TALIS 2018 Results

TEACHERS AND SCHOOL LEADERS AS VALUED PROFESSIONALS

VOLUME II

OECD

TALIS 2018 Results (Volume II)

TEACHERS AND SCHOOL LEADERS AS VALUED PROFESSIONALS

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Foreword

What does it mean to recognise our teachers and school leaders as professionals? Most people have spent a significant portion of their lives inside a school, and many probably think they are able to identify what makes a "good" teacher or principal. But being a professional encompasses much more than being "good" at your job.

A "professional" is someone who is able to use their expertise to make decisions about their work, who has the autonomy to act on those decisions, and who contributes to the body of professional knowledge. Such decisions and actions are grounded in a specialised set of knowledge and skills, stemming from both quality training and from the constant collaboration with peers and other stakeholders. For teachers and school leaders, professionalism means not only conducting their work in an effective manner, but working to improve their skills, collaborating with colleagues and parents, and thinking creatively about the challenges they face.

The notion of professional teachers and school leaders is not a static one and is continuously evolving to address the challenges that emerge in 21st century education. Teachers and school leaders are increasingly expected to perform new tasks, such as nurturing the development of students' social and emotional skills and responding to students' individual learning needs. They are also expected to adapt to the technological and digital demands of our era and to use information and communication technologies in their classroom and for collaborating with other professionals. The profile of 21st century teachers and school leaders also paints them as intellectually curious, capable of collecting and analysing data about their school and classroom, and acting upon it. Teaching in today's world requires a new, uniquely modern kind of professionalism.

The Teaching and Learning International Survey (TALIS) offers us insights into the levels of professionalism among teachers and school leaders by giving them a voice on issues surrounding their work. The first volume of TALIS 2018, *Teachers and School Leaders as Lifelong Learners*, showed that, across all participating countries and economies, there is a highly motivated workforce that places the chance to influence child development and serve underprivileged children at the top of their reasons for becoming a teacher. At the same time, novice teachers are often allocated to the more challenging schools with a larger proportion of students with special needs or disadvantaged backgrounds. Furthermore, even though teachers and school leaders are participating in in-service training, they still feel like they need more training in those competencies required for 21st century education, such as teaching cross-curricular skills, use of ICT teaching and teaching in multicultural or multilingual settings.

These results deserve our attention given the fact that teachers' working conditions and classroom processes are changing. In many education systems, teachers are working with diverse classrooms where students' ability levels, socio-economic backgrounds and demographic composition can vary significantly. At the same time, schools are becoming increasingly more bureaucratic, with teachers being overloaded with non-teaching activities, particularly administrative tasks.

This second volume of TALIS, *Teachers and School Leaders as Valued Professionals,* aims to shed a light on teachers' and school leaders' working conditions, along with their reported satisfaction levels and work-related well-being. It also gives us a sense of how schools can foster productive and engaging working environments where peer learning thrives and teachers are at the centre of discussions on what is best for teaching.

The results tell us that the vast majority of teachers and school leaders enjoy their work – systems should capitalise on that enthusiasm by turning schools into intellectually stimulating places to work. If not, disillusionment may creep in. Combine that with stress and an administration-heavy work environment and suddenly teaching becomes far too unattractive to be counted among society's most respected professions. Here it is important to point out that teachers and school leaders whose well-being is looked after are likely to report stronger motivation at work and an increased commitment to staying in the profession. So frustration and dissatisfaction should not be ignored. Identifying and balancing the sources of stress is one of the challenges that TALIS addresses, and it shows that stress need not be the suffocating force it tends to be in other professions.

What these results show us is that, if we expect teachers and schools leaders to behave as professionals, we should treat them as such. This means having an open and direct dialogue with the teaching profession and respecting their view on their own developmental needs.

Our message has been consistent: the quality of a school system cannot exceed the quality of its teachers and principals. But what this new volume of TALIS adds is that the quality of teachers and principals cannot exceed the quality of their training, their opportunities to collaborate and develop, and the quality of their working conditions.

Andreas Schleicher

Director for the Directorate for Education and Skills
Special Advisor on Education Policy to the Secretary General

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

The development of this volume was guided by Andreas Schleicher and Yuri Belfali and led by Karine Tremblay (TALIS Project Manager). Pablo Fraser managed its production, with contributions from Emily Groves and Florence Bernard, as well as earlier input from Noémie Le Donné. Chapter 1 was authored by Karine Tremblay, with support from Aakriti Kalra and Pablo Fraser. Pablo Fraser was the lead author of Chapters 2 and 5; Gabriele Marconi the lead author of Chapter 3; and Aakriti Kalra and Gabor Fülöp the lead authors of Chapter 4. Additional drafting and input to each of these chapters was provided by Zsuzsa Bakk, Yuri Belfali, Maxence Castiello, Noémie Le Donné, Massimo Loi, Henri Pearson and Andreas Schleicher, as well as by chapter lead authors. Statistical analyses and outputs were co-ordinated by Gabor Fülöp and prepared by Maxence Castiello, Gabor Fülöp, Massimo Loi and Gabriele Marconi. Valentin Burban, Hélène Guillou, Judit Pál and Markus Schwabe contributed to the development of the infrastructure and coding for TALIS 2018 statistical outputs.

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Annex D of this volume lists the members of various TALIS bodies, as well as the experts who have contributed to TALIS in general.

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Executive summary

The skillset required to be an effective teacher is expansive and complex. On top of being knowledgeable about their subject and how to teach it, teachers are also expected to be experts in child development, classroom management, administration, and even psychology, and to update their knowledge base throughout their career. It is for these reasons that teaching is referred to as a "profession" rather than simply a "job". Likewise, the expectations for school leaders have gone beyond their traditional role as administrators, and now include team leadership, instruction, networking and effective communication with parents and other stakeholders. But the "professionalism" of teachers and principals varies in its forms across countries and contexts, and can be influenced both by policy and the behaviour of teachers and school leaders themselves.

The extent to which teachers and school leaders live up to this status of professionals in the 48 countries surveyed is the main focus of the 2018 cycle of the Teaching and Learning International Survey (TALIS).

TALIS aims to give teachers and school leaders a voice on this issue by asking them about their working life in school, covering everything from the characteristics of their school environment and how they interact with colleagues, to teaching practices and participation in continuous professional development.

Teacher professionalism is analysed in TALIS 2018 by looking at five pillars: the knowledge and skills required to teach; career opportunities and working regulations; the collaborative culture among teachers; the responsibility and autonomy afforded to teachers; and the status and standing of the profession. This second volume, *Teachers and School Leaders as Valued Professionals*, addresses the final four pillars: prestige, career opportunities, collaboration and autonomy.

HOW DO SOCIETY AND TEACHERS VIEW THE TEACHING PROFESSION?

Whether a career is seen as prestigious or not can have an impact on both the kinds of candidates that enter the profession and the job satisfaction of those already in it. The majority of teachers in OECD countries and economies in TALIS (90%) are satisfied with their job, and most of them (91%) do not regret becoming a teacher.

Despite this, an average of only 26% of teachers in OECD countries and economies participating in TALIS think that the work they do is valued by society. Longer-serving teachers are also more likely than their younger colleagues to say that the profession is undervalued, suggesting a degree of professional disillusionment as teachers progress along the career path. Furthermore, 14% of teachers aged 50 years or less express a desire to leave teaching within the next five years, i.e. well before they reach retirement age.

Acute stress at work is also strongly associated with teachers' job satisfaction and their intention to continue teaching: 18% of teachers report experiencing a lot of stress in their work, and 49% report that having too much administrative work is one of the main sources of stress.

WHAT ARE THE MAIN FEATURES OF TEACHERS' EMPLOYMENT CONTRACTS AND HOW DO THEY FEEL ABOUT IT?

The majority of teachers in OECD countries and economies in TALIS are employed on permanent contracts, with only 18% reporting that their employment contract is temporary. But this figure jumps to 48% for teachers under the age of 30. While temporary contracts offer some flexibility, teachers working under contracts of less than one year also report feeling less confident in their ability to teach in roughly one third of the countries surveyed.

In terms of salaries, 39% of teachers and 47% of principals are satisfied with the pay they receive, on average across OECD countries and economies in TALIS. It is not particularly common for appraisal processes to be tied to career progression in the form of pay increases or a bonus, with an average of only 41% of teachers reporting that this happens in their school. However, the proportion of teachers working in schools where this does happen has increased significantly since the last cycle of TALIS in over half the participating countries and economies. It should also be noted that this practice is more likely to occur when the school management team has some authority over teachers' salaries.

Teachers who report that their school provides staff with opportunities to actively participate in school decisions and supports their professional development are also more likely to say that they are satisfied with the conditions of their employment contract (apart from salaries).

HOW DO TEACHERS WORK TOGETHER AS PROFESSIONALS AND WHAT IMPACT DOES THIS HAVE?

Central to many professions is a core network of practitioners who collaborate regularly. In teaching, such professional collaboration takes the form of team teaching, providing feedback after classroom observations, engaging in joint activities across different classes, and participating in collaboration-based professional development. Teachers in OECD countries and economies in TALIS are quite likely to employ basic collaborative practices like discussing the development of specific students with colleagues (61% of teachers on average do this) and, to a lesser extent, exchanging teaching materials with colleagues (47%). However, far fewer teachers engage in the deeper forms of professional collaboration, which involve more interdependence between teachers, with only 9% of teachers saying they provide observation-based feedback to colleagues, and 21% engaging in collaborative professional learning at least once a month.

Such low instances of professional collaboration may be worrisome, considering the impact collaboration can have on promoting 21st century teaching: teachers who regularly collaborate with peers in this way also tend to report using cognitive activation practices more frequently in class). Professional collaboration is also associated with higher job satisfaction and teacher self-efficacy.

Feedback from peers is a unique form of collaboration that puts teachers at the centre as experts of their own practice. On average across OECD countries and economies in TALIS, 71% of teachers who received feedback from colleagues found it useful for their teaching. Feedback appears to be most effective for teachers when it is delivered in a variety of ways, rather just one repeated method.

HOW MUCH CONTROL DO TEACHERS AND SCHOOL LEADERS HAVE OVER THEIR PRACTICE AND THEIR WORKING ENVIRONMENT?

The practice of teaching in class remains at the teacher's discretion: over 90% of teachers say that it is up to them to select teaching methods, assess students' learning, discipline students and set the amount of homework to assign. Determining the overall course content, however, appears slightly less commonly within the teacher's purview, with only 84% of teachers reporting that they have some control over this.

More efforts should be made to involve teachers in the decision-making processes of their schools. On average across OECD countries and economies in TALIS, only 56% of principals report that teachers have a role in the school management team. In addition, only 42% of principals report that their teachers have a significant responsibility over a large share of tasks related to school policies, curriculum and instruction. Teachers also have little responsibility over staffing and budgets; but budget allocation appears to still be within the school's control, with 68% of principals reporting that schools have significant responsibility in this area.

Reader's guide

The results referred to in this volume are provided in Annex C.

Country coverage

The publication features results on teachers and school principals working in schools providing lower secondary education (ISCED Level 2) in 48 countries and economies, as well as in 2 sub-national entities (the Flemish Community of Belgium and the French Community of Belgium) that opted for their data to be adjudicated. It also features results on primary teachers and school principals in 15 countries and economies (ISCED level 1) and on upper secondary teachers and school principals in 11 countries and economies (ISCED level 3).

In tables, countries and economies are ranked in alphabetical order. There are two exceptions to this rule:

- The Flemish Community and the French Community of Belgium are indented and italicised, under Belgium, for tables based on ISCED 2 teacher and principal data for TALIS 2018.
- Countries that have not met TALIS standard participation rates are placed at the bottom of the tables.

There are six sub-national entities participating in TALIS 2018. They are referred to in the following manner:

- The province of Alberta, in Canada, is referred to as Alberta (Canada).
- The Flemish Community of Belgium is referred to as Flemish Comm. (Belgium) in tables and figures.
- The French Community of Belgium is referred to as French Comm. (Belgium) in tables and figures.
- Ciudad Autónoma de Buenos Aires is referred to as CABA (Argentina).
- The nation of England is referred to as England (United Kingdom), or England (UK) in tables and figures.
- The municipality of Shanghai, in China, is referred to as Shanghai (China).

Chinese Taipei and Cyprus did not participate directly in TALIS 2018: their data collection and processing were managed exclusively by the international research consortium. Their data are reported in the result tables listed in Annex C.

Two notes are added to the information on Cyprus:

- **Note by Turkey**: The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".
- **Note by all the European Union Member States of the OECD and the European Union**: The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

One note is added to the information on the data for Israel:

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

Classification of levels of education

The classification of levels of education is based on the International Standard Classification of Education (ISCED). ISCED is an instrument for compiling statistics on education internationally. ISCED-97 was recently revised, and the new International Standard Classification of Education (ISCED-2011) was formally adopted in November 2011 and is now the basis of the levels presented in this publication. It distinguishes between nine levels of education:

- early childhood education (ISCED level 0)
- primary education (ISCED level 1)
- lower secondary education (ISCED level 2)

- upper secondary education (ISCED level 3)
- post-secondary non-tertiary level of education (ISCED level 4)
- short-cycle tertiary education (ISCED level 5)
- bachelor's or equivalent level (ISCED level 6)
- master's or equivalent level (ISCED level 7)
- doctoral or equivalent level (ISCED level 8).

More information can be found in Annex B.

Reporting teacher data

The report uses "teachers" as shorthand for the TALIS target population of lower secondary teachers. TALIS covers teachers who, as part of their regular duties in a target school, provide instruction in programmes at the ISCED 2 level (lower secondary education). "Primary teachers" refer to teachers providing instruction in programmes at the ISCED 1 level (primary education). "Upper secondary teachers" refer to teachers providing instruction in programmes at the ISCED 3 level (upper secondary education).

Reporting principal data

The report uses "principals" and "school leaders" as equivalent shorthand for the TALIS target population of lower secondary principals. School principals provided information on their schools' characteristics and their own work and working conditions by completing a principal questionnaire. Where responses from school principals are presented in this publication, they are usually weighted by the school weights. In some cases, principal responses are treated as attributes of the teachers' personal working conditions. In such cases, principals' answers are analysed at the teacher level and weighted by the teacher weights.

International averages

The OECD and TALIS averages correspond to the arithmetic mean of the respective country estimates. They are calculated for most indicators based on the main survey data (ISCED 2 level) presented in this report. The European Union average, called "EU total", takes the European Union Member States as a single entity, to which each country contributes in proportion of the estimated size of the target population. It can be used to assess how a country compares with the European Union as a whole.

The system-level estimates of the Flemish Community of Belgium and the French Community of Belgium are not included in the international averages, as these sub-national entities already contribute to the international averages through the means of Belgium as a whole.

The system-level estimates of countries that have not met the standards for TALIS participation rates are excluded from the international averages. This is the case for the estimates based on the responses of lower secondary principals in Australia.

In the case of some countries, data may not be available for specific indicators, or specific categories may not apply. Readers should, therefore, keep in mind that the terms "OECD average", "TALIS average" and "EU total" refer to the countries included in the respective averages. Each of these averages may not necessarily be consistent across all columns of a table.

The number of countries or economies included in an international average is indicated next to that average:

- **OECD average-31**:[1] arithmetic average based on ISCED 2 teacher data across 31 OECD countries and economies with adjudicated data. The report refers to the average teacher "across the OECD" as equivalent shorthand for the average teacher "across the 31 OECD countries and economies participating in TALIS".
- **OECD average-30**: arithmetic average based on ISCED 2 principal data across 30 OECD countries and economies with adjudicated data. The report refers to the average school or principal "across the OECD" as equivalent shorthand for the average school or principal "across the 30 OECD countries and economies participating in TALIS".
- **TALIS average-48**: arithmetic average based on ISCED 2 teacher data across 48 TALIS 2018 countries and economies with adjudicated data.
- **TALIS average-47**: arithmetic average based on ISCED 2 principal data across 47 TALIS 2018 countries and economies with adjudicated data.
- **EU total-23**: weighted average based on ISCED 2 teacher or principal data across all EU Member States that participate in TALIS with adjudicated data.

The list of countries and economies included in each international average is provided in Annex B.

Data underlying the figures

Five symbols are used to denote non-reported estimates:

a: The question was not administered in the country because it was optional or it is part of a questionnaire from a TALIS cycle the country has not participated in. Therefore, data are missing.

c: There are too few or no observations to provide reliable estimates and/or to ensure the confidentiality of respondents (i.e. there are fewer than 10 schools/principals and/or 30 teachers with valid data; and/or the item non-response rate [i.e. ratio of missing or invalid responses to the number of participants for whom the question was applicable] is above 50%).

m: Data were collected but subsequently removed for technical reasons (e.g. erroneous translation) as part of the data checking process.

n: Data is missing due to computational process (e.g. regression coefficients are missing if there is at least one variable without valid data included in a regression model).

p: Data were collected but are not reported for technical reasons (e.g. low participation rate) as part of the data adjudication process.

w: Data were withdrawn or were not collected at the request of the country concerned.

TALIS results are based exclusively on self-reports from teachers and school leaders and, therefore, represent their opinions, perceptions, beliefs and accounts of their activities. No data imputation from administrative data or other studies is conducted and, as with any self-reported data, this information is subjective and may, therefore, differ from data collected through other means (e.g. administrative data or video observations). The same is true of school leaders' reports about school characteristics and practices, which may differ from descriptions provided by administrative data at a national or local government level.

Rounding figures

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

All standard errors in this publication have been rounded to one, two or three decimal places. Where the value 0.0, 0.00 or 0.000 is shown, this does not imply that the standard error is zero, but that it is smaller than 0.05, 0.005 or 0.0005, respectively.

Focusing on statistically significant differences

This volume only comments on statistically significant differences or changes. These are denoted in darker colours in figures and in bold font in tables. See Annex B for further information.

Abbreviations

ISCED	International Standard Classification of Education
Dif.	point difference
% dif.	percentage-point difference
ICC	intra-class correlation coefficient
ICT	information and communication technology
S.D.	standard deviation
S.E.	standard error

Further technical documentation

For further information on TALIS documentation, instruments and methodology, see the *TALIS 2018 Technical Report* (OECD, 2019[1]) and *TALIS 2018 and TALIS Starting Strong 2018 User Guide* (OECD, 2019[2]).

This report uses the OECD StatLinks service. All tables and charts are assigned a URL leading to a corresponding Excel™ workbook containing the underlying data. These URLs are stable and will remain unchanged over time. In addition, readers of the e-books will be able to click directly on these links and the workbook will open in a separate window if their Internet browser is open and running.

References

OECD (2019), *TALIS 2018 and TALIS Starting Strong 2018 User Guide,* OECD, Paris, http://www.oecd.org/education/talis/TALIS_2018-TALIS_Starting_Strong_2018_User_Guide.pdf. [2]

OECD (2019), *TALIS 2018 Technical Report,* OECD, Paris, http://www.oecd.org/education/talis/TALIS_2018_Technical_Report.pdf. [1]

Note

1. On 25 May 2018, the OECD Council invited Colombia to become a Member. While Colombia is included in the OECD averages reported in this publication, at the time of its preparation, Colombia was in the process of completing its domestic procedures for ratification and the deposit of Colombia's instrument of accession to the OECD Convention was pending.

What is TALIS?

INTRODUCTION

The OECD Teaching and Learning International Survey (TALIS) is an international, large-scale survey of teachers, school leaders and the learning environment in schools. TALIS uses questionnaires administered to teachers and their school principals to gather data. Its main goal is to generate internationally comparable information relevant to developing and implementing policies focused on school leaders, teachers and teaching, with an emphasis on those aspects that affect student learning. It gives a voice to teachers and school leaders, allowing them to provide input into educational policy analysis and development in key areas. It is also a collaboration between participating countries and economies, the OECD, an international research consortium, teachers' unions and the European Commission.

TALIS must serve the goals of its three main beneficiaries: policy makers, education practitioners and researchers. First, it must help policy makers review and develop policies that promote the teaching profession and the best conditions for effective teaching and learning. Secondly, TALIS must also help teachers, school leaders, and education stakeholders to reflect upon and discuss their practice and find ways to enhance it. Thirdly, TALIS must build upon past research while informing the future work of researchers.

WHICH COUNTRIES AND ECONOMIES PARTICIPATE IN TALIS?

The first cycle of TALIS was conducted in 2008 in 24 countries. The second cycle, five years later – TALIS 2013 – included 34 participants. The following year, in 2014, four additional countries and economies participated, bringing the second cycle total to 38 participants. TALIS 2013 broadened its scope to include options for participants to also survey teachers and leaders in primary schools (ISCED level 1), in upper secondary schools (ISCED level 3), and in schools that had participated in the 2012 cycle of the Programme for International Student Assessment (PISA), an option referred to as the TALIS-PISA link.

TALIS 2018 has expanded to include additional countries, bringing the total number of participants to 48 countries and economies.[1] While maintaining the focus on lower secondary education (ISCED level 2, as classified by the International Standard Classification of Education [ISCED-2011] (UNESCO-UIS, 2012[1]), which identifies comparable levels of education across countries), TALIS 2018 offered the same three options as TALIS 2013. In 2018, 15 countries and economies surveyed teachers and school leaders in their primary (ISCED level 1) schools, 11 did so in their upper secondary (ISCED level 3) schools and 9 countries conducted the survey in schools that participated in the 2018 Programme for International Student Assessment (PISA) through the TALIS-PISA link option.

The main survey (ISCED level 2) has been conducted in 31 OECD countries and economies – Alberta (Canada),[2] Australia,[3] Austria, Belgium (the Flemish Community of Belgium[3] and the French Community of Belgium also participated as a sub-national entity of Belgium), Chile, Colombia,[4] the Czech Republic, Denmark,[2, 3] England (United Kingdom),[3] Estonia, Finland, France,[3] Hungary, Iceland, Israel, Italy, Japan,[3] Korea,[3] Latvia, Lithuania, Mexico, the Netherlands,[3] New Zealand, Norway, Portugal,[2] the Slovak Republic, Slovenia,[2] Spain,[3] Sweden,[2, 3] Turkey[2, 3] and the United States – as well as in Brazil,[2] Bulgaria, Ciudad Autónoma de Buenos Aires (Argentina),[3] Croatia,[2] Cyprus,[5] Georgia, Kazakhstan, Malta, Romania, the Russian Federation, Saudi Arabia, Shanghai (China), Singapore, South Africa, Chinese Taipei,[2, 3, 5] the United Arab Emirates[2, 3] and Viet Nam.[2, 3]

WHAT IS THE TALIS SURVEY ABOUT?

Nine main themes were selected for inclusion in the TALIS survey: teachers' instructional practices, school leadership, teachers' professional practices, teacher education and initial preparation, teacher feedback and development, school climate, job satisfaction, teacher human resource issues and stakeholder relations, teacher self-efficacy. Two cross-cutting themes were added to this list: innovation, and equity and diversity. More information on the conceptualisation of the eleven themes can be found in the *Teaching and Learning International Survey* (*TALIS) 2018 Conceptual Framework* (Ainley and Carstens, 2018[2]).

WHAT ARE THE KEY FEATURES OF TALIS DESIGN?

The key features of TALIS 2018 survey design are as follows:

- **International target population:** lower secondary education teachers and school leaders of mainstream schools.
- **Target sample size:** 200 schools per country; 20 teachers and 1 school leader in each school.
- **Target response rates for teachers:** 75% of the sampled schools, together with a 75% response rate from all sampled teachers in the country. A school is considered to have responded if 50% of sampled teachers respond.

- **Target response rates for school leaders:** 75% of the sampled school leaders.
- **Questionnaires:** Separate questionnaires for teachers and school leaders, each requiring between 45 and 60 minutes to complete.
- **Mode of data collection:** questionnaires completed on paper or on line.
- **Survey windows:** September to December 2017 for Southern Hemisphere countries (with some countries extending into January 2018 as an exception) and March to May 2018 for Northern Hemisphere countries (with some early starting participants in January and February, and some extending into July 2018).

The sample size for the ISCED 1 and ISCED 3 options is the same as the sample size for ISCED 2: 200 schools per country and 20 teachers and 1 school leader per school. For the TALIS-PISA link, 150 schools were surveyed per country. The target response rates for all TALIS survey options were the same as those for the core ISCED 2 sample. Further details on the sample for all target populations can be found in Annex A.

WHAT KINDS OF RESULTS DOES TALIS PROVIDE?

TALIS results are based exclusively on self-reports from teachers and school leaders and, therefore, represent their opinions, perceptions, beliefs and accounts of their activities. No data imputation from administrative data or other studies is conducted. Giving a voice to teachers provides insight into how they perceive the learning environments in which they work and how policies that are put in place are carried out in practice. But, as with any self-reported data, this information is subjective and may, therefore, differ from data collected through other means (e.g. administrative data or video observations). The same is true of school leaders' reports about school characteristics and practices, which may differ from descriptions provided by administrative data at a national or local government level.

In addition, as a cross-sectional survey, TALIS cannot measure causality. For instance, in examining the relationship between teachers' participation in professional development and self-efficacy in teaching, it is possible to determine the sense (positive, negative) of the association, its strength and its statistical significance, but it is not possible to establish whether participating in professional development depends on self-efficacy or whether self-efficacy depends on participation in professional development.

The analyses presented in this report are conducted with an emphasis on the following aspects: 1) reporting of results about both teachers and school leaders throughout the report; 2) meaningful international comparisons; 3) trends; 4) contextualisation of results and 5) cross-theme analyses.

1. This report intends to provide results for both teachers and school leaders. The *TALIS 2013 Results* report (OECD, 2014[3]) focused on results regarding teachers but also included one chapter and a few sections with results about school principals. The key findings highlighted in the 2013 report and in the *School Leadership for Learning* report (OECD, 2016[4]) proposed including more results on school leaders in the *TALIS 2018 Results* report. To the extent that the themes are covered in the teacher and the principal questionnaires, results about school leaders and their schools are, therefore, spread throughout the report.
2. The analyses presented in this report aim at drawing meaningful international comparisons for benchmarking. Given that the number of participating countries and economies in TALIS has grown since the first two cycles, the average estimated from all participants in TALIS 2018 does not refer to the same populations of teachers and school leaders across time. Therefore, this report focuses on the average across the OECD countries and economies participating in TALIS 2018, as they belong to a more steady and coherent entity.
3. The report also aims at making the best use of the data accumulated over the three cycles since 2008. In 2018, for the first time, three data points (2018, 2013 and 2008) are available for some indicators across many countries and economies, making trend analyses possible to inform the monitoring of the teaching profession in lower secondary education. Yet, changes over time need to be interpreted with great caution (see Annex B).
4. Emphasis is also put on contextualising teachers', principals' and schools' practices and attitudes by breaking down results according to pre-selected contextual variables. The *TALIS 2013 Results* report analysed how experienced teachers and trained teachers were distributed across more or less challenging schools (OECD, 2014, pp. 40-44[3]). This report substantially expands this kind of analyses, especially to describe how teachers', principals' and schools' practices vary by teachers' characteristics – particularly teachers' gender, age and experience – and by schools' characteristics – geographical location, school type and composition.
5. The ambition of this report is to include cross-theme analyses in each chapter. Each chapter consistently depicts the state of a given aspect of teachers' and principals' work and analyses the way this aspect relates to key outcomes of teachers, or school leaders' professionalism (see more detail in Chapter 1).

While this report focuses mainly on lower secondary teachers and school leaders, Chapters 2 to 5 also present some data and analyses for key indicators from primary and upper secondary teachers through text boxes. Two other types of text boxes are included throughout the report: text boxes highlighting examples of local or national education policies or practices and methodological boxes.

Box A **TALIS' contributions to the Sustainable Development Goals**

The Sustainable Development Goals (SDGs) were adopted by the United Nations in September 2015 (United Nations, 2015[5]). Goal 4 of the SDGs seeks to ensure "inclusive and equitable quality education and promote lifelong learning opportunities for all".

The OECD, through its large-scale international studies, is committed to helping countries monitor and report their work towards achieving and sustaining the SDGs (OECD, 2016[4]). TALIS data, in particular, can contribute to providing information to Goal 4's Target 4.c: "By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing States" (United Nations, 2015, p. 17[5]). Target 4.c consists of one global indicator and six thematic indicators:[6]

- Global Indicator 4.c.1: Proportion of teachers in:
  1. pre-primary education
  2. primary education
  3. lower secondary education
  4. upper secondary education

  who have received at least the minimum organised teacher training (e.g. pedagogical training) pre-service or in-service required for teaching at the relevant level in a given country, by sex.

- Thematic indicators:
  - 4.c.2 Pupil-trained teacher ratio, by education level
  - 4.c.3 Percentage of teachers qualified according to national standards, by education level and type of institution
  - 4.c.4 Pupil-qualified teacher ratio by education level
  - 4.c.5 Average teacher salary relative to other professions requiring a comparable level of qualification
  - 4.c.6 Teacher attrition rate, by education level
  - 4.c.7 Percentage of teachers who received in-service training in the last 12 months, by type of training

TALIS data on professional development fit perfectly with indicator 4.c.7 for primary, lower secondary, and upper secondary teachers. For the other indicators, it is possible to consider some of the current TALIS indicators as "proxy measures" for the SDGs, particularly when no other internationally comparable indicator is currently available. For example, although TALIS does not have an indicator that aligns perfectly with 4.c.1, data on teacher certification and highest educational level attained can still be a proxy for qualified teachers and, thus, provide some information on the extent to which countries have achieved Goal 4.

The contribution of TALIS to the SDGs is not limited to the 4.c indicators. Other targets, means of implementation, and indicators of Goal 4 indirectly address the contribution of teachers to a quality education system. For example, the intent underlying indicator 4.7.1 is to monitor the "[e]xtent to which (i) global citizenship education and (ii) education for sustainable development, including gender equality and human rights, are mainstreamed at all levels in: (a) national education policies, (b) curricula, (c) teacher education and (d) student assessment" (UNESCO, 2016, p. 73[6]). TALIS 2018 also collects information with regard to schools' policies and teachers' practices related to student diversity and various kinds of discrimination, which, in part, contribute to the goals of indicator 4.7.1.

Other OECD data, such as those derived from the OECD Programme for the International Assessment of Adult Competencies (PIAAC) and the OECD Programme for International Student Assessment (PISA), provide a solid evidence base for monitoring education systems. OECD analyses promote peer learning, as countries can compare their experiences in implementing policies. Together, OECD indicators, statistics and analyses can be seen as a model of how progress towards the SDG education goal can be measured and reported.

Sources: United Nations (2015[5]), *Transforming our World: The 2030 Agenda for Sustainable Development*; UNESCO (2016[6]), *Education 2030: Incheon Declaration and Framework for Action for the Implementation of Sustainable Development Goal* 4.

HOW IS THIS REPORT ORGANISED?

This volume is the second of two volumes forming the *TALIS 2018 Results* report. The chapters included in this volume present the first results and policy recommendations emerging from TALIS 2018.

- **Chapter 1** gives readers who are closely involved with teaching and learning an overview of the main findings and recommendations of this present volume and of the previous volume, *TALIS 2018 (Volume I): Teachers and School Leaders as Lifelong Learners.*
- **Chapter 2** explores the prestige of the teaching profession by examining to what extent teachers and school leaders consider their profession is valued in society. The chapter also contrasts teachers' and school leaders' levels of job satisfaction with both their working environments and their profession and how they have changed over time. It also describes the level of stress teachers report experiencing in their work and explores the sources of stress. The chapter concludes by examining how teachers' perceptions of their working conditions are related to the risk of attrition.
- **Chapter 3** depicts the working conditions of teachers and school leaders, including appraisal processes, as well as their satisfaction with them. It begins by discussing job security among teachers, along with the prevalence of part-time work for teachers and principals, and teaching in multiple schools. The chapter then reviews the characteristics of formal teacher appraisal procedures: the agents conducting appraisals, the methods used and the consequences of these evaluations. Finally, it discusses teachers' and principals' satisfaction with their salary and other working conditions.
- **Chapter 4** describes the different ways in which teachers collaborate in classrooms, schools and professional development avenues. It explores how often teachers engage in collaborative activities and how that shapes the wider dimensions of the teaching profession, such as expertise and job satisfaction. It further examines teachers' collegiality – i.e. the quality of interpersonal relationships between colleagues in schools – which provides the basis for a collaborative working environment. The second part of the chapter discusses feedback received by teachers, a unique form of collaboration, and examines how specific types of feedback can help teachers to improve their practices.
- **Chapter 5** describes the levels of autonomy and leadership in schools. It first identifies the tasks where schools have a larger role than out-of-school authorities and then compares the responsibilities of teachers and school leaders for the different tasks. The chapter concludes by describing the prevalence of different forms of leadership for teachers and school leaders.
- **Annex A** contains information about the TALIS target populations, the TALIS samples and a summary of the adjudication outcomes for each sample, along with cautionary notes about the interpretations of results, whenever necessary.
- **Annex B** contains information about complex variables derived from the teacher and principal questionnaires analysed in the volume, and statistical methods used to analyse TALIS data.
- **Annex C** contains the full list of online result tables.
- **Annex D** lists the members of the TALIS Governing Board, managers in the TALIS national centres, members of the OECD Secretariat, members of the TALIS Consortium, and members of TALIS expert groups that contributed to the TALIS 2018 cycle.

References

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United Nations (2015), *Transforming our World: The 2030 Agenda for Sustainable Development*, United Nations, New York, NY, http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E. [5]

Notes

1. The Flemish Community of Belgium and the French Community of Belgium also participated in TALIS 2018 as a sub-national entity of Belgium.

2. Countries and economies that participated in the ISCED 3 option.

3. Countries and economies that participated in the ISCED 1 option.

4. On 25 May 2018, the OECD Council invited Colombia to become a Member. While Colombia is included in the OECD averages reported in this publication, at the time of its preparation, Colombia was in the process of completing its domestic procedures for ratification and the deposit of Colombia's instrument of accession to the OECD Convention was pending.

5. Chinese Taipei and Cyprus did not participate directly in TALIS 2018: their data collection and processing were managed exclusively by the international research consortium. Their data are reported in the result tables listed in Annex C.

6. "Global indicators" are compulsory for UN member states. As such, every country should commit to achieving these indicators by 2030. "Thematic indicators" seek to provide a wide framework of indicators that can assist completion of the global indicator. These indicators are not compulsory for every country or region. From the total of 43 indicators for Goal 4, 11 are global indicators and 32 are thematic indicators.

1

What TALIS 2018 implies for policy

The international report on the results of the 2018 Teaching and Learning International Survey (TALIS) focuses on the notion of professionalism and its various dimensions. The first volume, *Teachers and School Leaders as Lifelong Learners,* published in 2019, explored teaching practices, the changing contexts for teaching and the knowledge and skills dimensions of professionalism for teachers and school leaders. This second volume, *Teachers and School Leaders as Valued Professionals,* explores the prestige and standing of the profession, the security, flexibility and reward structures of teaching and school leadership careers, the extent of professional collaboration and collegial relations within schools and the degree of autonomy and leadership that teachers and school leaders enjoy in their jobs. This chapter is an overview of the main findings presented in both volumes. It offers policy pointers emerging from these findings and discusses trade-offs for policy makers to consider in designing teacher policies.

PROFESSIONALISM OF TEACHERS AND SCHOOL LEADERS

Teacher professionalism as an overarching framework for TALIS 2018

Knowledge and skills are key to individual and collective success in today's economies and societies, resulting in high demands placed on education systems and their teachers and school leaders. Teachers are expected to have a deep and broad understanding of what they teach and the students they teach. They are also expected to understand the research-theory-practice nexus and to have the inquiry and research skills to become lifelong learners continuously growing in their profession. But teachers are also expected to perform additional tasks, such as facilitating the development of students' social and emotional skills, responding to students' individual differences and working collaboratively with other teachers and parents to ensure the holistic development of students.

The demands on school leaders are also significant. In many education systems, school leaders are not only expected to lead the administration and management of their school, but also to create conditions conducive to improved teaching and learning. These include developing school improvement plans, encouraging teachers' collaboration and participation in effective professional development, counselling students and parents about student progress and student orientation, and connecting the school to a larger network of schools and the local community. This is what communities expect from teachers, and a crucial question is how communities can best support their teachers in fulfilling these expectations.

Teachers and school leaders are at the centre of any attempt to improve the quality of education. Decades of research have found that teachers and school leaders shape the quality of instruction, which strongly affects students' learning and outcomes (Barber and Mourshed, 2009[1]; Darling-Hammond, 2017[2]; OECD, 2018[3]). As a result, education systems have sought how to attract, develop and retain quality teachers and school leaders (OECD, 2005[4]).

The Teaching and Learning International Survey (TALIS) defines teachers as those who provide instruction in programmes at a given educational level and principals as heads of their schools. Through the breadth and depth of the indicators collected, TALIS aims to contribute to the debate about teaching as a profession (Guerriero, 2017[5]; Ingersoll and Collins, 2018[6]). To do so, TALIS defines teaching as a profession underpinned by five pillars (Figure II.1.1):

1. the knowledge and skills base, which includes shared and specialised knowledge, and is captured through standards for access to the profession, pre-service training and in-service professional development
2. the career opportunities and working regulations applying to teaching, such as contractual arrangements offering security and flexibility, competitive reward structures commensurate with professional benchmarks, appraisal systems or mechanisms, and room for career progression
3. peer regulation and collaborative culture, which relies upon self-regulated and collegial professional communities that provide opportunities for collaboration and peer feedback to strengthen professional practices and the collective identity of the profession
4. responsibility and autonomy, captured through the degree of autonomy and leadership that teachers and school leaders enjoy in their daily work to make decisions, apply expert judgement, and to inform policy development at all levels of the system, so that professionalism can flourish
5. the prestige and standing of the profession, captured through the ethical standards expected of professional workers, the intellectual and professional fulfilment of the job, as well as its perceived societal value and standing relative to other professional occupations.

Figure II.1.1 **The five pillars of teacher professionalism in TALIS 2018**

Using these five pillars, this report examines the different attributes of professionalism through many different indicators, ranging from fact-based indicators to more subjective factors and perceptions. But the report also examines the levers that enhance the degree of professionalism of teachers and school leaders. Given the hundreds of variables collected, TALIS 2018 was published in two volumes. The first volume, *Teachers and School Leaders as Lifelong Learners*, published in 2019, explores the first pillar of professionalism, the knowledge and skills dimension, as well as the changing contexts for teaching. This second volume, *Teachers and School Leaders as Valued Professionals*, published in 2020, examines the other four pillars of professionalism. It focuses on the prestige and standing of the profession, the security, flexibility and reward structures of teaching and school leadership careers, the extent of professional collaboration and collegial relations within schools, and the degree of autonomy and leadership that teachers and school leaders enjoy in their jobs.

TALIS 2018 results and policy pointers

A profession relies on a specialised set of knowledge and skills from which practitioners draw their legitimacy and prestige. Volume I of the TALIS 2018 international report showed how teachers and school principals view their practice and how they develop their knowledge and skills to help students develop the cognitive and social-emotional skills and academic knowledge needed in today's changing world. It examined how much the landscape of teaching has changed since the 2008 and 2013 cycles of TALIS, in terms of the profiles of teachers, school leaders and students and the climate in schools and classrooms. It also explored links between the content and features of initial teacher education and continuous professional development and individuals' feelings of preparedness for the job, self-efficacy and job satisfaction. These analyses helped explore to what extent a strong knowledge and skills base supports the work of teachers and school leaders, as well as how and in what areas teachers and school leaders can develop further. Volume I also examined the perspectives of teachers and school leaders on school resources issues and priority areas for intervention and additional spending. This helps give them a voice on these issues, an important first step towards greater leadership and regulation by the profession.

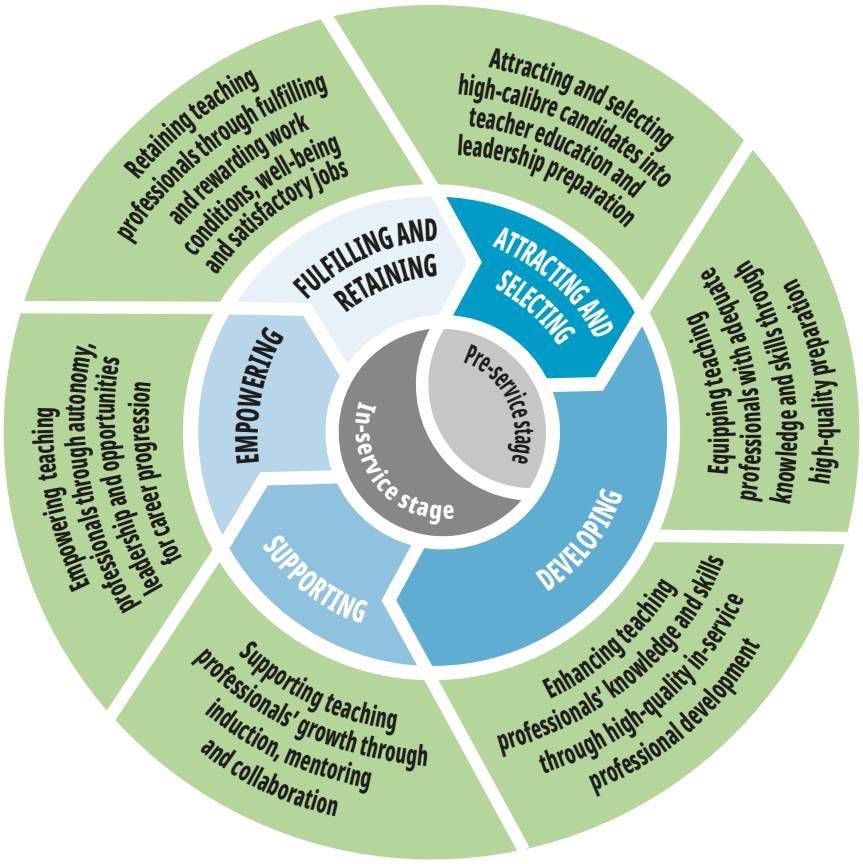
But the characteristics of professional occupations are not limited to their knowledge and skills base. Historically, professions have been defined through the notions of expert judgement and autonomous decision making, the construction of a specialised body of knowledge and skills and the collegial nature of a professional community regulated by clear standards (Evans, 2008[7]). With respect to the teaching profession, the following key attributes have been proposed to characterise teachers or school leaders as professionals: 1) individual and collective mastery of a core knowledge base; 2) development and use of specific skills; 3) application of expert judgement in their everyday settings; 4) autonomy to make decisions; 5) quality initial and continuous training; 6) collegial work with other members of the profession; 7) self-regulation by a professional community or body based on clear standards; 8) an ethical dimension underpinned by a sense of public service and social responsibility; and 9) the prestige and status of the profession, which mainly derives from the existence of the other attributes (Guerriero, 2017[5]; Ingersoll and Collins, 2018[6]; OECD, 2016[8]; Price and Weatherby, 2018[9]; Rowan, 1994[10]; Schleicher, 2018[11]).

This first chapter of Volume II brings together the main findings of both volumes of the TALIS 2018 international report, offering policy pointers to consider in designing teacher policies. Chapter 2 focuses on the prestige and standing pillar, examining to what extent teachers and school leaders consider that their profession is valued in society. It also looks at their levels of job satisfaction and their levels and sources of stress and explores how teachers' perceptions of their working conditions are related to attrition. Chapter 3 then turns to the career opportunities pillar, describing the working conditions of teachers and school leaders in terms of job security and flexibility, appraisal processes and teachers' satisfaction with reward structures and other working conditions. In Chapter 4, the focus shifts to the peer-regulation pillar, examining the collaborative aspects of teachers' work in terms of frequency, methods and how collaboration shapes their expertise and job satisfaction. The chapter further examines teachers' collegiality and the quality of their interpersonal relationships as a basis for a collaborative working environment, as well as feedback received by teachers to help them improve their practices. Finally, Chapter 5 focuses on the responsibility and autonomy pillar and the potential of school leadership to shape effective learning environments and, ultimately, student learning. It describes the levels of autonomy and leadership that teachers and school leaders have to make decisions pertinent to their jobs, as well as the prevalence of different forms of leadership for teachers and school leaders.

Highlighting the connections between results on different cross-cutting issues, the rest of this overview chapter is structured around policies promoting working environments that motivate and support school staff to achieve quality education across education systems. It is organised along the teaching career pathway model (Figure II.1.2):

- attracting and selecting high-calibre candidates into teacher education and leadership preparation
- developing teaching professionals through high-quality pre-service preparation and in-service professional development
- supporting teaching professionals' growth through induction, mentoring and collaboration
- empowering teaching professionals through autonomy, leadership and opportunities for career progression
- retaining teaching professionals through fulfilling and rewarding work conditions, well-being and satisfactory jobs.

Figure II.1.2 **The teaching career pathway model**



Source: Adapted from OECD (2019[12]), *A Flying Start: Improving Initial Teacher Preparation Systems,* OECD Publishing, Paris, https://doi.org/10.1787/cf74e549-en, Figure 1.1.

The chapter points out promising directions for education policies and practices, to be considered when seeking improvement on each of these broad objectives for teachers and school leaders. These draw on TALIS 2018 findings and other research. Unless specified otherwise, the TALIS findings presented in this chapter refer to the lower-secondary level of education (ISCED 2). The numbering of the source tables indicates whether these findings are discussed in *TALIS 2018 Results (Volume I)* (OECD, 2019[13]), e.g. Table I.x.x; or *TALIS 2018 Results (Volume II)*, e.g. Table II.x.x.

It is important to note that, given the cross-sectional design of the survey, the causality and directionality of relationships identified in TALIS cannot be ascertained. Moreover, there is no one-size-fits-all approach to designing policies on teaching and teaching professionals. When choosing among different policy options, governments must take into consideration the context of their education systems, as well as a broad range of evidence to underpin and substantiate policy development. Accordingly, the policy pointers that follow should be interpreted as the OECD's suggestions based on the analysis results, for consideration in each national context according to country-specific challenges and constraints.

Table II.1.1 maps how each category of the teachers' professional pathway aligns to a goal and policy pointer emerging from the TALIS study. The goals are teacher policy areas that are informed by the data collected in both volumes of TALIS. For each of them, there is a set of policy pointers suggested by the OECD to reinforce and further develop the goals. Finally, the table signals exemplary policy initiatives from a range of educational systems.

Table II.1.1. [1/3] **TALIS 2018 goals and policy pointers**

Stage in the teaching career pathway model	Goals and policy pointers	Policy examples from countries
Attracting and selecting high-calibre candidates into teacher education and leadership preparation	**Monitor workforce dynamics and develop a diverse workforce** 1. monitor and forecast future human resources needs of the system, prepare for the renewal of the teaching and principal workforces 2. design effective recruitment campaigns encouraging both men and women to join the ranks of teachers and school leaders 3. select candidates for the teaching profession who show high levels of intrinsic motivation.	• Federal Equal Treatment Act to foster female school leadership in **Austria** (see Box I.3.2). • The National Academy for the Teaching Profession to enhance the prestige and attractiveness of the profession in **Sweden** (see Box II.2.1). • Raising interest in the profession through the youth to school program in **Estonia** (see Box II.2.1).
	Enhance the prestige of teaching careers as a key element of their attractiveness 4. design effective communications and media campaigns to promote the complexity and intellectual stimulation of teaching careers, as well as the contribution of teaching professionals to society 5. develop a systemic approach to boosting the prestige and status of the profession to attract quality candidates to teaching and school leadership roles.	
Developing teaching professionals through high-quality pre-service preparation and in-service professional development	**Provide high-quality initial education or pre-service training to future teachers and school leaders** 6. offer alternative paths into the profession while preserving quality training 7. foster pre-service preparation of school leaders 8. ensure links between the content of initial teacher education and professional development activities.	• National standards guiding teacher education in **Estonia** (see Box I.4.2). • Leaders in Education Programme in **Singapore** (see Box I.4.4). • Enlaces, the ICT programme of **Chile**, launched an innovation centre and technology-enhanced learning for rural schools (see Box I.2.1). • Digital Education Policy of **Israel** involves a link between curricular goals, 21st century skills and technology driven education (see Box I.2.1). • Evidence from **Brazil** on coaching as an effective form of professional development (see Box I.5.3). • Building teacher capacity for diverse education environments in **Alberta (Canada)** and **Sweden** (see Box I.5.7). • Mobile intercultural teams and teaching first languages in the context of migration initiatives in **Austria** (see Box I.3.7). • Incentives and opportunities aligned with teachers' professional development needs in **Georgia** and **Italy** (see Box I.5.8).
	Provide high-quality continuous professional development, with a focus on high-need areas 9. promote school-based, collaborative and active professional development that responds to local needs and is adapted to school specific contexts 10. tailor support for integrating information and communications technology (ICT) teaching and dissemination of good practices 11. incorporate teaching strategies for diverse settings in the curricula of initial and continuous teacher training 12. reinforce training for teaching students with special needs.	
	Lift barriers to participation in professional development 13. allow time to participate in professional development 14. create or foster incentives to participate in professional development.	

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Table II.1.1. [2/3] **TALIS 2018 goals and policy pointers**

Stage in the teaching career pathway model	Goals and policy pointers	Policy examples from countries
Supporting teaching professionals' growth through induction, mentoring and collaboration	**Provide novice teachers and newly appointed school leaders with tailor-made support** 15. review the distribution of novice teachers to schools 16. give school leaders an active role in the development and promotion of induction and mentoring opportunities 17. develop mentoring programmes for newly appointed school leaders.	• Elements of effective induction programmes in the **United States** (see Box I.4.5). • Methodological associations in **Kazakhstan** and education priority networks in **France** for school-based teacher collaboration (see Box II.4.5). • Structured team-teaching in **Austria** (see Box II.4.2). • Empowered Management Programme for inter-school collaboration in **Shanghai (China)** (see Box II.4.1). • Feedback through in-person coaching in **South Africa** (see Box I.5.3).
	Make the most of teachers' time to support quality teaching and the use of effective teaching practices 18. support teachers in the use of effective teaching practices 19. rethink teachers' schedules and school time and space to promote small-group instruction.	
	Foster a school and classroom climate conducive to student learning and well-being 20. implement system-level and school-level policies and practices to combat all forms of bullying.	
	Develop a collaborative culture within schools 21. harness the potential of collaborative professional development and professional learning communities to initiate and spread a school culture of collaboration 22. foster a collegial climate within schools to encourage voluntary collaboration among teachers 23. build on collaboration champions and distributed leadership within schools.	
	Foster mentoring and peer feedback as key attributes of professional work 24. foster a growth mindset and a culture of formative feedback within the profession 25. encourage and mainstream the most impactful forms of feedback according to teachers 26. encourage mentoring and feedback at all stages of the career.	

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Table II.1.1. [3/3] **TALIS 2018 goals and policy pointers**

Stage in the teaching career pathway model	Goals and policy pointers	Policy examples from countries
Empowering teaching professionals through autonomy and leadership and opportunities for career progression	**Foster leadership at all levels of the system** 27. foster teachers' sense of agency through greater autonomy and distributed leadership 28. strengthen school leadership 29. bolster system leadership and enhance teachers' and school leaders' voices in the policy debate.	• Project for Autonomy and Curricular Flexibility in **Portugal** (see Box I.2.6). • Fostering instructional leadership in **Viet Nam** and **Norway** (see Box II.5.4). • Chancellor's Teachers' Cabinet to promote teacher leadership in Washington, DC, **United States** (see Box II.5.6). • Teachers' assessment and feedback through the teacher appraisal system in **Shanghai (China)** (see Box II.3.3). • Career progression and appraisal structure in the **Slovak Republic** (see Box II.2.3)
	Make the most of school leaders' time to foster instructional leadership 30. encourage instructional leadership through clear professional standards for school leaders 31. build capacity for instructional leadership and recruit instructional leaders among teachers.	
	Link appraisal with teachers' career progression 32. define and prioritise the key objectives of appraisal, and design appraisal processes accordingly 33. create conditions to attain the key objectives of appraisal.	
Retaining teaching professionals through fulfilling and rewarding work conditions, well-being and satisfactory jobs	**Build a motivated and efficient teacher and principal workforce through attractive working conditions** 34. engage in constructive dialogue with the profession to improve the financial package and conditions of teachers over time 35. consider revamping teachers' career structures and salary scales 36. pay attention to the competitiveness of the work package for school leaders in publicly managed institutions 37. reduce the reliance on short-term contracts of less than one year.	• Reducing teachers' workload through the workload challenge in the **United Kingdom** (see Box II.2.7). • Improving job security for young teachers in the **Flemish Community of Belgium** (see Box II.3.1) • Boosting job satisfaction through the leave of absence for self-training system in **Korea** (see Box II.2.3) • The Governor's Teaching Fellowship Programme for attracting teachers to disadvantaged schools in California, **United States** (see Box II.3.6). • Retaining high-performing teachers in disadvantaged schools in **Chile** and **France** (see Box II.3.6).
	Reduce stress and enhance well-being 38. address identified sources of stress 39. build teachers' resilience to curb stress and reduce attrition.	
	Foster the intellectual fulfilment of the profession to boost job satisfaction 40. develop the conditions for boosting job satisfaction 41. target policies to the different profiles of teachers and specific challenges 42. focus efforts on retaining teachers in the most difficult schools.	
	Boost teachers' sense of fulfilment through enhanced self-efficacy 43. develop the conditions for boosting teachers' self-efficacy.	

ATTRACTING AND SELECTING HIGH-CALIBRE CANDIDATES INTO TEACHER EDUCATION AND LEADERSHIP PREPARATION

TALIS has developed indicators to depict the teacher and school leader workforces in terms of demographics and qualifications.[1] These can be used not only to describe the current teacher and principal populations, but also to forecast needs and assess the importance of attracting new entrants to the profession in the future. Related to this issue, a range of indicators on the perceived prestige of teaching careers and motivations to join the career shed light on the attractiveness of the profession and how it can be enhanced.

Goal: Monitor workforce dynamics to develop a diverse and motivated workforce

The socio-demographic characteristics of teachers and principals and workforce dynamics are crucial factors to consider when examining the best policies for attracting and selecting candidates into teacher education and leadership preparation. Examining the ageing of the teaching workforce provides an estimation of the number of teachers who will be retiring in upcoming years. In combination with expected changes over time in student numbers, this helps forecast needs. Changes over time in the age and experience profiles of teachers and school leaders provide valuable information on human resources' dynamics.

Global changes over time in age and experience profiles are mixed, but many education systems are facing an ageing of their teacher population. This may translate into a challenge for renewal of the teaching workforce and would require training and support of large proportions of relatively junior teachers. The ageing of the workforce needs to be monitored alongside projections of student numbers, so that education systems can carefully plan recruitment needs to avoid future shortages.

On average across the OECD, teachers are about 44 years old, and 34% of them are over age 50 (Table I.3.1). Since the average pension age across the OECD is 64.3 for men and 63.7 for women, this means that education systems will have to renew at least one-third of their teaching workforce in the next 15 years, assuming student numbers to be stable (OECD, 2017, p. 93[14]). As expected, principals are generally older than teachers, with the average age for a principal being 52 on average across the OECD, eight years older than the average teacher (Table I.3.5). This is not surprising, as principals are usually recruited from among the ranks of teachers, and their positions often require higher academic credentials and more years of experience. These age patterns mean that policy makers will also face the challenge of renewing the principal workforce and preparing a new generation of school leaders over the next decade or so.

TALIS 2018 data show that, on average across the OECD, 68% of all teachers are female. Women make up more than half of the teaching workforce in all participating countries and economies, with the exception of Japan (Table I.3.17). But only 47% of principals are women (Table I.3.21). This suggests significant gender imbalances in the teaching workforce because of fewer numbers of men choosing to be teachers. This also suggests imbalances in the scope for career progression of female teachers from teaching to leadership roles, whether the cause is endogenous (a lesser propensity of women to apply for leadership positions) or exogenous (a lesser propensity for women to be selected for leadership roles).

Individuals' motivations to become teachers shed light on the aspects of the job that make the profession attractive. The most important motivations reported by teachers pertain to a sense of self-fulfilment through public service, through the opportunity to influence children's development and contribute to society, reported by around 90% of in-service teachers across the OECD (Table I.4.1). Factors pertaining to the financial package and working conditions of the profession are reported less often, by about 60% to 70% of teachers. TALIS further shows that in nearly all countries and economies, individuals with higher values in the social utility index tend to participate in more professional development activities (Table I.5.5). No such relationship is observed for personal utility motivations for the vast majority of countries/economies (Table I.5.6).

Policy pointer 1: Monitor and forecast future human resources needs of the system and prepare for the renewal of the teaching and principal workforces

Education systems should focus on renewing their teaching workforce by creating new positions of entry for individuals. This will not only create a breeding ground for high-quality candidates to enter the profession but will particularly help systems facing the retirement of a significant proportion of their teacher or principal workforce. Therefore, education systems need to carefully review their staffing needs and plans for the next 10 to 15 years, taking into consideration the socio-demographic changes of both their workforce and their student population.

Education systems also need to carefully design plans to attract and prepare large cohorts of new teachers and school leaders and to adequately support them to maximise retention in the profession. Indeed, shortages may also result from in-service teachers and school leaders leaving the profession prematurely, due to dissatisfaction, lack of recognition (real or perceived) or burnout.

Other possible avenues for renewing the teaching profession entail expanding the supply pool of potential teachers and creating more diverse pathways into teaching (OECD, 2005[4]). However, implementation of such measures needs to mitigate the risk of lowering standards for the profession. Thus, it is important to have institutions that monitor the quality of both initial teacher preparation and the individuals who are certified as teachers (OECD, 2019[12]).

Policy pointer 2: Design effective recruitment campaigns encouraging both men and women to join the ranks of teachers and school leaders

Countries and economies should engage in research to better understand the factors underlying differential recruitment of male and female candidates into teaching. Research on the differential progression of male and female teachers towards leadership roles is also warranted, as well as policies to overcome any identified barriers to career progression for female teachers. Countries facing particularly strong gender imbalances will need to engage in a more thorough examination of the underlying factors. A possible path of action is to conduct research on salary competiveness with jobs requiring a similar number of years of education as teaching careers, particularly those that tend to attract higher proportions of males. Research could also tackle certain cultural norms or expectations regarding gender roles that may be deterring male candidates from becoming teachers and female teachers from considering leadership roles.

Whenever the limited progression of female teachers to leadership roles is due to a lack of interest by female teachers in such positions, education systems may consider further differentiating teaching careers to offer promotion tracks within teaching roles as a way to strengthen the professional attributes of teaching careers. This could foster the intellectual fulfilment and job satisfaction of female teachers and, ultimately, their retention in the profession.

Recruitment campaigns should then build upon these insights. In particular, depending on the type of job targeted, consideration may be given to designing recruitment campaigns that are not gender neutral, emphasising that men can achieve professional growth as teachers and women as school leaders. Recruitment campaigns should also aim to portray teachers and school leaders as key contributors to society and the development of future generations, given the importance of these motivations for those who have entered the profession. Such campaigns should provide information about the financial packages and working conditions of these jobs and should praise their rewarding aspects, such as intellectual and social fulfilment and the possibility to continually learn on the job, benefit from job security and achieve work-life balance.

Policy pointer 3: Select candidates for the teaching profession who show high levels of intrinsic motivation

Another important aspect of renewing the profession is to select individuals with the right knowledge, skills and attitudes at the point of entry to the teaching profession. Indeed, one important finding from TALIS 2018 is the high level of social utility motivation among teachers and the fact that individuals scoring high on the social utility index are also more likely to engage in professional development activities later in their career.

While intrinsic motivation alone is not a pre-condition to being an effective educator, these results stress the importance of social motivation for teachers to participate in further training and become lifelong learners. Accordingly, selection processes at the point of entry to the profession should, to the extent possible, aim to identify and favour candidates who possess this public service motivation when choosing between equally qualified candidates.

It is equally important to nourish this intrinsic motivation of teachers throughout their career, and teachers' social utility motivation should be sustained and encouraged by schools and management staff (Jacobsen, Hvitved and Andersen, 2014[15]). Governments and professional development providers can also play a role through their professional development offer and related incentives (OECD, 2019[16]).

Goal: Enhance the prestige of teaching careers as a key element of their attractiveness

The prestige of the profession can help boost the attractiveness of teaching careers among prospective candidates and trainee teachers and can improve retention of effective teachers (Ingersoll and Collins, 2018[6]; Price and Weatherby, 2018[9]). Usually, careers with the highest prestige are also the ones that are able to attract and retain highly skilled candidates, as is the case in medicine or engineering. Accordingly, raising and maintaining the status and prestige of the profession have been a long-term endeavour and overarching goal of teacher policies. Critical to this goal are the professionalisation of the teaching workforce (Hargreaves, 2009[17]; Hargreaves, 2000[18]; Hoyle, 2001[19]; OECD, 2005[4]; Schleicher, 2018[11]), the working conditions of teachers (Borman and Dowling, 2008[20]), and the perception in the general public and society at large of teaching as a true profession, rather than a mid-level career (Dolton et al., 2018[21]; Ingersoll and Collins, 2018[6]; Smak and Walczak, 2017[22]).

On average across the OECD countries and economies that participate in TALIS, only 26% of teachers (Table II.2.1) and 37% of principals (Table II.2.8) agree that their profession is valued in society, with variations across countries from less than 5% to over 90% in the case of teachers. Male teachers, teachers under age 30 and novice teachers are more likely to believe that the profession is valued than female teachers and teachers age 50 and above or with more than five years of experience. TALIS findings also show that the perceived prestige of the profession can vary quite significantly over relatively short periods of time. Since 2013, 8 education systems have experienced significant deterioration in the perceived prestige of the profession, but 12 have seen significant improvement in the share of teachers who think that their profession is valued in society, sometimes by over 10 percentage points. This suggests that there is room for policy intervention (Table II.2.5).

TALIS findings also shed light on the extent to which perceived prestige relates to the attractiveness of the profession, captured through whether teaching was the teachers' first choice as a career. For 27 of the TALIS countries and economies, teachers who report feeling valued in society are more likely to have decided on teaching as a first career choice, after controlling for age, experience, type of contract and other relevant factors (Table II.2.6).

Policy pointer 4: Design effective communications and media campaigns to promote the complexity and intellectual stimulation of teaching careers, as well as the contribution of teaching professionals to society

An important policy lever in shaping the perceived prestige of the profession is to engage in communications campaigns designed to boost the public image and social prestige of teaching careers, especially in the media, by promoting the reality of teaching jobs in today's schools. Indeed, the views of parents and society at large are often shaped by the way teachers and teaching are portrayed in the media, as well as their own experience of schooling, usually dating back decades. These campaigns should ideally be developed in partnership with the profession to provide more authenticity in portraying the rewarding aspects of the job.

In order to convey the message that teaching has become a truly professional career, it is particularly important for such campaigns to emphasise the multiple aspects of teaching careers that have the attributes of a profession. As a start, such campaigns should highlight the complexity of teaching in an era characterised by rapid changes, digitalisation and inclusion of students with diverse profiles. They could also feature the diversity of tasks performed by teachers and the intellectual stimulation and rewards it brings them. Campaigns should also emphasise other professional attributes of teachers' work – such as opportunities for lifelong professional learning and professional growth, autonomy and teacher leadership, collaboration with peers, teachers' contribution to students and the future of society – as well as provide information on working conditions and financial aspects.

To the extent that female teachers and older and more experienced teachers are less prone to perceiving their profession as valued by society, campaigns could include specific messages directed to these groups to encourage retention of those already in the system. This could involve pinpointing opportunities for professional growth into new roles or highlighting success stories of female teachers who made a difference to their students, as a way of enhancing the self-confidence of female teachers.

However, it is important to acknowledge that communications campaigns are only the tip of the iceberg, and any effort to boost the prestige of teaching careers would likely require a systemic approach involving all aspects of attractiveness and retention: salary levels, public image, autonomy and collegiality, care for teacher well-being and intellectual fulfilment in the job.

Policy pointer 5: Develop a systemic approach to boosting the prestige and status of the profession to attract quality candidates to teaching and school leadership roles

Changes over time in the perceived value of the profession over time suggest that its prestige and the perception of it do not remain constant and could be driven by several social, economic and policy changes within countries – for better or for worse. The prestige of the profession could possibly increase if more high-quality candidates choose to enter teaching (Hargreaves, 2009[17]). In working out possible policy levers, however, trade-offs are inevitable. Many education systems, for example, face a trade-off between student-teacher ratios and average teacher salaries (OECD, 2005[4]). Thus, education systems need to assess what would be the most appropriate levers for improving the attractiveness of the profession in their specific circumstances. Factors for systems to consider include their institutional framework, their labour market for tertiary graduates, the motivation profile of their teachers and their budget constraints. For example, systems with a relative oversupply of teachers may find it more meaningful to improve working conditions (e.g. student-teacher ratios, support staff, hours for planning) than to make teachers' salaries more competitive. In some systems, aspects related to work organisation (e.g. opportunities for high-quality professional development, collaboration, autonomy and accountability requirements) may also be more powerful than financial elements to enhance the intellectual attractiveness of the profession. In systems with flat career structures, introducing some degree of career differentiation might allow teachers to see greater scope for continued professional growth after 15 or 20 years on the job.

To the extent that female teachers and older and more experienced teachers are less prone to perceiving their profession as valued by society, specific policy measures should target these groups, by developing new career stages and intermediate leadership roles to provide opportunities for career progression to experienced teachers, including those female teachers with no interest in school leadership roles. For example, Sweden has pursued a number of policy approaches since 2014 in its endeavour to boost the attractiveness of the profession, including a change in the salary scale to introduce wage progression linked to teachers' competences and development (see Box II.2.1).

DEVELOPING TEACHING PROFESSIONALS THROUGH HIGH-QUALITY PRE-SERVICE PREPARATION AND IN-SERVICE PROFESSIONAL DEVELOPMENT

Professional knowledge and skills, defined as a common set of knowledge and skills that are acknowledged through high-level qualifications, constitute the core elements of membership in a profession. Teachers and school leaders require advanced or graduate-level education and specialised knowledge and skills that are typically acquired through participation in initial training

programmes and continuous in-service professional development. As a result, the development of knowledge and skills takes place across diverse stages of the professional pathways of teachers and school leaders (OECD, 2016[8]).

Goal: Provide high-quality initial education or pre-service training to future teachers and school leaders and link it with continuous professional development

In relation to the attributes of professions, Ingersoll and Collins (2018, p. 202[6]) state that "... the underlying and most important quality distinguishing professions from other kinds of occupations is the degree of expertise and complexity involved in the work itself." In this context, an essential aspect of strengthening professionalism throughout the education system is to ensure that teachers and school leaders start off in their jobs with a solid knowledge base.

On average across OECD countries and economies in TALIS, 49% of teachers report a bachelor's degree or equivalent as their highest educational attainment and another 44% a master's degree or equivalent (Table I.4.8). Most teachers completed a regular, concurrent (rather than consecutive) teacher education or training programme, and 79% of teachers report that their formal education or training included content, pedagogy and classroom practice in some or all of the subjects they teach (Table I.4.14). TALIS findings support the idea that receiving pre-service training and/or in-service training in a given area is associated with a higher perceived level of self-efficacy in this area by teachers, and/or a higher propensity for them to use related practices. But in some systems, a significant share of teachers did not complete any formal teacher education or only completed fast-track or specialised education or training programmes. TALIS findings show that school leaders have attained, on average, a higher level of education than teachers, with 63% of school leaders holding a master's degree or equivalent, across the OECD (Table I.4.24). However, just a little more than half of school leaders (54%) actually completed a programme preparing them for their job before they took up their duties, whether in terms of school administration or principal training or an instructional leadership training programme or course (Table I.4.28).

"The assumption is that achieving a professional-level mastery of complex skills and knowledge is a prolonged and continuous process and, moreover, that professionals must continually update their skills, as the body of technology, skill, and knowledge advances." (Ingersoll and Collins, 2018, p. 205[6]). Under this approach, teachers and school leaders are considered lifelong learners, with different needs for training throughout their career path. Across the OECD, 94% of teachers and 99% of principals participated in at least one type of professional development activity in the 12 months prior to the survey (Tables I.5.1 and I.5.10).

A key task when considering teachers as lifelong learners is to ensure adequate linkages between the content of teachers' initial training and that of their continuous professional development. In this way, all aspects of a teacher's work will be covered at some point and consolidated and expanded upon over time (OECD, 2019[12]). Training in subject matter knowledge and understanding of the subject field and pedagogical competencies are the most frequent types of professional development that teachers participate in. Other elements often included in professional development relate to student behaviour and classroom management (across OECD countries and economies in TALIS, 50% of teachers had such content covered); teaching cross-curricular skills (48%) and use of information and communication technologies (ICT) for teaching (60%) (Table I.5.18). Certain areas still emerge as very common topics for in-service training. Conversely, teaching in multicultural or multilingual settings is more rarely included in both initial training (35%) and continuous professional development (22%), albeit with large cross-country variation.

Policy pointer 6: Offer alternative paths into the profession while preserving quality training

Faced with teacher shortages and the prospect of mass retirements in some countries, education systems are increasingly required to provide multiple ways into the profession to satisfy the demand for teachers, including fast-track or alternative routes. In doing so, they need to establish mechanisms to ensure that all teachers start their teaching career with adequate and quality training.

At the system level, a recent OECD review of initial teacher preparation identified a series of policies and initiatives to ensure quality of initial training. These include the establishment of rigorous accreditation institutions monitoring the work of teacher education providers (possibly including "fast-track" providers), teacher evaluation conducted at some point of teachers' initial training, and the establishment of teaching standards that define precisely what is required and expected of teachers when they enter training and when they are ready to start teaching (OECD, 2019[12]). At the school level, schools should also ensure that, regardless of local circumstances, all teachers are equipped with sufficient training in the content and pedagogy of the subjects they teach.

Policy pointer 7: Foster pre-service preparation of school leaders

There is considerable room to improve the professionalism of school leaders by creating pre-service programmes that help them develop the leadership skills they need to effectively engage in the various practices associated with school success. These include developing and conveying a shared vision, cultivating shared practices, leading teams towards school goals, instructional improvement, developing organisational capacity, and managing change (Darling-Hammond et al., 2007[23]).

Since TALIS results show that participation in professional development is the most common route principals use to develop their skills, education systems could provide prospective school leaders with more opportunities to develop leadership skills prior to their appointment as school principals. This could be done either through specific training modules that prospective school principals would need to undertake or validate ahead of taking up leadership duties (e.g. by making such training a prerequisite for any appointment to a leadership position, as is done in Spain)[2] or through the creation of intermediate leadership roles for experienced teachers interested in growing into leadership roles.

Policy pointer 8: Ensure links between the content of initial teacher education and professional development activities

Countries and economies need to ensure that the curricula of initial education and in-service professional development are consistent, well-connected and complementary. This is not always easy. The first reason for this is the limited feedback between schools and initial teacher education (OECD, 2019[12]). But it is also a result of the "*stickiness* (resilience) of the implicit know-how of teachers" (Moreno, 2007[24]), whereby teachers may consider what they have learned as part of their initial education and during their first years of experience as a fixed or set reference.

Continuous professional development activities need to consider and build upon the knowledge and skills that teachers and school leaders acquired as part of their initial education or pre-service training. Thus, curricula need to be designed in a concerted manner for pre-service and in-service training.[3] The major challenge for establishing this continuum between initial teacher education and in-service training is articulating each stage in a cohesive manner. This may require systematic alignment across each education system, establishing consultations, feedback loops and, if these responsibilities are shared across several entities, collaboration between the different actors and stakeholders of initial teacher preparation and professional development systems.

Goal: Provide high-quality continuous professional development, with a focus on high-need areas

TALIS data show that teachers attended about four different types of continuous professional development activity in the 12 months prior to the survey, and 82% of teachers report that the professional development activities they participated in had an impact on their work (Tables I.5.7 and I.5.15). The forms of professional development with the highest participation are courses or seminars attended in person (76% of teachers across the OECD) and reading professional literature (72%). However, participation is lower for more collaborative forms of professional development: only 44% of teachers participated in training based on peer/self-observation and coaching, learning and networking. This is despite the fact that according to teachers' reports, impactful professional development programmes are based on strong subject and curriculum content and involve collaborative approaches to instruction, as well as the incorporation of active learning. Evidence from the previous cycle of TALIS indicates that teachers who had positive views of their self-efficacy and job satisfaction are more likely to engage in more school-embedded professional development activities (Opfer, 2016[25]).

Research evidence is, to a large extent, consistent with TALIS findings. It has shown that, although traditional training in the form of courses or seminars can be an effective tool (Hoban and Erickson, 2004[26]), school-embedded professional development, such as peer-learning opportunities, tends to have a larger impact on teaching practices and can significantly reduce the cost of training (Kraft, Blazar and Hogan, 2018[27]; Opfer, 2016[25]). In particular, a recent meta-analysis review of 60 studies that employed causal research designs, found that teacher coaching (i.e. a school-embedded approach to in-service training) had a positive impact on both teachers' instruction and students' achievement (Kraft, Blazar and Hogan, 2018[27]).[4]

Teachers' reports on areas of high need for professional development highlight the areas that should be prioritised by policy makers and professional development providers to build the capacity of teachers and school leaders. It also highlights an increasing awareness among teachers regarding identifying areas in which they need to update their teaching competencies, based on contemporary challenges and the policy priorities of education systems.

Training in teaching students with special needs[5] is the professional development topic for which the highest percentage of teachers (22%) report a high need (Table I.5.21) and, while participation in professional development on this topic has experienced one of the highest increases between 2013 and 2018, the percentage of teachers reporting a high need for it has also experienced one of the highest increases over the same period (Tables I.5.27 and I.5.28). Reports of school leaders corroborate this high level of need: 32% of school principals report that delivery of quality instruction in their school is hindered by a shortage of teachers with competence in teaching students with special needs (Table I.3.63). This shortage ranks among the most frequent resource issues reported by school principals.

The second-highest area of professional development for which teachers (18%) report a high need is ICT skills for teaching (Table I.5.21). The frequency with which teachers have students use ICT for projects or class work has risen in almost all countries since 2013, to a point where 53% of teachers across the OECD now report frequently or always using this practice (Tables I.2.1 and I.2.4). This reflects not only the broader trend of digitalisation, the spread of ICT and the dissemination of these technologies in all spheres of society, but also the renewal of the teacher workforce, with younger teachers being more familiar with these technologies.

However, TALIS data suggest that there is limited preparation and support available for teachers in this area. Only 56% of teachers across the OECD received training in the use of ICT for teaching as part of their formal education or training, and only 43% of teachers felt well or very well prepared for this element when they completed their initial education or training (Tables I.4.13 and I.4.20). Apart from training, 25% of school leaders report a shortage and inadequacy of digital technology for instruction as a hindrance to the provision of quality instruction, which suggests that teachers may be limited in their use of ICT (Table I.3.63).

Teaching in a multicultural or multilingual setting is the next highest area of high need for professional development for teachers (15%) (Table I.5.21). Between 2013 and 2018, there has been a global increase in the share of teachers expressing a high need for training in teaching in multicultural or multilingual settings (Table I.5.28). Yet, 33% of teachers on average across the OECD report that they do not feel able to cope with the challenges of a multicultural classroom (Table I.3.38). This is increasingly an issue, as the integration of world economies, large-scale migration and surges in refugee flows have all contributed to forming more ethnically, culturally and linguistically diverse learning environments in the countries that have been most exposed to these phenomena. Therefore, ensuring high-quality learning experiences for this diverse student body is a policy priority. On average across the OECD, 17% to 30% of teachers teach in schools with a culturally or linguistically diverse student composition (Table I.3.25), depending on the criterion considered.

Policy pointer 9: Promote school-based, collaborative and active professional development that responds to local needs and is adapted to school-specific contexts

Although TALIS data and research findings concur to suggest that school-based and collaborative professional development could have potential for more impactful effects on teaching practices and student achievement (Borko, 2004[28]; Opfer, 2016[25]), a comparatively low percentage of teachers participate in collaborative training activities. System-level and school-level policies for teachers' professional development could promote school-based and collaborative in-service training.

Indeed, approaches in which the design and implementation of effective professional development is led at the school level would ensure that the focus of the training responds to locally identified needs and takes account of the school-specific context. This would make professional development more relevant to the daily jobs of participants. Other advantages of school-based professional development include efficiency gains and cost savings, as well as the potential to enhance collaboration among teachers within the school and initiate or strengthen collective reflection on school improvement. For instance, school leaders and teachers could allocate part of their monthly or weekly working hours to discussing issues involving instruction in their classroom, exchanging ideas and reflecting on their practices. Furthermore, each school could create a system of collective professional development based on peer observation of classroom instruction, inspired by the Japanese lesson study model (Avalos, 2011[29]).

Policy pointer 10: Tailor support for integrating ICT in teaching and dissemination of good practices

International surveys and studies conducted in international and national contexts highlight that the effective use and integration of ICT in the classroom depends on teachers' training in ICT, collaboration with peers, teachers' beliefs about self-efficacy and purposes of ICT use in teaching, as well as availability of support infrastructure (Fraillon et al., 2014[30]; Gil-Flores, Rodríguez-Santero and Torres-Gordillo, 2017[31]; OECD, 2015[32]).

In this context, teacher professional learning opportunities could provide a useful mechanism to support teachers in their use of ICT for teaching. Training on ICT skills for teaching should reflect how technology can be used to amplify great teaching and empower teachers to become better instructors. In particular, it would be important for collaborative forms of professional learning to move forward from just helping teachers acquire the tools and skills to master certain technological competencies and towards working collectively to find ways to tailor technology to specific subjects and specific activities within those subjects, as a way of building teachers' competence in dealing with use of technology in the classroom.

Policy pointer 11: Incorporate teaching strategies for diverse settings in the curricula of initial and continuous teacher training

Teachers also need to prepare for teaching multicultural, multilingual and mixed-ability classes. Education systems need to have a systemic framework to prepare and support the teaching workforce to teach in diverse settings, including in diverse multicultural environments. To do so, they need to include this issue in the vision, planning and curricular design of initial training and in-service professional development.

Training systems could offer opportunities for student teachers to study abroad as part of their formal teacher education or training. This would allow future teachers to develop intercultural and interpersonal skills useful for teaching culturally diverse classes, as indicated by past research (Rundstrom Williams, 2005[33]). A number of countries in Europe have also adopted policies to hire teachers from diverse backgrounds and short-term preparation programmes for migrant teachers joining

the workforce, so that the teaching workforce can be more heterogeneous and reflect the diversity of the student body (Cerna et al., 2019[34]). These fast-track programmes enable newly arrived teachers to learn about the pedagogical practices, teacher-student interactions, classroom routines and traditions specific to their host countries. Teacher training programmes for diverse classrooms should include pedagogical approaches for second-language learning and support strategies to help students become socially integrated in diverse settings (Cerna et al., 2019[34]). These learning opportunities have been introduced by many countries in the form of elective courses and modules in their initial teacher education programmes (Cerna et al., 2019[34]).

Going beyond training opportunities, school communities should also play an active role in preparing teachers to work in diverse environments. Schools should take into account teachers' abilities and preparedness to teach in diverse environments when allocating teachers to specific classrooms, and should team up teachers with more and less experience in this area so they can learn from one another.

Policy pointer 12: Reinforce training for teaching students with special needs

Education systems should develop strategic policy actions to improve the quality and increase the number of teachers equipped to teach students with special needs, as they are increasingly enrolled in regular schools and classes.

As a first step, it is important for education systems to invest in detection and diagnosis of students with special needs. What teachers perceive as behavioural issues (misbehaviour, low performance) could have other explanations. Misdiagnosis is costly for students, teachers and education systems as a whole. So, an increased emphasis on training teachers to detect students who need to be directed to specialists for proper diagnosis would be desirable. In addition, education systems need to ensure that all students have access to professional diagnosis. This can be achieved by developing professional capacity for detection and diagnosis within schools or, in systems where private providers are responsible for such diagnoses, by ensuring that financial constraints do not impede the diagnosis of socio-economically disadvantaged students.

The high need for training in this area reported by teachers, as observed in TALIS, could also signal that these teachers' schools do not have the necessary resources in terms of infrastructure or educational resources to support teachers serving students with special needs. A specific financial subsidy for mainstream schools that serve students with special needs (e.g. for recruiting teacher aides) could improve both human and educational resources.

Goal: Lift barriers to participation in professional development

On average across the OECD, around half of teachers (54%) and principals (48%) report that participation in professional development is restricted by schedule conflicts (Tables I.5.36 and I.5.40). The next two most important barriers reported by teachers and, to a lesser extent, by school leaders, are a lack of incentives to engage in these activities and their participation costs. Teachers' participation in professional development programmes is mainly supported by mechanisms such as releasing them from teaching duties for activities during regular working hours, providing them with materials needed for activities and reimbursing them for participation costs.

Policy pointer 13: Allow time to participate in professional development

While access to and participation in professional development programmes are both very high in the countries and economies participating in TALIS, the high percentage of teachers and school leaders reporting concrete barriers to participation suggests that more can be done to support continuous training. The most successful education systems can provide inspiration on how to achieve this. They have embedded professional development as an integral part of the work of teachers, and they do what it takes to facilitate participation, as illustrated by the entitlement of teachers in Singapore to 100 hours of professional development per year (Bautista, Wong and Gopinathan, 2015[35]).

Indeed, an efficient manner of addressing scheduling conflicts as barriers to in-service training is to ingrain professional development in the day-to-day work of teachers and school leaders (Darling-Hammond, 2017[2]). A good example is the case of Victoria (Australia), where teachers adopt a professional-learning-community approach, by collectively gathering evidence on students' learning, identifying students' needs and targeting their professional learning to address these issues (Darling-Hammond, 2017, p. 304[2]).

Policy pointer 14: Create or foster incentives to participate in professional development

The notion of incentives to encourage professional development is directly linked to the question of what motivates teachers and school leaders to engage in further training. Typically, this is to improve their practices or know more about particular areas of their work. Consequently, one of the main incentives to encourage participation in professional development is to develop a training offer that matches teachers' needs. However, more often than not, the needs of teachers and schools leaders do not align with the training offer put in place by schools or national education systems (Opfer and Pedder, 2011[36]).

An efficient way to identify and respond to the needs of teachers is to adopt a school-embedded approach to teacher training that allows teachers and school leaders to participate in the design or selection of professional development better suited to their needs. In decentralised systems, earmarked funds could be allocated to schools to invest in professional development activities for teachers and school leaders. Training at the school could be grounded in peer work, collaborative work and other tools that involve all teachers with leaders within their school.

Another crucial incentive for professional development is recognition, as an essential attribute of the work of teachers and school leaders, as well as a stepping stone for professional growth and career evolution. The validation of certain competencies through participation in professional development could be considered in career progression, recruitment or school assignments, following the model of Korea where, after three years of service, teachers are eligible for 180 hours of professional development to obtain an advanced certificate, which can lead to a salary increase and eligibility for promotion (Darling-Hammond et al., 2009[37]).

SUPPORTING TEACHING PROFESSIONALS' GROWTH THROUGH INDUCTION, MENTORING AND COLLABORATION

While initial preparation of teachers and school leaders and their subsequent professional development activities are critical elements for developing professional knowledge and skills, a range of tangible support structures are also used within education systems and schools to support the process of teachers' continuous professional growth.

Goal: Provide novice teachers and newly appointed school leaders with tailor-made support

Among all the steps of a teacher's career pathway, the early career years are those that deserve the greatest support and attention to ensure effectiveness and well-being. New teacher graduates mostly enter the profession with some degree of training through initial teacher education programmes, as well as some practical training opportunities. However, TALIS 2018 data shows that teachers in their early career years tend to work in more challenging schools (schools that have a higher concentration of students from socio-economically disadvantaged backgrounds and/or students from disadvantaged backgrounds) and 22% of novice teachers report that they would like to change to another school if that were possible (Tables I.4.32 and I.4.33). In addition, novice teachers feel less confident in their ability to teach, particularly in their classroom management skills and their capacity to use a wide range of effective instructional practices (Table I.2.20). This result could be linked to the amount of time they have available for planning and teaching their classes, as novice teachers spend less time actually teaching than more experienced teachers (Table I.2.13). These findings highlight the importance of providing additional support activities and structures in the initial years of teaching to help novice teachers to cope with the challenges they face and maintain their levels of motivation (OECD, 2019[12]).

Induction to teaching and mentoring are mechanisms to support teachers new to the school or the profession. But despite empirical evidence showing that teachers' participation in induction and mentoring is beneficial to student learning (Glazerman et al., 2010[38]; Helms-Lorenz, Slof and van de Grift, 2013[39]; Rockoff, 2008[40]) and the fact that school principals generally consider mentoring to be important to support less experienced teachers in their teaching (Table I.4.63), these programmes and activities cannot be considered commonplace. On average across the OECD, 51% of novice teachers report not having participated in any formal or informal induction activity at their current school (Table I.4.39), and only 22% have an assigned mentor (Table I.4.64).

Policy pointer 15: Review the distribution of novice teachers to schools

Teacher shortage is one of the most pressing problems faced by current education systems. Although there are many reasons for teacher shortages, one of the most salient factors is attrition in the early years of teaching. For example, in Australia, 30% to 50% of all teachers leave the profession in the first five years. This is also the case for 32% of teachers in England (Department for Education, UK, 2019[41]). TALIS data show that teachers in their early career years tend to work in more challenging schools. Thus, one solution for reducing attrition in the early years is to review how novice teachers are distributed across schools, with a view to assigning them to less challenging working environments in their first placements, and also to encourage more experienced teachers to work in disadvantaged schools, to reduce the need to staff them with less experienced teachers. An additional advantage of such an approach would be the potential effect of fostering equity, as students in challenging schools would be taught by more experienced teachers (Sanders and Rivers, 1996[42]).

In countries with more centralised teacher allocation and compensation mechanisms, a possibility would be to create a fixed-term first assignment for recent graduates of initial teacher education programmes, using a separate algorithm that would assign them only to a subset of schools considered less challenging. A complementary approach would be to create salary incentives for experienced teachers working in less challenging schools to accept teaching positions in more challenging schools. The goal of this approach would be to change mindsets, so that teaching in more challenging schools would be seen as a prestigious stage in a teacher's professional growth and career trajectory, rather than a necessary first ordeal, and would be recognised accordingly in career structures and financial terms. However, several education systems have introduced financial incentives to attract teachers to schools with more challenging circumstances with mixed results and little evidence of the effect of such measures on teacher allocation across schools (OECD, 2018[3]). One possible explanation for this could be that financial incentives have to be substantial to be effective.

Figure II.1.3 [1/2] **Supporting teaching professionals' growth through induction, mentoring and collaboration**

Countries/economies where the indicator is **above** the OECD average
Countries/economies where the indicator is **not statistically different** from the OECD average
Countries/economies where the indicator is **below** the OECD average

	Percentage of teachers who **did not** take part in formal or informal induction activities at the current school	Percentage of novice teachers who have an assigned mentor at the current school	Percentage of teachers who "agree" or "strongly agree" that there is a collaborative school culture that is characterised by mutual support	Percentage of teachers who report participating in collaborative professional learning at least once a month	Percentage of teachers who received feedback in the 12 months prior to the survey report that it had a positive impact on their teaching practice	Percentage of teachers who received feedback at some point, based on at least four different methods
	Vol I, Chapter 4	Vol I, Chapter 4	Vol II, Chapter 4	Vol II, Chapter 4	Vol II, Chapter 4	Vol II, Chapter 4
Alberta (Canada)	55	25	83	29	79	55
Australia	28	37	76	39	77	59
Austria	77	11	83	13	63	41
Belgium	57	25	76	4	52	35
Flemish Comm. (Belgium)	52	40	77	4	59	38
French Comm. (Belgium)	62	9	75	3	43	33
Brazil	61	33	79	27	77	67
Bulgaria	62	18	78	20	73	77
CABA (Argentina)	76	6	87	15	77	29
Chile	66	7	71	24	66	56
Colombia	46	22	76	19	83	74
Croatia	45	13	79	8	77	33
Czech Republic	43	26	87	23	73	74
Denmark	63	15	85	13	59	32
England (UK)	23	37	74	26	75	64
Estonia	69	17	84	19	72	65
Finland	43	10	79	9	57	13
France	83	17	73	3	54	28
Georgia	85	15	95	24	89	78
Hungary	70	27	82	14	83	66
Iceland	66	18	86	36	69	18
Israel	59	47	83	31	79	46
Italy	75	5	81	18	67	24
Japan	81	40	83	6	80	59
Kazakhstan	33	59	93	32	89	90
Korea	74	16	79	13	78	75
Latvia	56	16	91	12	88	86
Lithuania	79	9	87	11	75	84
Malta	50	23	80	13	72	46
Mexico	60	17	74	33	83	76
Netherlands	35	41	78	15	70	58
New Zealand	26	56	77	44	77	77
Norway	65	18	95	43	69	34
Portugal	60	14	75	5	58	33
Romania	63	22	91	11	89	90

Source: OECD, TALIS 2018 Database, Tables I.4.39, I.4.64, II.4.24, II.4.1, II.4.48 and II.4.47.

StatLink http://dx.doi.org/10.1787/888934083126

Figure II.1.3 [2/2] **Supporting teaching professionals' growth through induction, mentoring and collaboration**

Countries/economies where the indicator is **above** the OECD average
Countries/economies where the indicator is **not statistically different** from the OECD average
Countries/economies where the indicator is **below** the OECD average

	Percentage of teachers who **did not** take part in formal or informal induction activities at the current school	Percentage of novice teachers who have an assigned mentor at the current school	Percentage of teachers who "agree" or "strongly agree" that there is a collaborative school culture that is characterised by mutual support	Percentage of teachers who report participating in collaborative professional learning at least once a month	Percentage of teachers who received feedback in the 12 months prior to the survey report that it had a positive impact on their teaching practice	Percentage of teachers who received feedback at some point, based on at least four different methods
	Vol I, Chapter 4	Vol I, Chapter 4	Vol II, Chapter 4	Vol II, Chapter 4	Vol II, Chapter 4	Vol II, Chapter 4
Russian Federation	65	27	89	18	84	89
Saudi Arabia	63	19	82	36	76	81
Shanghai (China)	50	67	91	70	85	88
Singapore	15	54	83	48	89	78
Slovak Republic	40	22	81	2	84	62
Slovenia	48	5	89	26	83	54
South Africa	31	50	73	13	93	91
Spain	74	10	77	21	55	29
Sweden	70	17	80	44	64	32
Turkey	76	15	76	29	63	47
United Arab Emirates	32	43	84	54	84	84
United States	39	39	79	34	79	60
Viet Nam	55	30	96	27	93	96
OECD average-31	**58**	**22**	**81**	**21**	**71**	**52**

Source: OECD, TALIS 2018 Database, Tables I.4.39, I.4.64, II.4.24, II.4.1, II.4.48 and II.4.47.
StatLink http://dx.doi.org/10.1787/888934083126

When assignment of novice teachers to challenging schools is unavoidable, school leaders have a role to play in easing the transition of recent graduates to the profession. This can be done by providing the induction and coaching they need, allocating them to less challenging classes, making sure that their teaching assignments allow some degree of efficiency gain in lesson preparation (e.g. having several groups of the same grade) or pairing them with more experienced teachers in joint teaching arrangements.

Policy pointer 16: Give school leaders an active role in the development and promotion of induction and mentoring opportunities to maximise participation of novice teachers

Induction programmes should be designed to aid new practitioners or practitioners who have taken on new roles to adjust to their working environments and become acquainted with the realities of their jobs, as well as to avoid early attrition from the profession. A crucial element in planning induction opportunities for teachers is for induction to be adapted and tailored to the context of the school and student composition. Induction programmes could include team-teaching opportunities, as they can foster greater collaboration among teachers within schools and help new teachers to learn from experienced colleagues who are more familiar with the specific school context. For inspiration, policy makers could explore approaches pursued in Austria (see Box II.4.2).

At the same time, school leaders need to encourage and support teachers to take an active part in induction and mentoring activities. To guarantee participation in induction, it could be useful to allocate, within teachers' weekly or monthly schedules, a certain number of hours of paid non-teaching time dedicated to induction or mentoring activities. School leaders could identify which teachers are best suited to act as mentors for the new teachers at their school. But time is a constraint, and education systems can support this process by allowing mentors and mentees to reduce their teaching load, so that they can balance

their working time between lesson preparation and actual teaching and can meet the demands of participating in induction. A possible approach could be to provide financial support to schools (in decentralised systems) or additional teacher allocations (in centralised systems) to enable recruitment of novice teachers on a full-time basis but with a reduced teaching load that would increase incrementally over the first years in the profession as they gain experience. Likewise, the contribution of mentors could be acknowledged by lightening their teaching load, as well as offering other incentives (salary bonus or promotion to a mentor-teacher role).

Policy pointer 17: Develop mentoring programmes for newly appointed school leaders

Besides pre-service preparation, education systems could also provide school leaders with other relevant opportunities for in-service training upon appointment. A possible way to achieve this would be to create professional networks of principals, in which more experienced principals mentor those who are newly appointed, allowing school leaders to learn from one another and share good practices. Several studies examining the advantages and disadvantages of mentoring for new school principals could guide the design of such programmes (Daresh, 2004[43]; Southworth, 1995[44]). If mentors understand the needs of new school leaders and are paired well with mentees, mentoring for new school leaders can could help newcomers adapt to their new role and occupational identity.

Goal: Make the most of teachers' time to support quality teaching and the use of effective teaching practices

The frequent and widespread use of high-leverage pedagogies and teaching practices is an important element of teaching quality. Among the wide range of instructional practices used by teachers in class, those aimed at enhancing classroom management and clarity of instruction are widely applied. However, practices involving cognitive activation[6] are less widespread, with only about half of teachers using most of these methods frequently across the OECD (Table I.2.1). This is despite the fact that about 70% to 80% of teachers and more than 80% of school leaders view their colleagues as open to change and their schools as places that have the capacity to adopt innovative practices (Tables I.2.35 and I.2.39) and over 80% of teachers feel confident in their ability to vary instructional strategies in their classroom and help students think critically (Table I.2.20). This suggests that teachers may face constraints in implementing quality teaching practices.

One such constraint may relate to their ability to collaborate with their colleagues to develop and implement effective teaching practices. Indeed, TALIS findings suggest the existence of a significant positive association between teachers' engagement in deeper forms of collaboration and the use of cognitive activation practices in the classroom (Table II.4.17). The collaborative activities that particularly stand out among the eight activities covered in TALIS[7] are: teachers' engagement in collaborative professional learning and joint activities across different classes and age groups (Table II.4.19).

Another constraint may relate to time, as some important changes over time in teachers' use of time are also observed. Overall, during a typical week, teachers report teaching a higher number of hours in 2018 than in 2013 (in about half of the countries with available data). Over the same period, the number of hours teachers spend on planning and preparing lessons has decreased (Table I.2.30). This may not be worrisome, as long as lesson preparation has become more effective. This is made possible, for example, through efficiencies in content (such as reusing lesson materials for different classes), the use of technology, or ageing of the teacher population and related changes in the experience profile of the teacher workforce (as lesson preparation time is typically longer for novice teachers than for more experienced teachers).

An important precondition for use of quality teaching practices is also to make the most of classroom time to implement them. On average across the OECD, teachers report spending 78% of classroom time on actual teaching and learning (the equivalent of 47 minutes of a 60-minute lesson), with the rest of classroom time spent on keeping order in the classroom (13% or 8 minutes) and administrative tasks (8% or 5 minutes) (Table I.2.10). It is noteworthy that 11% to 17% of teachers report low levels of self-efficacy on the various indicators of classroom management and discipline (Table I.2.20) and that, in most countries and economies participating in TALIS, there is a significant inverse relationship between perceived self-efficacy in classroom management and class time spent on keeping order, although the direction of causality cannot be determined (Table I.2.26).

Policy pointer 18: Support teachers in the use of effective teaching practices

Initial and continuous teacher learning should focus on the use of pedagogies related to cognitive activation, as they require students to engage in critical thinking, problem solving and evaluation of knowledge and may be demanding for teachers to use (Lipowsky et al., 2009[45]). Teachers should be trained in the use of these practices, be aware of their importance, feel able to use them and enjoy the conditions needed to actually implement them. Clinical experiences in the field could become opportunities where teachers can explore such strategies and acquire related skills (Cheng, Cheng and Tang, 2010[46]). TALIS findings also suggest that teachers who frequently engage in professional collaboration, especially collaborative professional learning and joint activities across different classes and age groups, tend to use cognitive activation practices more often.

Policy pointer 19: Rethink teachers' schedules and school time, their space to promote small-group instruction, and optimise classroom time

To design and implement effective pedagogical practices, teachers need time to prepare lessons and to try out, revise and improve specific practices. Thus, it is important for policy makers and other stakeholders to reflect on how people, time, space and technology can be used most productively in education. This includes ensuring that teachers have enough time for activities that maximise student learning (such as lesson preparation, professional collaboration, meeting with students and parents, and participating in professional development), as well as flexibility in designing effective learning environments that optimise classroom time.

One common constraint reported by teachers, and an important resource priority for them, relates to the size of the groups of students they teach. However, from a system perspective, the opportunity cost of reducing class size is high, and this option is unaffordable in many education systems. Still, there seems to be room for more creative solutions. For example, teachers should be encouraged and supported to set up their classroom space in a way that is conducive to more individualised and active learning approaches, splitting the room into different areas and groups, with adequate materials for students to complete tasks. Past research found that students' attitudes about group-based learning improve with comfort and physical ease of communication within groups, such as small tables facing one another and facilities for easy mobility in the room (Espey, 2008[47]).

School leaders could also be given increased discretion to use human resources in more flexible ways at the school level, to enable teachers to work with smaller groups at least part of the time. An additional advantage of such an approach could be an opportunity to trial new ways of working in teams with other teachers and support staff.

Goal: Foster a school and classroom climate conducive to student learning and well-being

An important issue for policy makers, principals, teachers and parents alike is to ensure that schools are safe environments, that the classroom climate is conducive to student learning, and that relationships among students and school staff encourage their development and well-being. Fortunately, on average across the OECD, schools in 2018 are, for the most part, immune from weekly or daily school-safety incidents and, thus, provide students with safe learning environments. However, one issue stands out in the reports of school principals on school safety. Reports of regular incidents related to intimidation or bullying among students occur at least weekly in 14% of schools (Table I.3.42). With respect to the classroom climate, TALIS 2018 results indicate that teachers perceive the relations they have with their students as very positive (Table I.3.46), and teachers' belief in the importance of student well-being has progressed in the vast majority of countries since 2008 (Table I.3.49).

Policy pointer 20: Implement system-level and school-level policies and practices to combat all forms of bullying

Teachers and school staff can play a crucial role in preventing bullying by working closely with students to build strong and healthy interpersonal relationships. A first priority is to promptly identify cases of bullying. Training programmes for teachers and school leaders should be updated with the most recent changes over time in bullying incidents to better prepare schools for the emerging challenges related to student safety. Training programmes and other professional learning opportunities, such as coaching activities and professional networks, should allow educators to communicate with one another and focus on the different contexts and situations where bullying incidents take place, both within and outside the school environment, in the real world and on line. Support from behavioural experts can also help teachers to identify victims of bullying and intimidation, and training from counsellors can enable teachers to be better prepared to intervene and support all students who are victims of bullying.

A second priority is to ensure that all bullying incidents are addressed. As part of an education system's role in providing welcoming, respectful and safe learning environments, system-level policies could establish a code of conduct for schools and students to combat bullying as a national priority and could also develop monitoring frameworks. This can ensure that all schools are held accountable for implementing measures against bullying and encourage viewing this issue as a shared responsibility.

A third priority is to ensure that effective responses are put in place whenever a bullying situation is identified within a school. A review of 21 studies on the effectiveness of policy intervention for school bullying found that such policies might be effective at reducing bullying if their content is based on evidence and sound theory and if they are implemented with a high level of fidelity (Hall, 2017[48]). School-level disciplinary policies could focus on monitoring and supervision of all students, communication and partnership among teachers, parent-teacher meetings and classroom management. Furthermore, information sharing and supportive communication are important to help students cope with the harmful effects of being bullied. School programmes should educate students on measures to take when they witness bullying. This can help schools to promptly identify incidents of bullying and develop suitable responses. Finally, including social-emotional learning in regular classroom hours can improve students' interpersonal and intrapersonal skills and help build an overall healthy environment in the school.

Goal: Develop a collaborative culture within schools

Another powerful mechanism to stimulate teachers' ongoing professional learning lies in the power of collaboration with their peers within their school. Research has pointed out the value of collaboration in enabling learning for teachers themselves, stemming from the exchange of ideas and peer interactions (Goddard, Goddard and Tschannen-Moran, 2007[49]). This learning process allows teachers to learn from each other's practices and experiences to improve their own practices (Reeves, Pun and Chung, 2017[50]). Collaboration can also provide a support mechanism for teachers working in challenging environments, through interdependence and help among colleagues (Johnson, Kraft and Papay, 2012[51]).

The many forms of collaboration can be categorised in two groups, based on the nature of teacher interactions. Some collaborative activities, identified in TALIS as "professional collaboration",[8] imply a deeper level of co-operation among teachers and a high degree of interdependence among participants (Little, 1990[52]), while other forms of interaction include simple "exchanges and co-ordination"[9] between teachers (OECD, 2014[53]; OECD, 2009[54]). In line with previous TALIS findings, professional collaboration remains less prevalent in 2018 than simple exchanges and co-ordination between teachers (Table II.4.1). Unfortunately, data also show that large proportions of teachers report never engaging in these deeper forms of collaboration (Table II.4.1), and regression analyses show that older teachers tend to engage less often in professional collaboration in a number of countries and economies (Table II.4.31).

Giving opportunities for staff to participate in school decisions is another way in which teachers can work with other teachers in the school. Thus, school leaders can foster collaboration as well as a culture of collaboration in the school by promoting collaborative and collective decision making. TALIS findings suggest that teachers whose school provides staff with opportunities to participate in school decisions also tend to engage in deeper forms of collaborative activities more frequently (Table II.4.33). Thus, it is encouraging that, on average across the OECD, 77% of teachers agree that their school provides staff and parents with opportunities to actively participate in school decisions (Table II.4.24) and that these proportions have increased significantly since 2013 in 13 countries and economies (Table II.4.27).

TALIS findings affirm the importance of collegiality for collaboration, since teachers who agree that there is a collaborative school culture characterised by mutual support also tend to engage more often in professional collaboration in all countries and economies (Table II.4.30). The good news is that TALIS data show that a large majority of teachers concur on the existence of a collegial school climate in their schools. More specifically, respondents agree that teachers can rely on each other in the schools they work in (95% of principals and 87% of teachers) and that there is a collaborative school culture characterised by mutual support (95% of principals and 81% of teachers) (Tables II.4.24 and II.5.9). However, the latter opinion is less prevalent in a number of countries, where it is shared by less than 75% of teachers (Table II.4.24). Over the past five years, views on collegiality have improved in around one-third of the TALIS countries and economies with comparable data and have deteriorated in only one country (Table II.4.27).

Policy pointer 21: Harness the potential of collaborative professional development and professional learning communities to initiate and spread a school culture of collaboration

Collaborative professional development is, potentially, a cost-effective policy lever for initiating and extending a culture of collaboration within schools that could be implemented with limited mobilisation of extra resources (Darling-Hammond, 2017[2]). Indeed, TALIS findings show that participation in collaborative forms of professional development is associated with teachers' frequent engagement in professional collaboration. When asked about impactful professional development they participated in, teachers often cite opportunities for collaborative learning as a key feature of their professional development. These insights from TALIS suggest avenues for policy intervention within schools. Indeed, it is a missed opportunity that, in spite of its potential to spur teachers' learning and shape their collaborative practices, participation in collaborative professional learning is still a marginal practice across TALIS countries and economies, with only 21% of teachers engaging in collaborative professional learning at least once a month (Table II.4.1). Thus, school leaders could play a critical role in systematically offering school-wide and school-based collaborative professional development opportunities.

Opportunities for collaboration that involve key characteristics of professional learning communities (PLCs) of teachers within and across schools, can be an instrumental form of collaborative professional development, as they are collective goal-driven professional development activities. PLCs involve a routine of teacher collaboration for knowledge sharing, structures and purposeful interactions and collective improvement (Antinluoma et al., 2018[55]; Lomos, Hofman and Bosker, 2011[56]; Spillane, Shirrell and Hopkins, 2016[57]). Past OECD research (Kools and Stoll, 2016[58]; Vieluf et al., 2012[59]) has pointed out the value that professional learning communities offer by constantly providing feedback to teachers, thus supporting incremental change and positively affecting instructional quality and student achievement (Bolam et al., 2005[60]; Louis and Marks, 1998[61]).

While the role of school leaders is key, education systems could encourage and facilitate this process by providing all schools with earmarked funding to spend on collaborative professional development activities, and training providers could also review and restructure existing continuous professional development programmes to allow for greater collaboration between colleagues. For example, existing courses and seminars could be led by facilitators with time for teachers to work in groups, discuss ideas and develop small projects together.

Experiences with teachers and schools abroad can be a unique collaborative professional development opportunity for teachers. Teacher education institutions should aim to include mobility abroad as part of teachers' initial preparation, given its positive relationship with subsequent collaborative behaviours of teachers. But school leaders and professional development providers could also reflect on how an international mobility dimension could be integrated into teachers' in-service professional development in the countries and economies where this factor shows a strong and positive association with collaborative behaviour.

Policy pointer 22: Foster a collegial climate within schools to encourage voluntary collaboration among teachers

Policy makers and school leaders can design opportunities for collaboration, especially deeper forms of collaboration that increase collegial contact among teachers. In particular, school-level professional learning communities can be instrumental in helping teachers see value in their colleagues' expertise and help improve teacher collegiality.

School leaders also have a key role to play in developing a climate conducive to collaboration. This is an area where they can express leadership and have an impact, as building teachers' sense that they can rely on each other is an effective way to boost collaboration within schools. But trust and interpersonal relationships built over time and cannot be mandated. One way to initiate this process could be for school leaders to multiply opportunities for teachers to work with one another on small projects, team-teaching arrangements or collaborative professional development, as a way to develop a new school culture and change mindsets. This would seem particularly important for public schools in those countries where perceptions on collegiality are noticeably lower among publicly managed schools.

Policy pointer 23: Build on collaboration champions and distributed leadership within schools

Another approach could be for school leaders to delegate the task of fostering a collegial climate and boosting collaboration in a broader sense to a "collaboration champion". Individuals show diverse dispositions for collaboration, teamwork, interpersonal skills and abilities for leadership in this area, but some people are natural team workers and collaborators. Schools should aim to capitalise on their predispositions and talent to help them become collaboration champions within the school. Potential candidates would likely display a good knowledge of the school context and staff, a strong collaboration profile, good interpersonal relationships with most of the school staff, a predisposition for leadership and a genuine interest in promoting collaboration within the school and advancing this agenda. This could be done by developing new roles, along the model of Austria, where this has become an effective mechanism to change collaboration mindsets and practices over time (see Box II.4.2).

It is encouraging that distributed leadership has been on the rise over the past five years in a number of countries and economies. But in spite of this progress, it seems like a missed opportunity that, on average across the OECD, nearly a quarter of teachers still work in schools where such shared decision making is not present (Table II.4.24). And even more teachers have no say in school decisions in systems where this proportion exceeds 30%.[10] Thus, policy makers and school leaders should enable and encourage distributed leadership wherever it is not already present, not only with teachers, but also with parents/guardians and students themselves, given the positive association between this form of school governance and collaboration among teachers.

Goal: Foster mentoring and peer feedback as key attributes of professional work

Teacher feedback is another important lever for improving teaching quality, since it aims to better teachers' understanding of their methods and practices for the purpose of improvement. Peer feedback from other teachers is a unique form of collaboration between educators that plays a vital role in improving instructional practices (Erickson et al., 2005[62]). Research has shown that providing teachers with constructive feedback based on teaching and learning in their classrooms has the largest impact on student performance of any school intervention (Hattie, 2009[63]). Thus, teacher feedback is considered a key feature of effective professional development (Ingvarson, Meiers and Beavis, 2005[64]) and of continuous learning, through the process of seeking, receiving and responding to feedback (Jensen and Reichl, 2011[65]). As such, peer feedback, defined in TALIS as any communication teachers receive about their teaching through informal discussions with their peers or as part of a more formal and structured arrangement, is a critical attribute of professional work and an important policy lever for enhancing teachers' professionalism.

TALIS data show that feedback is fairly prevalent in schools in the countries and economies participating in TALIS, with 90% of teachers reporting having received feedback, on average across the OECD (Table II.4.37).[11] Teachers receive feedback based on different methods. Common types of evidence include classroom observation (for 80% of teachers), students' results, whether school-based and classroom-based (70%) and external results of students (64%) (Table II.4.44).

Although TALIS does not provide information on the quality and frequency of feedback received by teachers, the number of different feedback methods used may be indicative of education systems that make the most of teacher feedback. For instance, according to Jensen and Reichl (2011[65]), schools should apply at least four different methods for providing feedback. Yet, TALIS 2018 data show that only about half of teachers (52%) receive feedback through four or more different methods (Table II.4.47). Regression analyses make it possible to examine the likelihood of teachers finding feedback impactful, as associated with the number of and specific methods of feedback. Results show that teachers are more likely to find feedback useful for their teaching practice when it is based on multiple sources of evidence (Table II.4.55).

Feedback focused on the teaching process (i.e. using classroom observation) is promising, since it is evidence-based and directly related to teaching practice. Although some may find it intimidating, teachers say that this method improves teaching and learning as well as collegiality (Kumrow and Dahlen, 2002[66]). While the prevalence of observation of teachers' classroom teaching as a method of feedback has increased since 2013 in most countries and economies with available data (Table II.4.39), it is still not a common practice. In a number of countries, at least 25% of teachers report never having received feedback at their school via classroom observation (Table II.4.44) and, on average across the OECD, only 15% of teachers report providing feedback based on observation of other teachers' classes more than four times a year (Table II.4.8). Further analysis indicates that, for a large majority of countries, teachers who report receiving feedback based on classroom observations or assessment of the teachers' content knowledge are twice as likely to find the feedback received impactful, irrespective of having received feedback from other methods and irrespective of the teachers' characteristics (Table II.4.56).

TALIS provides an indication of the quality and nature of the feedback that teachers receive. Moreover, by capturing how welcoming teachers are to feedback, TALIS also offers an indication of their growth mindset and how they feel about improving their practice. On average across the OECD, 71% of teachers who received feedback in the 12 months prior to the survey report that it had a positive impact on their teaching practice (Table II.4.48). The education systems where feedback is not so prevalent are also the systems where teachers do not find it useful. In many of the countries and economies that participate in TALIS, teachers' perceptions of the impact of feedback seem to be associated with age and teaching experience, with younger and novice teachers more likely to find feedback useful and relatively larger differences in the perception of the impact of feedback in Western European countries (Table II.4.48). Moreover, in around one-third of the countries, female teachers also tend to have a relatively more positive view than their male colleagues of the feedback they received (Table II.4.48).

Policy pointer 24: Foster a growth mindset and a culture of formative feedback within the profession

One of the striking findings of TALIS with respect to feedback is that nearly three out of ten teachers did not seem to find feedback useful for improving their practice. Moreover, TALIS findings suggest that, in countries where feedback is least prevalent, teachers also seem less prone to find it useful, and males and older and more experienced teachers also seem less inclined to find feedback useful, particularly in Western European countries.

There could be many possible explanations for these differences. The feedback received by experienced teachers may differ in type, quality and frequency from that received by their novice colleagues, and that might be affecting their perception of the value of feedback. School leaders, management staff or other agents may be devoting more time and preparation to feedback for novice and younger teachers, since they may feel that novice and younger teachers require more guidance than experienced and older teachers. But this result could also be hinting that significant proportions of teachers have yet to embrace a mindset of career-long professional learning.

Where this is the case, education systems, professional organisations and school leaders need to trigger a paradigm shift to foster a growth mindset among teachers and a culture of genuine career-long professional learning throughout the system, supported by formative peer feedback. Several policy levers could be used to achieve this overarching goal. Wherever they do not exist already, professional standards should be adopted that explicitly recognise the incremental professional growth of teachers over the course of their career. In particular, professional standards should make explicit that teachers are expected to develop levels of mastery over the course their career, as a way to foster social acceptance that teachers have scope to improve their practice at all stages of their career.

Specific efforts in this area should target male teachers and older and more experienced teachers working in Western European countries, given the lower perceived value of feedback for improving practice within these groups. But novice teachers should not be neglected either. Education systems should aim to capitalise on their demand for feedback and their more positive attitudes towards it to impress on them that feedback remains valuable throughout their career. This could be done, for instance, by incorporating feedback mechanisms as part of their induction, or by generalising the practice of team teaching with experienced teachers (preferably with more than one experienced teacher), in order to maximise opportunities for informal feedback and develop a school culture of feedback and collaboration.

Policy pointer 25: Encourage and mainstream the most impactful forms of feedback according to teachers

While a number of countries seem to face issues regarding openness to feedback among some of their teachers, the fact that only 71% of teachers who received feedback found it impactful also calls for a critical review of feedback processes currently in place, with a view to improving the quality of feedback. Policy makers and school leaders should encourage and mainstream, throughout the education system, approaches to peer feedback that are more likely to be impactful.

TALIS findings provide interesting insights in this respect. They highlight that it is important for feedback to build on multiple sources of evidence and make use of classroom observations or the assessment of teachers' content knowledge and also that feedback based on external results of students is rarely associated with teachers' finding feedback impactful. These views of

teachers on the impact of feedback are consistent with research, which suggests that frequent and specific feedback based on evidence from classroom practice may lead to improvements in teacher performance and student achievement (Steinberg and Sartain, 2015[67]; Taylor and Tyler, 2012[68]).

TALIS findings also suggest that some aspects of teachers' work may be better suited to feedback. This is the case, for instance, for pedagogical competencies and the use of student assessments to improve student learning. Feedback also seems effective in primary education to address methods for teaching students with special needs, a challenge that many teachers struggle with. In designing feedback schemes, it would, thus, seem desirable for school leaders to focus on aspects of teaching practice for which feedback has proved to be an effective support mechanism to improve practice.

Last but not least, the higher impact of feedback reported by younger and novice teachers relative to their more experienced peers calls into question whether this differential impact derives from a higher level of need from novice teachers, or whether this could have to do with the way feedback is organised. Novice teachers tend to receive feedback in a more structured fashion, as part of induction and mentoring schemes. This is an area where further research is warranted. For instance, education systems could consider piloting structured feedback opportunities for all teachers to maximise the impact of feedback. These structures could include a mandated frequency of the use of feedback, requirements to base feedback to teachers on multiple types of evidence, as well as mentoring for teachers who express a need for additional support, as is done in Shanghai (see Box II.4.1). It would then be important to assess the impact of this structured feedback relative to less structured approaches.

Policy pointer 26: Encourage mentoring and feedback at all stages of the career

As part of efforts to professionalise the teaching profession, specific attention should be placed on encouraging the participation of teachers and school leaders in mentoring and feedback at all stages of their career.

Indeed, TALIS data on mentoring show that few experienced teachers across the OECD have a mentor (Table I.4.64). This is a surprising finding, given that 71% of teachers across the OECD work in schools where appraisal can result in the appointment of a mentor to help them improve their teaching (Table II.3.42) and that two-thirds of principals report that mentoring is very important to improving teachers' pedagogical competence and collaboration with colleagues (Table I.4.63) (OECD, 2019, p. 144[13]). To the extent that research shows that the quality of mentoring can have an impact (Rockoff, 2008[40]; Simmie et al., 2017[69]; Spooner-Lane, 2016[70]), the low participation of experienced teachers in mentoring programmes is a missed opportunity. A similar pattern is observed with respect to peer feedback, as described above.

To encourage participation of more experienced teachers in mentoring and peer feedback, one possibility could be to embed feedback mechanisms into mentoring programmes and to make broader use of mentoring following teacher appraisals, whether or not performance issues have been identified. Another possible approach could be to develop opportunities for lateral feedback within the school, for example, by launching collective professional development activities at the school level inspired by the lesson study model, as the format of these development opportunities provides scope for feedback and collective mentoring. With its Boost programme, Sweden provides a helpful example of how the lesson study approach can be adapted to a very different cultural context (OECD, 2019[71]).

EMPOWERING TEACHING PROFESSIONALS THROUGH AUTONOMY, LEADERSHIP AND OPPORTUNITIES FOR CAREER PROGRESSION

In addition to the tangible support structures used within education systems and schools to support teachers' continuous professional growth, a range of less tangible elements designed to empower teachers and school leaders also support their professionalism, with the goal of developing their sense of agency over their work. TALIS has developed a range of indicators on decision making, distributed leadership and autonomy that shed light on these less tangible elements of professionalism, alongside opportunities for career progression in the teaching profession.

Goal: Foster leadership at all levels of the system

A crucial component and lever of principals' and teachers' professionalism refers to their capacity to make discretionary judgements over their work (Hargreaves and Fullan, 2012[72]) and to enact leadership in their job (Guerriero, 2017[5]). This critical importance of school leadership for both school leaders and teachers has been emphasised by research as one of the most important school-level factors influencing students' development and achievement (Chapman et al., 2016[73]; Hallinger, 2018[74]; Marzano, Waters and McNulty, 2005[75]). Yet, the understanding of the main components of school leadership has evolved over the years. The focus has long been on a series of discrete elements, such as establishing goals, providing pertinent professional development and taking action for the development of curriculum and improvement of instruction, while not losing sight of the managerial aspects of the school (Ainley and Carstens, 2018[76]; OECD, 2016[77]; Urick and Bowers, 2014[78]). But, recent research has emphasised that a holistic approach of "leadership for learning", incorporating all these elements, seems to be the most effective form of leadership (Hallinger, 2011[79]; Hallinger and Heck, 2010[80]; OECD, 2016[77]).

Figure II.1.4 [1/2] **Empowering teaching professionals through autonomy, leadership and opportunities for career progression**

Countries/economies where the indicator is **above** the OECD average
Countries/economies where the indicator is **not statistically different** from the OECD average
Countries/economies where the indicator is **below** the OECD average

	Percentage of teachers whose school principals report that their teachers are **never** formally appraised	Percentage of teachers who have control over determining course content	Percentage of principals who "often" or "very often" took actions to support co-operation among teachers to develop new teaching practices in the 12 months prior to the survey	Percentage of teachers who "agree" or "strongly agree" that their school provides staff with opportunities to actively participate in school decisions	Percentage of principals who report that their schools have autonomy in determining teachers' salary increases	Percentage of teachers in schools where formal appraisal can result in salary increases, by school management's responsibility	
						School management has **no responsibility** over salary	School management has **a responsibility** over salary
	Vol II, Chapter 3	Vol II, Chapter 5	Vol II, Chapter 5	Vol II, Chapter 4	Vol II, Chapter 5	Vol II, Chapter 3	Vol II, Chapter 3
Alberta (Canada)	17	65	52	81	50	13	17
Australia*	2	73	60	67	40	3	24
Austria	11	81	61	83	6	16	c
Belgium	4	82	52	68	5	0	0
Flemish Comm. (Belgium)	4	87	51	76	3	0	c
French Comm. (Belgium)	4	76	53	59	7	0	c
Brazil	10	94	79	79	19	21	45
Bulgaria	8	69	63	89	43	81	87
CABA (Argentina)	4	85	67	63	13	a	a
Chile	4	91	79	59	44	10	65
Colombia	0	88	84	79	23	3	42
Croatia	4	83	62	81	2	a	a
Czech Republic	1	93	60	83	86	81	92
Denmark	8	94	45	75	49	12	37
England (UK)	0	62	51	63	77	c	83
Estonia	1	93	45	87	49	82	90
Finland	41	83	65	77	13	46	67
France	2	94	56	76	0	22	c
Georgia	1	93	75	95	21	84	92
Hungary	2	91	59	86	19	34	54
Iceland	8	96	59	80	3	10	c
Israel	2	94	62	68	12	11	54
Italy	36	95	66	75	9	87	54
Japan	9	75	31	77	11	19	43
Kazakhstan	0	93	86	86	23	42	74
Korea	1	96	46	76	7	47	49
Latvia	0	82	70	88	44	75	94
Lithuania	0	86	63	85	46	62	86
Malta	3	62	55	73	13	2	c
Mexico	7	90	71	73	31	20	51
Netherlands	1	95	39	81	76	26	61
New Zealand	0	83	57	73	43	8	46
Norway	15	96	65	86	8	3	4
Portugal	6	47	61	74	15	4	50

* Participation rate of principals is too low to ensure comparability for principals' reports and country estimates are not included in the OECD average.

Source: OECD, TALIS 2018 Database, Tables II.3.30, II.5.32, II.5.12, II.4.24, II.5.1 and II.3.48.

StatLink http://dx.doi.org/10.1787/888934083145

Figure II.1.4 [2/2] **Empowering teaching professionals through autonomy, leadership and opportunities for career progression**

Countries/economies where the indicator is **above** the OECD average
Countries/economies where the indicator is **not statistically different** from the OECD average
Countries/economies where the indicator is **below** the OECD average

	Percentage of teachers whose school principals report that their teachers are **never** formally appraised	Percentage of teachers who have control over determining course content	Percentage of principals who "often" or "very often" took actions to support co-operation among teachers to develop new teaching practices in the 12 months prior to the survey	Percentage of teachers who "agree" or "strongly agree" that their school provides staff with opportunities to actively participate in school decisions	Percentage of principals who report that their schools have autonomy in determining teachers' salary increases	Percentage of teachers in schools where formal appraisal can result in salary increases, by school management's responsibility	
						School management has **no responsibility** over salary	School management has **a responsibility** over salary
	Vol II, Chapter 3	Vol II, Chapter 5	Vol II, Chapter 5	Vol II, Chapter 4	Vol II, Chapter 5	Vol II, Chapter 3	Vol II, Chapter 3
Romania	0	93	77	87	8	31	52
Russian Federation	0	82	39	87	22	93	99
Saudi Arabia	2	92	72	73	2	11	c
Shanghai (China)	0	93	88	81	19	91	100
Singapore	1	75	51	71	23	64	72
Slovak Republic	0	87	65	77	44	97	96
Slovenia	0	80	69	85	25	12	20
South Africa	4	87	71	66	15	47	48
Spain	25	71	63	76	13	4	66
Sweden	5	97	54	79	81	c	78
Turkey	2	74	71	78	8	27	60
United Arab Emirates	0	82	86	69	55	14	78
United States	0	80	59	79	53	16	35
Viet Nam	0	89	84	95	36	81	90
OECD average-31	..	**84**	..	**77**	..	..	..
OECD average-30	**7**	..	**59**	..	**32**	**30**	**55**

* Participation rate of principals is too low to ensure comparability for principals' reports and country estimates are not included in the OECD average.

Source: OECD, TALIS 2018 Database, Tables II.3.30, II.5.32, II.5.12, II.4.24, II.5.1 and II.3.48.

StatLink http://dx.doi.org/10.1787/888934083145

To effectively engage in leadership roles, schools must have the autonomy necessary to make decisions on aspects that concern their day-to-day operations. In order to shed light on the distribution of responsibilities between schools and authorities, TALIS 2018 asked school principals which actors have significant responsibility at the school level for a series of tasks related to staffing, budget, school policies, and curriculum and instructional policies.[12] On average across the OECD, 63% of principals report having significant responsibility for a majority of these tasks, with large differences between publicly managed schools (57%) and privately managed schools (80%) (Table II.5.11). This may reflect system-wide regulation or standards governing the tasks of principals.

Principals engage in different forms of leadership, such as administrative and instructional leadership. With respect to administrative tasks, on average across the OECD, 65% of principals report reviewing school administrative procedures and reports frequently, and 42% report frequently resolving problems with the lesson timetable in their school (Table II.5.12). Principals' engagement in instructional leadership deserves particular attention insofar as it refers to principals' efforts to focus on the instructional quality enacted by teachers. Over time, the emphasis has shifted from direct forms of instructional leadership towards indirect forms referred to as transformational leadership. A relatively high proportion of principals report engaging in these indirect forms of instructional leadership, such as actions to ensure that teachers feel responsible for their students' learning outcomes (68%) and that teachers take responsibility for improving their teaching skills (63%) and actions to support co-operation among teachers to develop new teaching practices (59%) (Table II.5.12). Regression analyses shed light on the factors associated with principals' enacting instructional leadership. They show that, on average across the OECD, the principals who show higher levels of instructional leadership are those who report devoting more time to these tasks and having more responsibility for the curriculum (Table II.5.17).

Teacher engagement in leadership hinges on teachers having concrete opportunities to enact leadership, i.e. to be leaders not just within their classroom, but also by collaborating with their colleagues for the overall improvement of their school (Harris and Muijs, 2004[81]). In that sense, it is interesting to explore the association of instructional leadership with distributed leadership, measured by the participation of stakeholders (including teachers) in school decisions and building a culture of shared understanding and responsibility within the school. Results show that those principals who involve staff, parents and students in school decisions and have a school culture of collaboration and shared responsibility are more likely to report that they take actions pertaining to transformational leadership (Table II.5.17).

A critical prerequisite for teacher leadership is for teachers to have the autonomy necessary for their work (Johnson and Donaldson, 2007[82]). The degree to which teachers are autonomous in making decisions in their work has been identified as a cornerstone of teachers' professionalism, along with the development of knowledge and the capacities for collaboration at work (Hargreaves and Fullan, 2012[72]). On average across the OECD, 84% of teachers consider that they have control over "determining course content" (Table II.5.32), and teachers with higher feelings of control over their target class tend to report that they engage more often in professional collaboration activities with their peers, after controlling for teacher and class characteristics. In addition, regression analyses show that, on average across the OECD, teachers who feel a higher sense of control over their target class are more likely to report that they work in an innovative environment, after controlling for teacher and class characteristics (Table II.5.37).

The importance of system leadership, understood as principals' ability to connect with other principals and parents, cannot be overstated and, in many systems, principals are increasingly encouraged to exercise leadership not only within their school, but also beyond their school. Yet, TALIS evidence suggests that a relatively low percentage of principals report engaging "often" or "very often" in system leadership activities such as providing parents or guardians with information on the school and student performance (55%) or collaborating with principals from other schools on challenging work tasks (37%) (Table II.5.12).

Lastly, making teaching careers attractive and prestigious also entails empowering teachers and school leaders by offering them the possibility to be actors of change through advocacy and advising on educational reform (Schleicher, 2011[83]). It is encouraging in this respect that, on average across the OECD, only 33% of principals consider that they cannot influence decisions that are important for their work, implying that two-thirds feel that they can influence decisions (Table II.5.25). However, this sense of agency is considerably lower for teachers (24%), albeit with important variation across countries (Table II.5.47).

Policy pointer 27: Foster teachers' sense of agency through greater autonomy and distributed leadership

Teachers who feel a greater sense of control over their target class are more likely to report that they work in an innovative environment, engage more often in professional collaboration activities with their peers and have a better sense of their performance, satisfaction and well-being. This provides converging evidence to support efforts towards fostering teachers' sense of agency. Accordingly, a priority for policy makers and school leaders should be to foster teachers' autonomy and leadership over their work.

This entails giving teachers more autonomy over the core aspects of their work, such as determining course content or choosing learning materials but also, ideally, giving teachers more of a say on course offer. Such devolution of responsibility in the development of the school curriculum could, indeed, bring a number of benefits, for instance, by enabling school management teams to adapt the curriculum to local contexts and needs. It would also require school staff to work collaboratively towards the development of a shared vision and mission for their school to underpin the curriculum, hence contributing to building a collaborative culture within the school. This process would also give school staff more opportunity to enact leadership and nurture the professional attributes of their jobs. In countries with a tradition of centralised curriculum development, such a shift in approach could initially be disconcerting for both policy makers and teachers. But it is worth noting that the development of the curriculum at the school level is not incompatible with central steering and the setting of learning goals to be attained by students, as the recent curriculum reform in Portugal illustrates (OECD, 2018[84]). In countries with little tradition of curriculum development at the school level, such a shift might also require a piloting stage to build capacity on curriculum development within schools.

In order to encourage professional ways of working within schools, policy makers and school leaders should also consider granting teachers more responsibility and agency over other aspects of school life and school decision making, through greater distributed leadership. This could cover, for instance, more responsibility for teachers over establishing student assessment policies (given their close relationship with the curriculum and course content), establishing student disciplinary policies (given that this is closely tied to the establishment of a shared vision for the school), and appointing and hiring teachers (to the extent that teachers will eventually be asked to work collaboratively with the new recruits). Teachers with an interest in moving towards leadership roles could also be given opportunities to work (and decide) on budget allocations within the school, to develop their management skills.

Policy pointer 28: Strengthen school leadership

To deliver enhanced outcomes for students, teacher autonomy and enhanced responsibility in decision making at the school level must be accompanied by stronger leadership of schools. Accordingly, policy makers' efforts should aim to strengthen school leadership, with particular emphasis on the instructional leadership function of principals.

Enhancing teacher autonomy and leadership relies on the premise that schools and school leaders themselves have sufficient autonomy from central authorities over key aspects of school operations. This is far from being the case everywhere, and the fact that over a third of school leaders do not have significant authority over a majority of the tasks related to staffing, budget, school policies, and curriculum and instructional policies seriously inhibits their ability to enact leadership. Indeed, principals' discretion over these tasks is important to enable them to develop incentives and support mechanisms to encourage continuous professional learning for their teachers, adopt effective teaching and professional practices within the school and classrooms and, more generally, create the conditions for effective teaching and learning. This issue is particularly salient in publicly managed schools, where over 40% of principals face such limitations on their scope for enacting leadership. Wherever this is the case, policy makers should engage in consultations with the profession to better understand the specific aspects of principals' autonomy that are problematic and might hinder their capacity to foster school improvement, in order to address the most serious constraints. Policy makers could also consider reducing the degree of central control and shift from that towards models of central steering and local autonomy, to give schools more flexibility to adapt to local needs and constraints. In a rapidly changing environment, the need for schools to be able to respond and adapt their offer to the needs of their communities can only be expected to rise. And since teachers' sense of control over their work shows positive associations with their feelings of self-efficacy and job satisfaction, one could expect similar benefits to arise from granting school leaders greater levels of control over their work.

One aspect of school leadership that deserves close attention is ensuring that the governance and organisation of schools enable principals to enact the full scope of their leadership over curriculum and instructional issues. Research conducted using Programme for International Student Assessment (PISA) 2015 data has shown that the relation between principals' autonomy and student performance is relatively strong, but it is even stronger for systems with high levels of instructional leadership (OECD, 2016[85]). TALIS sheds light on the levers that may be used to enhance instructional leadership. Results from regression analyses using TALIS 2018 data show that the principals who show higher levels of instructional leadership are those who report devoting more time to these tasks and declare having more responsibility for the curriculum. This provides additional grounds to encourage policy makers to consider devolving more autonomy over curriculum and instructional issues to schools and their principals.

Policy pointer 29: Bolster system leadership and enhance teachers' and school leaders' voices in the policy debate

Irrespective of the degree of school and teacher autonomy, the ability of schools to adapt their curriculum and instruction to the needs of local communities and students ultimately depends on the degree of school-parent and school-community engagement. Unfortunately, this level of engagement is not as widespread as it could be, on the part of both principals and parents. This is a missed opportunity, as TALIS regression analyses show a positive association between levels of stakeholder participation in school decisions and levels of instructional leadership (Table II.5.17).

In those countries and economies where stakeholder engagement in school activities is particularly low, one implication for policy makers could be to give them more of a say on school decisions, as a way of initiating or fostering collaboration between schools and parents and schools and their community. This could be done, for instance, by making it mandatory to have parents represented on school governing boards, or by creating incentives, such as providing schools with earmarked funding for school-community projects with payment conditional on collective decision making for spending it (with involvement of the principal, teachers, parents and representatives of the broader community). Such approaches would seem particularly promising at higher levels of education, where school-parent and school-community engagement tends to be less prevalent.

Another aspect of system leadership relates to the opportunities for teachers and school leaders to engage in and influence policy development and to enact leadership beyond the borders of their schools and communities. Policy makers could benefit from engaging more in genuine and sustained dialogue with the profession on education policy, as a way to build up trust over time.

Goal: Make the most of school leaders' time to foster instructional leadership

The quality of conditions for teaching and learning also hinges on the time and efforts school leaders dedicate to supporting teachers and providing instructional leadership and related activities in their school. In this respect, TALIS findings suggest that, despite the benefits of instructional leadership and related activities emerging from research (Hallinger, 2015[86]; Hallinger and Heck, 2010[87]), school leaders may be limited in the time and resources needed to express instructional leadership. On average across the OECD, they spend 16% of their working time on curriculum and teaching-related tasks and meetings. This makes it the third most time-consuming task of principals, after administrative tasks and meetings (30% of principals' working time) and leadership tasks and meetings (21%) (Table I.2.31). Yet, this is not enough in the views of school leaders themselves. One of the most common resource issues hindering quality instruction reported by school leaders in participating countries and economies is the shortage or inadequacy of time for instructional leadership (Table I.3.63).

Fortunately, to the extent that solutions can be found to alleviate their administrative workload, school leaders do seem willing to engage more in instructional leadership activities. More than 80% of principals have attended training to become instructional leaders (Table I.4.28). This may be a reflection of national requirements and/or an interest in further development.

Furthermore, the areas in which large shares of principals report a high need for professional development are developing collaboration among teachers (26% of principals across the OECD) and training in using data to improve the quality of the school (24%) (Table I.5.32).

Policy pointer 30: Encourage instructional leadership through clear professional standards for school leaders and a rethink of their role and time schedules

A number of countries have introduced professional standards for teachers as a tool to make knowledge and competence requirements explicit. Likewise, defining and establishing clear professional standards for principals that stress the importance of and expectations for instructional leadership can be a powerful tool to stimulate dialogue within the profession on the importance of this function, as well as an incentive for school leaders to engage more in these activities. There is an additional advantage of professional standards and guidelines for instructional leadership. By articulating the base level of what school leaders need to know and the capacity they need to acquire, these instruments can also serve as a tool to guide school principals in the type of in-service training they need to lead their schools. This can also encourage them to reorganise their time to shift emphasis towards instructional leadership activities.

But to enable school leaders to engage more in instructional leadership activities, an important precondition is to ensure that they have the time and support to develop their leadership in the field of curriculum and learning. TALIS results show that time seems to be a constraint. To free up some time for school leaders to devote to tasks related to curriculum and teaching, one option could be for education systems or school management boards to create intermediate management roles or to devolve some management and administrative responsibilities to other teachers interested in building leadership capacity. For example, teachers showing exceptional leadership should find rewarding career tracks that allow them to pursue attractive careers, including school leadership, and foster their administrative and instructional leadership skills. Such an approach would allow school leaders more time to engage in curriculum and teaching activities, and it would also provide paths for teachers to grow and strengthen their professionalism.

Policy pointer 31: Build capacity for instructional leadership and recruit instructional leaders among teachers

Considering the importance of instructional leadership in supporting the professional growth of teachers, training in instructional leadership should be viewed as a prerequisite for school leaders prior to taking up their duties. Furthermore, the training of school leaders in this area should be seen as an ongoing process, with principals also offered opportunities for professional development in instructional leadership after taking up their duties in order to consolidate and further develop these skills. Such professional development can take many forms, as discussed above. Echoing the needs of teachers, school principals could also be given more opportunities to participate in communities of practice and collaborative enquiry with their peers from other schools, in order to improve their instructional leadership.

Goal: Link appraisal with teachers' career progression

Teacher appraisal refers to the formal evaluation of teachers "...to make a judgement and/or provide feedback about their competencies and performance." (OECD, 2013, p. 272[88]). The research literature points to teacher appraisal as an important building block of effective education systems. In its summative form, it can be a tool for quality assurance, to ensure that required standards are met or recommended practices are followed. But appraisal can also take a more formative emphasis and provide an opportunity for teachers to reflect on their practice, strengths and weaknesses, in order to identify areas for improvement, as well as to grow in their career. To better understand how appraisal is used to support school and teacher improvement, TALIS 2018 asks principals whether each teacher is formally appraised in their school, and if so with what frequency, by whom, and with which methods and potential consequences.

TALIS data show that appraisal is a common feature of education systems. On average across the OECD, only a small proportion of teachers (7%) work in schools in which teachers are never appraised, although this proportion is substantially larger in a few countries (Table II.3.30). Appraisals are most often conducted by the school principal (63% of teachers work in schools with annual appraisal by the school principal) or other members of the school management team (51% of teachers) (Table II.3.30). In schools where appraisal procedures are in place, observation of classroom teaching is typically part of teacher appraisal procedures. In nearly all TALIS countries and economies, over 90% of teachers work in schools where this method is used for appraisal (Table II.3.38). Other commonly used methods rely on the analysis of school-based and classroom-based student results (for 94% of teachers, on average across the OECD) and students' external results (93%). Other methods rely on student survey responses related to teaching (82% of teachers), assessments of teachers' content knowledge (70%) or self-assessments of teachers' work (68%). TALIS findings indicate that, on average across the OECD, teachers work in schools using five of the six different methods on which TALIS collects information (excluding schools where no appraisal takes place).

Whether teacher appraisal is used as a formative tool to develop professionally or as an accountability mechanism to ensure adequate teacher performance or compliance with standards, it must lead to the right consequences to attain any of these goals (Lillejord and Børte, 2019[89]; OECD, 2013[88]; Papay, 2012[90]). TALIS sheds light on these issues. Among schools where appraisal

procedures are in place, almost all teachers (98%) work in schools where principals report that appraisal is "sometimes", "most of the time" or "always" followed by a discussion with the teacher of measures to remedy any weaknesses in teaching (Table II.3.42). Other common consequences of teacher appraisal include the elaboration of a professional development or training plan (90% of teachers), the appointment of a mentor (71%) or a change in work responsibilities (70%), albeit with important differences across countries and economies. High-stakes consequences are less common: changes in teachers' career prospects (53% of teachers); dismissals or non-renewal of teachers' contracts (51%); increases in salary or payment of financial bonuses (41%); and reduced annual pay increases (15%).

Another noteworthy finding from TALIS 2018 is that the consequences of teacher appraisal have changed between 2013 and 2018. In nearly all education systems with available data, there has been a significant change in the occurrence of at least one of the consequences examined by TALIS, with the most common changes involving tying appraisal results to financial rewards and career advancement decisions (Table II.3.52). Overall, changes observed across countries and economies participating in TALIS suggest a growing reliance on financial and career advancement incentives as policy levers, as well as on support to teachers through mentoring, and a declining reliance on changes in teachers' work responsibilities and dismissals and non-renewal of contracts. TALIS findings also show that appraisal is more likely to result in certain consequences if the school management team has "significant responsibility"[13] for those consequences (i.e. if the principal or other members of the school management team play an active role in relevant decision making) (Table II.3.48).

Policy pointer 32: Define and prioritise the key objectives of appraisal, and design appraisal processes accordingly

The success of an appraisal system depends on clear alignment of its processes, methods and tools with the goals pursued. The first step of any review of appraisal mechanisms should be for policy makers and school leaders to clearly prioritise and define the key objectives of appraisal in their system or school, based on policy priorities, such as formative development of teachers, steering of their careers, reward mechanisms for good performance and ensuring compliance with standards.

As a second step, the characteristics of the appraisal system should be in line with these key objectives and policy priorities, as the methods used and the consequences of appraisal are not neutral. For example, if the main function of teacher appraisal is to inform career decisions and strengthen accountability, then it must be based on defensible and comparable sources of evidence and combine multiple sources of evidence to evaluate teachers accurately and fairly on the variety of tasks composing their jobs (OECD, 2013[88]). Specific caution is needed on the use of students' school or external results as a source of information for appraisal, as teachers' contributions to their students' learning outcomes are never directly observable and rely on a number of sensitive statistical assumptions (Braun, 2005[91]; OECD, 2013[88]; Papay, 2012[90]). If, however, the main goal of appraisal is to inform professional development and promote learning, then teacher observations and self-evaluation can provide valuable tools to spur teachers' self-reflection and achieve this formative goal.

It is then important to ensure that the consequences of appraisal are also aligned with the goals pursued, in order to incentivise teachers' behaviours. For instance, consequences such as a follow-up exchange, elaboration of a professional development or training plan or appointment of a mentor are more likely to generate a virtuous cycle of formative appraisal and school improvement. Conversely, performance incentives such as wage increases, financial bonuses or even dismissal of a teacher are more likely to be effective if the goal pursued is to ensure good performance and compliance with standards. If the appraisal system aims to incentivise high performance in a transparent fashion, then the recent OECD review of human resources policies recommends approaches establishing clear links between teachers' salary scales and the steps in their career structure, whereby appraisal has consequences for career progression on the basis of teaching standards and competency frameworks and teachers' demonstrated capacity to assume growing levels of responsibilities (OECD, 2019[16]).

Policy pointer 33: Create conditions to attain the key objectives of appraisal

In teacher appraisal, an important consideration is that the consequences of appraisals must be consistent with the distribution of responsibilities within the education system. TALIS evidence shows that the consequences of appraisal are related to school responsibilities. For instance, in some countries, the occurrence of salary consequences can vary by over 50 percentage points, depending on whether the school management team has significant responsibility for these issues. Therefore, an important issue is for policy makers to create the framework conditions for these goals to be attained. One of these conditions is to grant more autonomy to school management teams for decisions on which changes are desired. If certain consequences of appraisal are sought, TALIS evidence suggests that it is actually more effective to give schools autonomy for decisions on those issues, since consequences are more likely to happen when this is the case. This can be an important policy lever.

By the same token, if the appraisal system is deemed to foster school improvement, then it would make more sense to give schools more autonomy and leeway in defining their own goals, based on their specific context and challenges, and to grant them more autonomy in determining the consequences of appraisal.

RETAINING TEACHING PROFESSIONALS THROUGH FULFILLING AND REWARDING WORK CONDITIONS, WELL-BEING AND SATISFACTORY JOBS

An important challenge for education systems is to give the teachers and school leaders currently employed in schools a sense of well-being, intellectual fulfilment and satisfaction, in order to retain them in their schools and in the profession. The sense of fulfilment that professionals derive from their work is also important for attracting new entrants to the profession in the future.

Keeping experienced teachers motivated and retaining them in the profession is critical to instructional quality, as research shows that experienced teachers tend to be better at managing their complex jobs and relating to their students (Berliner, 2001[92]; Ladd and Sorensen, 2017[93]; Melnick and Meister, 2008[94]) and that they are, on average, more effective than novice teachers at promoting student learning (Abbiati, Argentin and Gerosa, 2017[95]; Kini and Podolsky, 2016[96]; Papay and Kraft, 2015[97]). But attrition among teachers has become a severe problem that threatens the stability of several educational systems across the world (Viac and Fraser, 2019[98]). TALIS 2018 includes questions that may function as indications of the potential risk of attrition, such as teachers' intention to leave their work prematurely.[14] On average across the OECD, 14% of teachers under age 50 wish to leave teaching within the next five years (i.e. before retirement age) (Table II.2.63). If one considers the number of teachers that would need to be replaced if these intentions to leave were actually realised, this is a sizeable proportion of teachers at risk of attrition and a real challenge for education systems and schools.

This final section sheds light on two key priorities for teacher professionalism: keeping the most effective teachers and school leaders so they continue working in the profession and attracting the next generation of high-quality candidates into the profession. It offers policy pointers to foster teachers' sense of well-being, satisfaction and professional fulfilment and improve teachers' working conditions and career packages, in order to pursue a virtuous spiral of boosting system quality.

Goal: Build a motivated and efficient teacher and principal workforce through fulfilling working conditions

Attracting the right individuals to the teaching profession is a necessary condition to ensure teaching quality and a pressing concern in many OECD countries (OECD, 2019[16]; OECD, 2005[4]). This entails offering careers in teaching that are sufficiently attractive to prospective candidates, in terms of their inner aspirations, working conditions, or opportunities for fulfilment on the job, as well as ensuring that education systems are able to select candidates who display adequate mastery of the knowledge, skills and attitudes needed for the teaching profession.

Figure II.1.5 provides a snapshot of how teachers and school leaders view their work. Working conditions and the terms of employment offered to teachers are crucial in influencing their decisions to join the profession at the outset of their careers, but they also help to retain quality teachers. In 2018, only 39% of teachers report satisfaction with their salary (Table II.3.56), and this proportion is significantly lower for primary teachers in about half of the countries and economies with available data (Table II.3.61). TALIS data shed light on patterns of satisfaction with the financial package. Across countries, in publicly managed schools, the higher the level of teachers' statutory salaries in a country,[15] the more teachers report being satisfied with their salary (Tables II.3.57 and II.3.63). Within countries, regression results suggest that, in a number of countries, teachers working in cities (where housing prices and the cost of living are typically higher than in rural areas) display lower satisfaction with their salary than their peers working in rural areas (Table I.3.70). These findings suggest that teachers' attitudes and demands concerning their salary follow fairly rational and predictable patterns, depending on the purchasing power and standard of living their salary allows. Teachers' satisfaction with salaries also seems related to the experience of teachers and the degree of salary progression over the course of a teacher's career. In nearly all education systems where the salary scale is relatively flat (i.e. the ratio between statutory salaries after 15 years of experience and statutory starting salaries is below 1.25), more experienced teachers are, on average, significantly less satisfied with their salaries than novice teachers. The opposite pattern is observed in most education systems where salaries after 15 years of experience are over 25% higher than starting salaries (Tables II.3.57 and II.3.63).

With respect to school leaders, there is mounting evidence that the demands placed on them have intensified and broadened over time (OECD, 2016[77]; Pont, Nusche and Moorman, 2008[99]). With one in five school principals expected to retire over the next five years or so (Table I.3.5), ensuring the attractiveness of school leader roles is crucial for the sustainability of education systems. School leaders report higher levels of satisfaction with their salary (47%) than teachers (39%) (Tables II.3.56 and II.3.65) and less variation in satisfaction across levels of education (Tables II.3.67 and II.3.68). A worrisome pattern is the large difference in levels of satisfaction with salary between principals of privately managed schools (65%) and principals of publicly managed schools (42%) (Table II.3.65).

Yet, remuneration is only one of many factors that can render a profession attractive (OECD, 2019[16]). This is evidenced by the fact that the vast majority of teachers (90%) and school leaders (95%) report being "all in all, satisfied with their job" (Tables II.2.16 and II.2.27). Working conditions, opportunities for professional learning and growth, social status and professional autonomy are all important in making teaching careers not only financially attractive, but also intellectually satisfying. Apart from salary levels, the other terms of employment examined by TALIS are job security, part-time work and employment arrangements (e.g. working

in multiple schools). Overall, a majority (66%) of teachers on average across the OECD report satisfaction with their terms of employment, apart from salaries (Table II.3.59). Job security is a characteristic of teachers' contractual arrangements that is usually seen as desirable for teachers, but it reduces flexibility for governments and schools in managing human resources (Bertoni et al., 2018[100]; Bruns, Filmer and Patrinos, 2011[101]).

TALIS 2018 findings show that a majority of teachers (82%) hold permanent contracts, while 6% have fixed-term contracts of more than one year and 12% have fixed-term contracts of one year or less (Table II.3.1). Some countries make wider use of short-term contracts, with more than a quarter of their teaching workforce holding contracts of one year or less. While these arrangements may provide needed flexibility in managing teacher supply, additional actions may still be required to ensure teaching quality. In about one-third of the TALIS countries and economies, teachers working on a fixed-term contract of less than one year tend to have lower levels of self-efficacy.

Figure II.1.5 [1/2] **Teachers' and school leaders' satisfaction with their work**

Countries/economies where the indicator is **above** the OECD average
Countries/economies where the indicator is **not statistically different** from the OECD average
Countries/economies where the indicator is **below** the OECD average

	Percentage of teachers who think that their profession is valued in society	Percentage of teachers who, all in all, are satisfied with their job	Percentage of principals who, all in all, are satisfied with their job	Percentage of teachers who are satisfied with the salary they receive for their work	Percentage of teachers who are satisfied with the terms of their contract (apart from salary)
	Vol II, Chapter 2	Vol II, Chapter 2	Vol II, Chapter 2	Vol II, Chapter 3	Vol II, Chapter 3
Alberta (Canada)	63	93	99	76	83
Australia*	45	90	98	67	78
Austria	16	96	98	70	85
Belgium	16	89	91	65	70
Flemish Comm. (Belgium)	26	93	90	73	67
French Comm. (Belgium)	5	85	94	55	74
Brazil	11	87	92	18	53
Bulgaria	18	92	96	29	73
CABA (Argentina)	9	96	95	20	65
Chile	15	94	98	38	54
Colombia	40	96	100	36	83
Croatia	9	91	95	25	51
Czech Republic	16	90	96	28	75
Denmark	18	89	97	68	37
England (UK)	29	77	93	54	66
Estonia	26	94	94	39	82
Finland	58	88	92	45	72
France	7	85	92	29	80
Georgia	41	94	95	27	83
Hungary	12	88	94	28	40
Iceland	10	93	92	6	51
Israel	30	92	100	30	51
Italy	12	96	93	21	59
Japan	34	82	93	42	40
Kazakhstan	63	91	95	39	51
Korea	67	89	96	49	54
Latvia	23	91	97	22	81

* Participation rate of principals is too low to ensure comparability for principals' reports and country estimates are not included in the OECD average.

Source: OECD, TALIS 2018 Database, Tables II.2.1, II.2.16, II.2.27, II.3.1, II.3.56 and II.3.59.

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Figure II.1.5 [2/2] **Teachers' and school leaders' satisfaction with their work**

Countries/economies where the indicator is **above** the OECD average
Countries/economies where the indicator is **not statistically different** from the OECD average
Countries/economies where the indicator is **below** the OECD average

	Percentage of teachers who think that their profession is valued in society	Percentage of teachers who, all in all, are satisfied with their job	Percentage of principals who, all in all, are satisfied with their job	Percentage of teachers who are satisfied with the salary they receive for their work	Percentage of teachers who are satisfied with the terms of their contract (apart from salary)
	Vol II, Chapter 2	Vol II, Chapter 2	Vol II, Chapter 2	Vol II, Chapter 3	Vol II, Chapter 3
Lithuania	14	83	94	11	77
Malta	15	85	100	18	56
Mexico	42	98	99	41	62
Netherlands	31	94	97	58	68
New Zealand	34	86	94	36	69
Norway	35	93	98	48	66
Portugal	9	92	98	9	29
Romania	41	94	96	23	74
Russian Federation	43	91	98	32	64
Saudi Arabia	52	87	92	59	61
Shanghai (China)	60	90	96	37	61
Singapore	72	89	98	72	75
Slovak Republic	5	89	95	18	80
Slovenia	6	90	96	32	76
South Africa	61	78	87	30	56
Spain	14	96	99	50	61
Sweden	11	90	93	35	67
Turkey	26	89	83	32	57
United Arab Emirates	72	89	95	50	68
United States	36	90	96	41	78
Viet Nam	92	96	96	52	76
OECD average-31	**26**	**90**	**..**	**39**	**66**
OECD average-30	**..**	**..**	**95**	**..**	**..**

* Participation rate of principals is too low to ensure comparability for principals' reports and country estimates are not included in the OECD average.

Source: OECD, TALIS 2018 Database, Tables II.2.1, II.2.16, II.2.27, II.3.1, II.3.56 and II.3.59.

StatLink http://dx.doi.org/10.1787/888934083164

Policy pointer 34: Engage in constructive dialogue with the profession to improve the financial package and working conditions of teachers over time

In most education systems, governments set the framework and provide the funding for employment and career progression of most teachers and principals (OECD, 2019[16]). This gives governments the opportunity to shape working conditions in schools. In this respect, the high percentage of teachers with a social utility motivation for entering the profession shows that education systems have an in-service workforce that is highly committed to the public service and social value of the profession. This is a strong asset to engage the profession in a virtuous spiral of change and enhanced professionalism. Still, education systems need to offer attractive financial packages and working conditions to prospective and in-service teachers to attract them to the profession and retain them.

Policy makers and education leaders responsible for human resources need to carefully determine their overall budget envelope for human resources and methodically decide how to best allocate it between recruitment efforts, salary levels over the career and job security. They also need to promote the profession as intellectually rewarding, through high-quality training and opportunities for career progression. A key challenge is that education budgets typically compete with a range of other public policy priorities and, for most countries, they are unlikely to increase drastically over short periods of time. In this context, complex trade-offs and choices are inevitable, as school leaders' views on resources shortages hindering quality education and teachers' levels of satisfaction with their salary point to the need to raise salaries in a number of countries and to recruit more staff (teachers and

administrative support). Another challenging trade-off for policy makers is to design salary scales in a way that is both effective at attracting new generations to the profession and progressive enough over a teacher's career to enable the system to maintain motivation and retain more experienced teachers.

Therefore, it would seem particularly fruitful for policy makers to engage in constructive dialogue with the profession on how best to allocate limited resources to improve the financial package and working conditions of the teaching profession over time. Resolving this equation is likely to involve a broader reflection and rethinking of teaching models, career differentiation and the way space, people and time are organised and deployed within the system, as well as where efficiency gains could free up resources to make the profession financially more attractive. Given the collective bargaining arrangements in education in many countries, such overhauls of the education system are often impossible without the co-operation of teachers (OECD/Gregory Wurzburg, 2010[102]) and can only be successful if designed in partnership with the profession, to secure buy-in (OECD, 2019[16]; Viennet and Pont, 2017[103]).

Policy pointer 35: Consider revamping teachers' career structures and salary scales

TALIS findings suggest that both teachers and principals call for reducing their administrative loads. Teachers' prioritisation of class size also suggests a desire to work with smaller groups of students (Table I.3.66). Arguably, there might be scope within each education system to reduce or simplify some of the administrative demands on teachers or to use technology to complement teachers' and principals' roles in these tasks.[16] Likewise, small group instruction could involve experienced teachers working in teams with novice teachers or teacher candidates doing their practicum as a way to reduce student group sizes without excessive impacts on budgets.

In a number of education systems, such approaches are likely to require a rethink of career structures towards a greater degree of vertical or horizontal career differentiation and revamping of the structure of salary scales and the factors that determine salary progressions. Indeed, these factors are critical policy levers for addressing challenges related to the supply, retention and motivation of school staff (OECD, 2019[16]). Overall, TALIS findings suggest that, to enhance the economic attractiveness of the profession, policy makers should consider how teachers' statutory salaries compare with those in other professions with similar requirements, between levels of education within the system, between regions according to the cost of living and housing, and over the course of a teacher's career. Education systems should aim for reward structures and salary scales that combine statutory salary levels on par with international standards to ensure a good standard of living (together with bonuses for teachers working in regions with higher costs of housing and living) and margins for progression over the course of a teacher's career. Indeed, the satisfaction of experienced teachers with their salary tends to be higher in countries with a margin of salary progression than in those with flat reward structures.

Given the importance of the early years of education for equity, specific efforts to enhance the attractiveness of teaching careers in primary education are also warranted in some systems, especially for countries in which equity is a strong policy priority. Better valuing primary education teaching careers would be important to attracting quality candidates and retaining experienced teachers. One possible model could be to progressively align qualification requirements for primary education teachers to those of lower and upper secondary teachers and to adopt salary scales on par with those of teachers working in secondary education whenever the qualifications are similar.

Policy pointer 36: Pay attention to the competitiveness of the work package for school leaders in publicly managed institutions

Depending on countries' specific contexts and the existence of either shortages of school principals or difficulties in attracting experienced teachers to fill leadership roles, specific attention may also be paid to the structure of school leaders' careers and the competitiveness of their work package compared to that of teachers. Ideally, salaries of school leaders should be sufficiently differentiated from those of teachers to reflect their additional responsibilities and to provide incentives for motivated and qualified staff to assume leadership positions (OECD, 2019[16]).

This may be an issue of concern, particularly in publicly managed schools, whose principals' satisfaction with salary conditions is significantly lower than for principals of privately managed schools. In countries where these differences in levels of satisfaction are particularly marked, it is important to examine to what extent these differences in levels of satisfaction reflect actual differences in levels of compensation. If this is the case, the public education system may risk losing its most effective and successful school leaders to the private sector. Policy makers should pay close attention to this risk.

Policy pointer 37: Support teachers on short-term contracts of less than one year

Contractual arrangements for teachers are a common issue of concern for teacher unions around the world. They often argue that teachers on fixed-term contracts tend to be less protected by pension schemes, less often awarded study leave and less entitled to benefits and rights, including family benefits and annual holiday pay (Stromquist, 2018[104]). As far as can be inferred from patterns of satisfaction with the non-salary terms of employment,[17] TALIS findings suggest that teachers accord more value to the workload and professional aspects of their term of employment than to contractual aspects per se. On the other

hand, TALIS findings show that teachers who report working on fixed-term contracts are less likely to participate in professional development and engage in professional collaboration, and those working on contracts of less than one year report lower levels of self-efficacy, thereby undermining professionalisation objectives.

Therefore, education systems can create opportunities especially tailored for teachers on short-term contracts to engage in professional networks for collaboration and continuous professional development so that they can develop their knowledge and skills base and develop as professionals. One of the ways to do this is by mandating a minimum number of professional development hours for teachers on short-term contracts that can, in turn, serve as a career-progression ladder for these teachers to be integrated into the ranks of permanent teachers.

Goal: Reduce stress and enhance well-being

An important aspect of human resources policies in education is to offer teaching professionals good working conditions, with adequate allocation of resources and supportive and collaborative working environments. Indeed, research suggests that good working conditions can improve teachers' overall well-being, job commitment and efficiency (Bakker et al., 2007[105]; Borman and Dowling, 2008[20]; Cochran-Smith, 2004[106]; Collie and Martin, 2017[107]; Hakanen, Bakker and Schaufeli, 2006[108]; Mostafa and Pál, 2018[109]) and, in turn, their willingness to stay in the profession (Viac and Fraser, 2019[98]).

To explore these issues, in TALIS 2018, teachers were asked, for the first time, how much they experience stress in their work and what their main sources of stress are. Results show that, on average across the OECD, 18% of teachers report experiencing a lot of stress in their work, albeit with a great deal of variation across countries (Table II.2.36). High levels of stress are more prevalent among female teachers and teachers under age 30 (in both groups, 20% report experiencing stress a lot) than among their male peers and colleagues over age 50 (15% in both groups) (Table II.2.39). Teachers working in city schools, publicly managed schools and schools with a high concentration of disadvantaged students are also more likely to report experiencing a lot of stress (Table II.2.40). With respect to the impact of this stress, 7% of teachers report that their job negatively impacts their mental health "a lot", while 6% report that it negatively impacts their physical health "a lot", and 6% of teachers consider that their work never leaves room for their personal life (Table II.2.36).

Regression analyses also show that the teachers' well-being and stress scale is negatively associated with both self-efficacy and job satisfaction for nearly all TALIS countries and economies (Tables II.2.41 and II.2.42). Also, regression analyses shed light on patterns of attrition and underline that teachers who report experiencing a lot of stress in their work are more likely to report a wish to leave their work within the next five years, in almost all countries and economies participating in TALIS (Table II.2.67). In addition, other TALIS findings also explore patterns of turnover across schools, which suggest an interplay between teachers' satisfaction with their salaries and with the other terms of their employment, and a desire to change to another school in about one-third of the countries and economies with available data, with a negative association between satisfaction with working conditions and turnover intentions (Table II.3.75).

Research evidence shows that schools have the capacity to limit this association of stress with attrition (Collie, Shapka and Perry, 2012[110]; Gu and Day, 2007[111]; Klassen et al., 2013[112]; Skaalvik and Skaalvik, 2018[113]). TALIS findings provide some support for this idea. Indeed, after accounting for job satisfaction, school support, motivation and self-efficacy,[18] the relationship between stress and teachers' intention to leave their work within the next five years stops being significant for half of the TALIS countries and economies, but remains so for the other half (Tables II.2.68 and II.2.69). Therefore, working conditions and satisfaction aspects play a pivotal role in the retention of teachers in their schools, as well as in the profession (Bakker et al., 2007[105]; Borman and Dowling, 2008[20]; Hakanen, Bakker and Schaufeli, 2006[108]). Thus, it is important to pay attention to both limiting job stress and enhancing job satisfaction.

TALIS 2018 also explores sources of stress reported by teachers, with a focus on workload stress, student behaviour stress and stress related to the responsiveness to stakeholders (Ainley and Carstens, 2018[76]). Among the top sources of stress reported by teachers ("quite a bit" or "a lot"), "having too much administrative work to do" (49%), "being held responsible for students' achievement" (44%) and "keeping up with changing requirements from local, municipal/regional, state or national/federal authorities" (41%) are prominent (Table II.2.43). The sources of stress reported by school leaders are fairly consistent with those reported by teachers. They include "having too much administrative work to do" (69%), and "keeping up with changing requirements from local, municipal/regional, state or national/federal authorities" (55%) (Table II.2.47).

Interestingly, significantly fewer novice teachers report administrative work as a source of stress than their more experienced peers (Table II.2.46). In exploring these relations further, research has consistently shown that workload is a key factor affecting teachers' stress and well-being (Bakker et al., 2007[105]; Collie, Shapka and Perry, 2012[110]; Hakanen, Bakker and Schaufeli, 2006[108]; Klassen and Chiu, 2010[114]). TALIS data suggest these results and show that the estimated proportion of teachers reporting a lot of stress in their work increases more sharply with time spent on planning, marking and particularly administrative tasks than with time spent on teaching (Table II.2.53, II.2.54, II.2.55 and II.2.56). These results seem to suggest that teachers who spend many hours doing administrative tasks are more likely to report high levels of stress than those who spend many hours teaching in the classroom.

Figure II.1.6 [1/2] **Retaining teaching professionals through fulfilling and rewarding work conditions, well-being and satisfactory jobs**

Countries/economies where the indicator is **above** the OECD average
Countries/economies where the indicator is **not statistically different** from the OECD average
Countries/economies where the indicator is **below** the OECD average

	Percentage of teachers with permanent contracts	Percentage of teachers with fixed-term contracts (one school year or less)	Percentage of teachers who would like to change school if that were possible	Percentage of teachers who experience stress "a lot" in their work	Percentage of teachers reporting that too much administrative work is a source of stress "quite a bit" or "a lot"	Percentage of teachers age 50 or less wanting to leave teaching within the next five years
	Vol II, Chapter 3	Vol II, Chapter 3	Vol II, Chapter 2	Vol II, Chapter 2	Vol II, Chapter 2	Vol II, Chapter 2
Alberta (Canada)	75	20	23	26	29	7
Australia	86	10	25	24	55	13
Austria	75	20	10	12	48	4
Belgium	78	17	14	22	65	8
Flemish Comm. (Belgium)	82	14	14	27	72	7
French Comm. (Belgium)	73	20	15	17	57	10
Brazil	79	12	13	14	38	13
Bulgaria	87	8	19	22	58	22
CABA (Argentina)	72	4	12	8	19	8
Chile	62	22	25	20	53	15
Colombia	76	17	25	14	49	5
Croatia	91	3	16	7	60	13
Czech Republic	82	11	10	11	61	12
Denmark	97	2	10	14	50	20
England (UK)	94	3	23	38	65	22
Estonia	85	10	13	18	30	27
Finland	78	17	20	14	33	11
France	93	6	26	11	60	8
Georgia	35	30	11	1	17	9
Hungary	88	7	16	32	63	12
Iceland	84	12	15	26	45	29
Israel	79	15	16	18	35	11
Italy	75	25	18	6	40	a
Japan	75	18	31	20	52	10
Kazakhstan	84	6	16	3	36	15
Korea	88	6	35	18	49	7
Latvia	93	2	14	23	39	26
Lithuania	92	3	15	10	54	29
Malta	92	5	13	28	48	20
Mexico	72	13	28	9	34	9
Netherlands	87	10	16	10	46	11
New Zealand	86	9	24	28	64	22
Norway	90	7	13	15	47	16
Portugal	74	17	28	35	77	3
Romania	73	21	13	5	43	6
Russian Federation	90	4	12	4	39	19
Saudi Arabia	100	0	47	11	33	35
Shanghai (China)	30	1	29	11	22	9

Source: OECD, TALIS 2018 Database, Tables II.3.1, II.2.16, II.2.36, II.2.43 and II.2.63.

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Figure II.1.6 [2/2] **Retaining teaching professionals through fulfilling and rewarding work conditions, well-being and satisfactory jobs**

Countries/economies where the indicator is **above** the OECD average
Countries/economies where the indicator is **not statistically different** from the OECD average
Countries/economies where the indicator is **below** the OECD average

	Percentage of teachers with permanent contracts	Percentage of teachers with fixed-term contracts (one school year or less)	Percentage of teachers who would like to change school if that were possible	Percentage of teachers who experience stress "a lot" in their work	Percentage of teachers reporting that too much administrative work is a source of stress "quite a bit" or "a lot"	Percentage of teachers age 50 or less wanting to leave teaching within the next five years
	Vol II, Chapter 3	Vol II, Chapter 3	Vol II, Chapter 2	Vol II, Chapter 2	Vol II, Chapter 2	Vol II, Chapter 2
Singapore	84	5	39	23	54	28
Slovak Republic	82	11	14	11	53	16
Slovenia	91	6	18	16	59	14
South Africa	84	8	45	25	63	25
Spain	67	27	20	11	46	4
Sweden	88	10	18	17	65	25
Turkey	89	5	37	7	35	9
United Arab Emirates	39	20	38	27	46	27
United States	62	26	18	26	30	17
Viet Nam	94	3	18	4	35	4
OECD average-31	**82**	**12**	**20**	**18**	**49**	**14**

Source: OECD, TALIS 2018 Database, Tables II.3.1, II.2.16, II.2.36, II.2.43 and II.2.63.
StatLink http://dx.doi.org/10.1787/888934083183

Policy pointer 38: Address identified sources of stress

TALIS provides a unique opportunity for policy makers to hear the views of frontline actors of their education system on the key constraints affecting their work and the main sources of stress they face. Policy makers can examine these responses in their national context and work with the profession to address the most common sources of stress identified. A number of issues emerge from the international analysis.

Since administrative work is one of the main sources of work stress reported by both teachers and school leaders, it deserves close scrutiny. As a starting point, policy makers could engage in research at the national level to better understand the specific aspects of administrative work that are causing stress and determine whether these tasks could be simplified or done more efficiently, if not totally eliminated. Indeed, a striking finding from TALIS is that more experienced teachers seem much more exposed to administrative sources of stress than their novice colleagues. Thus, one question is whether this is because they have more management responsibilities within the school or because they are less likely than their younger colleagues to use digital tools to help them save time and gain efficiency in their administrative work. Engaging in nation-wide consultations alongside the profession could help, with a view to identifying unnecessary and unproductive administrative demands. Countries could find inspiration in the *Workload Challenge* initiative and continuing programme of work in England (United Kingdom), or its spinoff version in the Slovak Republic (see Box II.2.7). Both have proved useful in identifying sticking points, as well as possible solutions to address them.

Given the many policy pointers in this chapter that require active involvement of school leaders to promote school climate and working conditions more conducive to professional ways of working in schools, the administrative workload of school leaders is of particular concern. Thus, it is critical to find ways to alleviate the administrative burden of school principals, so that they can focus on these leadership activities. This calls for a rethink of the workload of principals, as well as efforts to reduce their administrative burden. This could be done through two mutually reinforcing strategies. On the demand side, it could be through a review of administrative requirements and streamlining of administrative requests wherever possible, possibly with a school leaders' version of the "workload challenge" initiative described above. On the supply side, policy makers should aim to develop management teams within schools, with principals sharing the administrative burden with support staff and mid-level managers, for example, staff willing to evolve towards school leadership positions or those in need of a temporary break from classroom teaching duties.

Policy makers also need to address the importance of stress deriving from accountability considerations (being held responsible for student achievement), reported by 44% of teachers on average across the OECD. It is natural for teachers, as professionals, to be held responsible for student achievement. But such accountability mechanisms should be perceived as fair and should take into account factors beyond the control of teachers, such as the characteristics of the student intake, the resources available within schools and the local context. To alleviate fears, stress and resistance around individual accountability mechanisms, government authorities could also consider placing greater emphasis on collective rather than individual responsibility and giving the profession more responsibility and autonomy in ensuring high standards of quality and high levels of student achievement. To achieve this, authorities could engage in a dialogue with the profession on the design of a system of collective and individual responsibility that is perceived as efficient, fair and appropriately applied to local contexts and circumstances.

"Keeping up with changing requirements from local, municipal/regional, state or national/federal authorities" is also a predominant source of stress for both teachers and school leaders. One way to address this issue would be for policy makers to put in place mechanisms to foster policy coherence and consistency over time and to isolate education policy from political swings. This could be done, for instance, through greater recourse to co-design of education policy with the profession or establishing bi-partisan commissions to review and advise on education policy reforms.

Policy pointer 39: Build teachers' resilience to curb stress and prevent attrition

Research insights suggest that a possible explanation for the considerable share of variance in teachers' responses is that they could be linked to teachers' individual traits, such as resilience and coping mechanisms (Curry and O'Brien, 2012[115]; Gu and Day, 2007[111]; Kyriacou, 2001[116]). Environmental characteristics can foster this attribute in teachers to help them cope with their challenges (Gu and Day, 2007[111]), and school-level policies have a role to play in developing resilience.

TALIS analyses of the factors mediating the association between stress and intentions to leave teaching can shed some light on possible policy levers to help build teachers' resilience to stress. These include individual motivation, self-efficacy, school support through opportunities for induction, participation in professional development, autonomy and professional collaboration, and job satisfaction (Table II.2.69). Given the importance of these mediating factors for reducing the association between stress levels and the risk of attrition, it is important for policy makers to examine this issue in more depth and to target policy responses to the mediating factors (and hence the policy levers) of greatest significance in their national context.

Goal: Foster the intellectual fulfilment of the profession to boost job satisfaction

A key finding from TALIS 2018 with respect to teacher retention is the strong relationship between job satisfaction and the risk of attrition. Job satisfaction is the sense of fulfilment and gratification that teachers get from their work and responsibilities as a teacher (Ainley and Carstens, 2018[76]). In 44 TALIS countries and economies, the higher the level of job satisfaction, the less likely teachers are to report an intention to leave teaching prematurely (Table II.2.69). Fostering teachers' sense of fulfilment and satisfaction with their job is, therefore, a shared goal of education systems across the world.

TALIS asks teachers about their satisfaction with the overall profession through four indicators. The good news is that an overwhelming majority of teachers have no regrets about choosing a teaching career. For example, 91% disagree with a statement expressing regrets for having decided to become a teacher. However, one-third of teachers question their career choice, as two-thirds (66%) disagree with the statement "I wonder whether it would have been better to choose another profession" (Table II.2.10). TALIS data show that, in a considerable amount of countries and economies, younger teachers (under age 30), novice teachers (less than or equal to five years of experience) and teachers working in publicly managed schools are more likely than their older and more experienced counterparts or those in privately managed schools to wonder whether it would have been better to choose another profession (Tables II.2.13 and II.2.14).

TALIS also asks teachers about their satisfaction with their current job and work environment. The results display remarkably high levels of satisfaction. For example, 90% of teachers report that, all in all, they are satisfied with their job. However, teachers are a bit more nuanced with respect to recommending their school as a good place to work (83% agreement) and 20% express a wish to change to another school if that were possible (Table II.2.16). Similar to satisfaction with the overall profession, teachers under 30 and novice teachers report lower levels of satisfaction with their current job and work environment and are more likely to express a wish to change to another school (Table II.2.19). This is also the case for teachers working in schools with a relatively high concentration of students from socio-economically disadvantaged homes (Table II.2.20). Logistic regression analyses explore in more detail the factors associated with a higher propensity to wish to change to another school. The profiles of teachers who wish to change school vary from country to country, but the one consistent result across all countries and economies is that teachers with higher levels of satisfaction with the profession are less likely to report wishing to change schools (Table II.2.22).

As far as school leaders are concerned, levels of satisfaction with the current work environment are remarkably high, ranging between 94% and 96%, on average across the OECD, depending on the specific indicator considered (Table II.2.27), with only narrow variations across countries. Satisfaction with the overall profession is a bit lower, but it exceeds 80% for all indicators. Nonetheless, as for teachers, a sizeable proportion of school leaders (20%) wonder whether it would have been better to choose another profession (Table II.2.32).

In order to better understand the factors that contribute to teachers' sense of fulfilment and satisfaction with their jobs, it is useful to bring together the range of factors that have been identified in both volumes of the TALIS 2018 international report for their significant association with job satisfaction. Indeed, these factors can provide effective policy levers to boost job satisfaction. They are briefly summarised here, bearing in mind that most of these relationships do not hold true for all countries. Some associations should be interpreted with extra caution due to the limited explanatory power of some of the models (low coefficients of determination R^2). Thus, policy makers should refer to Figure II.1.7 to obtain more details on the policy levers most likely to be effective at enhancing teachers' sense of job satisfaction in their national context.

Figure II.1.7 [1/2] **Relationship between TALIS predictors and job satisfaction**

+	Countries/economies with a **positive association** between the predictor and job satisfaction
	Countries/economies with **no statistically significant association** between the predictor and job satisfaction
–	Countries/economies with a **negative association** between the predictor and job satisfaction

	Index of job satisfaction								
	Dependent on:								
	Teaching as a first career choice[1]	Took part in any induction activities (formal or informal) at current school[2]	Induction activities at current school included team teaching with experienced teachers[2]	Professional development acitivities in the 12 months prior to the survey had a positive impact on teaching practice[3]	The teaching profession is valued in society[4]	Index of workplace well-being and stress[4]	Index of professional collabora-tion[5]	Receiving impactful feedback[5]	Index of target class autonomy[4]
	Vol I, Chapter 4	Vol I, Chapter 4	Vol I, Chapter 4	Vol I, Chapter 5	Vol II, Chapter 2	Vol II, Chapter 2	Vol II, Chapter 4	Vol II, Chapter 4	Vol II, Chapter 5
Alberta (Canada)	+	+		+	+	–	+	+	+
Australia	+	+	+	+	+	–	+	+	+
Austria	+	+		+	+	–	+	+	+
Belgium	+	+	+	+	+	–	+	+	+
Flemish Comm. (Belgium)	+	+		+	+	–	+	+	+
French Comm. (Belgium)	+	+		+	+	–	+	+	+
Brazil	+	+	+	+	+	–	+	+	+
Bulgaria	+		+	+	+	–	+	+	+
CABA (Argentina)	+	+		+		–	+	+	+
Chile	+	+	+	+	+	–	+	+	+
Colombia	+	+	+	+	+	–	+	+	+
Croatia	+	+	+	+	+	–	+	+	+
Czech Republic	+	+		+	+	–	+	+	+
Denmark	+	+	+	+	+	–	+	+	+
England (UK)	+	+	+	+	+	–	+	+	+
Estonia	+	+		+	+	–	+	+	+
Finland	+	+		+	+	–	+	+	+
France	+	+	+	+	+	–	m	+	+
Georgia	+		+	+	+	–	+	+	+
Hungary	+	+	+	m	+	–	+	+	+

1. Results of linear regression after controlling for teachers' gender, years of experience as a teacher and self-efficacy.
2. Results of linear regression after controlling for teachers' gender and years of experience as a teacher.
3. Results of linear regression after controlling for teachers' gender, years of experience as a teacher, working full-time and classroom characteristics.
4. Results of linear regression after controlling for teachers' gender, age, years of experience as a teacher, working full-time and classroom composition.
5. Results of linear regression after controlling for teachers' gender, age, years of experience as a teacher, working full-time, collaborative school culture and teachers' reliance on their each other.

Source: OECD, TALIS 2018 Database, Tables I.4.6, I.4.51, I.4.54, I.5.13, II.2.7, II.2.41, II.4.14, II.4.54 and II.5.41.

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Figure II.1.7 [2/2] **Relationship between TALIS predictors and job satisfaction**

+	Countries/economies with a **positive association** between the predictor and job satisfaction
	Countries/economies with **no statistically significant association** between the predictor and job satisfaction
–	Countries/economies with a **negative association** between the predictor and job satisfaction

	Index of job satisfaction								
	Dependent on:								
	Teaching as a first career choice[1]	Took part in any induction activities (formal or informal) at current school[2]	Induction activities at current school included team teaching with experienced teachers[2]	Professional development acitivities in the 12 months prior to the survey had a positive impact on teaching practice[3]	The teaching profession is valued in society[4]	Index of workplace well-being and stress[4]	Index of professional collabora-tion[5]	Receiving impactful feedback[5]	Index of target class autonomy[4]
	Vol I, Chapter 4	Vol I, Chapter 4	Vol I, Chapter 4	Vol I, Chapter 5	Vol II, Chapter 2	Vol II, Chapter 2	Vol II, Chapter 4	Vol II, Chapter 4	Vol II, Chapter 5
Iceland	+			+	+	-	+	+	+
Israel	+			+	+	–	+	+	+
Italy	+	+		+	+	–	+	+	+
Japan	+		+	+	+	–	+	+	+
Kazakhstan	+	+	+	+	+	–	+	+	+
Korea	+	+	+	+	+	–	+	+	+
Latvia	+	+	+	+	+	–	+	+	+
Lithuania		+		+	+	–	+	+	+
Malta	+	+		+	+	–		+	
Mexico	+	+		+	+	–	+	+	+
Netherlands	+				+	–	+		+
New Zealand	+	+	+	+	+	–		+	+
Norway	+	+		+	+	–	+	+	+
Portugal		+		+	+	–	+	+	+
Romania	+	+		+	+	–	+	+	+
Russian Federation	m	+	+	+	+	–	+	+	+
Saudi Arabia	+	+	+	+	+	–	+	+	+
Shanghai (China)	+	+	+	+	+	–	+	+	+
Singapore	+	+	+	+	+	–	+	+	+
Slovak Republic	+		+	+	+	–	+	+	+
Slovenia	+		+		+	–	+	+	+
South Africa	+	+		+	+	–	+	+	+
Spain	+	+	+	+	+	–	+	+	+
Sweden	+	+	+	+	+	–	+	+	+
Turkey	+		+	+	+	–	+	+	+
United Arab Emirates	+	+	+	+	+	–	+	+	+
United States		+	+	+	+	–	+	+	+
Viet Nam	+			+	+	–	+	+	+
OECD average-31	**+**	**+**	**+**	**+**	**+**	**–**	**+**	**+**	**+**
No. of education systems with a positive significant relationship	44	37	29	45	47	0	45	47	47
No. of education systems with a negative significant relationship	0	0	0	0	0	48	0	0	0

1. Results of linear regression after controlling for teachers' gender, years of experience as a teacher and self-efficacy.

2. Results of linear regression after controlling for teachers' gender and years of experience as a teacher.

3. Results of linear regression after controlling for teachers' gender, years of experience as a teacher, working full-time and classroom characteristics.

4. Results of linear regression after controlling for teachers' gender, age, years of experience as a teacher, working full-time and classroom composition.

5. Results of linear regression after controlling for teachers' gender, age, years of experience as a teacher, working full-time, collaborative school culture and teachers' reliance on their each other.

Source: OECD, TALIS 2018 Database, Tables I.4.6, I.4.51, I.4.54, I.5.13, II.2.7, II.2.41, II.4.14, II.4.54 and II.5.41.

StatLink http://dx.doi.org/10.1787/888934083202

Policy pointer 40: Develop the conditions for boosting job satisfaction

The importance of teachers' and school leaders' job satisfaction in strengthening education systems cannot be overemphasised. Taken together, TALIS findings highlight the importance of five broad policy levers to boost job satisfaction:

- selection of candidates with strong motivation and the right attitudes to become lifelong learners and professional workers
- a strong focus on induction and mentoring throughout the career
- a strong focus on providing meaningful and impactful opportunities for professional learning
- working conditions and a school climate conducive to teacher well-being
- the importance of a sense of trust and respect.

Thus, policy makers in each education system should consider these levers in their efforts to design effective teacher policies, taking into account their national context and policy priorities, as well as the significance of each lever explored in TALIS analyses.

Policy pointer 41: Target policies to the different profiles of teachers and specific challenges of each level of education

The higher risk of attrition of younger and novice teachers must be taken seriously, given that a number of countries and economies already face teacher shortages or fear them in the future, due to ageing teacher populations. A range of possible strategies could be considered to foster novice teachers' satisfaction, with a view to retaining them in the profession. A strand of policies could aim to reduce the "practice shock" faced by novice teachers when they start in their career (e.g. by expanding practicums in initial teacher education, adopting allocation policies that do not direct them to the most challenging schools, and mainstreaming induction and mentoring for novice teachers). Another strand of policies could aim to secure high-quality candidates in the profession for a certain period of time (e.g. by offering higher education scholarships conditional on serving a certain number of years in teaching, in the hope that those teachers would eventually decide to remain in the profession). Finally, education systems should also acknowledge that, for teachers from younger generations, teaching is likely to be only one of a series of jobs in their lifetime and not a life-long career and should aim to make the most of such "temporary assignments" to support the development of more experienced teachers (e.g. in dealing with new technologies or spreading innovation).

The situation of experienced teachers also deserves closer scrutiny. It is of concern that, in some countries, significant proportions of older and more experienced teachers are questioning whether it would have been better to choose another profession. From a human-capital perspective, more experienced teachers have accumulated more occupation-specific knowledge and skills. This could make them more risk-adverse and less willing than their more junior colleagues to consider a career change. Considerations related to pension plans are also more likely to constrain career moves for older teachers (Goldhaber et al., 2015[117]). Depending on the reasons underpinning the lower satisfaction of experienced teachers, policies could focus on improving working conditions, developing career differentiation to make teaching careers more satisfying or developing opportunities for career reorientation for demotivated teachers. Indeed, education authorities should acknowledge that teaching is a demanding and stressful career and that experienced teachers might need a change or a break to restore energy at some point in their career. Whenever this is the case, it might be more effective to offer them opportunities for lateral mobility, a leave of absence to undergo training or restore energy (following the Korean or Estonian models, see Box II.2.3) or bridging programmes to facilitate the transition of dissatisfied/demotivated teachers to alternative or more fulfilling career options.

TALIS findings also reveal lower levels of job satisfaction among teachers in publicly managed schools than in privately managed schools in a number of countries and economies, which could be driven by resources, bureaucracy and autonomy (Crossman and Harris, 2006, p. 40[118]). Given the relatively large size of the public sector in many countries, further research would be warranted to better understand and address sources of dissatisfaction for this specific group of teaching professionals. Should insufficient levels of autonomy be the root of teachers' dissatisfaction in publicly managed schools, education authorities might want to consider piloting initiatives providing more leeway to schools and their management teams to decide on the key aspects of their work. Following a careful evaluation of the outcomes of these pilots, in terms of student outcomes, equity and teachers' levels of satisfaction, decisions could be made on whether to mainstream these approaches throughout the system.

Policy pointer 42: Focus efforts on retaining teachers in the most difficult schools

Specific efforts should target the most disadvantaged schools, whose teachers report more inclination to consider changing schools. Thus, specific policies and incentives should be designed to retain teachers in these more difficult schools, especially effective and experienced teachers. TALIS findings also suggest that incentives in terms of salaries and other terms of employment could be a way to retain teachers in the schools where they are most needed. As discussed above, one way of achieving this goal may be through making assignments to those schools a prestigious stage in career progression, with proper reward structures.

Goal: Boost teachers' sense of fulfilment through enhanced self-efficacy

In addition to teachers' well-being, a powerful way to retain teachers and school leaders in the profession is to enhance their sense of fulfilment from teaching. To the extent that the most important motivations for teachers to join the profession are related to the sense of fulfilment they derive from serving the public by influencing children's development and contributing to society (OECD, 2019[13]), a final policy lever is to strive to enhance teachers' self-efficacy. Teachers with high self-efficacy (higher levels of confidence in their teaching capabilities and effectiveness) show higher job satisfaction and commitment, and are less likely to be affected by burnout, indicating the importance of the construct for their well-being (Ainley and Carstens, 2018[76]; Mostafa and Pál, 2018[109]).

In order to better understand the factors that contribute to teachers' sense of fulfilment and self-efficacy, it is useful to bring together the range of factors that have been identified in both volumes of the TALIS 2018 international report for their significant association with the self-efficacy scale. These factors can provide effective policy levers to boost this sense of fulfilment. They are briefly summarised below, bearing in mind that most of these relationships do not hold true for all countries. Some associations should be interpreted with extra caution due to the limited explanatory power of some of the models (low coefficients of determination R^2). Thus, policy makers should refer to Figure II.1.8 to obtain more details on the policy levers most likely to be effective at enhancing teachers' sense of fulfilment and self-efficacy in their national context.

Figure II.1.8 illustrates the factors showing a significant association with teachers' self-efficacy. It is noteworthy that the factors identified are, for the most part, remarkably similar to those emerging from the job satisfaction analysis, with a few noticeable additions relating to the following:

- aspects of teachers' contractual arrangements, in terms of job security (contract duration) and flexibility (part-time arrangements)
- the disciplinary climate
- the impact of professional development taken, as well as its content, covering teaching in diverse environments and student behaviour and classroom management.

Policy pointer 43: Develop the conditions for boosting teachers' self-efficacy

Given the similarity in the factors boosting job satisfaction and teachers' self-efficacy, the policy pointers outlined above to develop the conditions for boosting teachers' job satisfaction are likely to apply equally to boost self-efficacy:

- selection of candidates with strong motivation and the right attitudes to become lifelong learners and professional workers
- a strong focus on induction and mentoring throughout the career
- a strong focus on providing meaningful and impactful opportunities for professional learning
- working conditions and a school climate conducive to teacher well-being
- the importance of a sense of trust and respect.

However, to help teachers to manage diversity in their classrooms in its multiple dimensions and to ensure a disciplinary climate conducive to student learning, some new factors emerge in relation to the composition of classrooms and the content of professional development. Therefore, the implications for policy would be to assign challenging classrooms to teachers with sufficient experience and adequate training to deal with the specific profile of their students – see the extended version of Figure II.1.8 available in the StatLink.

Overall, these policy pointers emerging from the two volumes of TALIS offer a menu of options for policy makers to consider in their national context, in light of their specific challenges and constraints. Of equal importance is to adapt policy responses to the national context, paying close attention to the factors and policy levers that show the strongest association at the system level with the policy goals pursued by system authorities.

Education policy is ill suited for one-size-fits-all approaches and responses. But if applied smartly in each local context, the policy pointers outlined above show strong potential to initiate a virtuous cycle for enhancing the professionalism of teaching careers. If successful, these policies have the potential to turn this virtuous cycle into a spiralling process, lifting the profession to higher levels and achieving better outcomes for teachers, school leaders and students alike.

Figure II.1.8 [1/2] Relationship between TALIS predictors and self-efficacy

+	Countries/economies with a **positive association** between the predictor and self-efficacy
	Countries/economies with **no statistically significant association** between the predictor and self-efficacy
–	Countries/economies with a **negative association** between the predictor and self-efficacy

	Index of self-efficacy								
	Dependent on:								
	Teacher characteristics: years of experience as a teacher[1]	Index of classroom disciplinary climate[2]	Took part in any induction activities at current school[3]	Induction activities at current school included team teaching with experienced teachers[3]	Professional development acitivities in the 12 months prior to the survey did have a positive impact on teaching practice[2]	Index of workplace well-being and stress[4]	Fixed-term contract: less than or one school year[5, 6]	Index of professional collaboration[7]	Index of target class autonomy[7]
	Vol I, Chapter 2	Vol I, Chapter 3	Vol I, Chapter 4	Vol I, Chapter 4	Vol I, Chapter 5	Vol II, Chapter 2	Vol II, Chapter 3	Vol II, Chapter 4	Vol II, Chapter 5
Alberta (Canada)		–		+				+	+
Australia	+	–		+		–	–	+	+
Austria	+	–		+	+	–	–	+	+
Belgium	+	–	+		+	–	–	+	+
Flemish Comm. (Belgium)	+	–		+		–	–	+	+
French Comm. (Belgium)		–	+	+		–	–	+	+
Brazil		–	+	+	+	–		+	+
Bulgaria	+	–		+	+	–		+	+
CABA (Argentina)		–	+	+		–		+	+
Chile		–	+	+	+	–	–	+	+
Colombia		–		+	+	–		+	+
Croatia	+	–	+	+	+	–		+	+
Czech Republic	+	–	+	+		–	–	+	+
Denmark	+	–			+	–	–	+	+
England (UK)	+	–	+	+		–	–	+	+
Estonia	+	–	+	+	+			+	+
Finland	+	–	+		+	–	–	+	+
France	+	–	+		+	–		m	+
Georgia		–		+		–	–	+	+
Hungary	+	–	+	+	m	–	–	+	+
Iceland	+	–			+	–		+	+
Israel	+	–			+	–	w	+	+
Italy	+	–	+			–	w	+	+
Japan		–		+	+	–		+	+
Kazakhstan	+	–	+	+		–		+	+
Korea		–		+	+			+	+
Latvia		–	+	+	+	–	–	+	+
Lithuania	+	–			+	–		+	+

1. Results of linear regression after controlling for classroom characteristics, teachers' gender and working full-time.
2. Results of linear regression after controlling for teachers' gender, years of experience as a teacher, working full-time and classroom characteristics.
3. Results of linear regression after controlling for teachers' gender and years of experience as a teacher.
4. Results of linear regression after controlling for teachers' gender, age, years of experience as a teacher, working full-time and classroom characteristics.
5. In Australia, the participation rate of principals is too low to ensure comparability for principals' reports and country estimates are not included in the OECD average.
6. Results of linear regression after controlling for other employment characteristics, teachers' gender, age, years of experience as a teacher, working full-time, classroom characteristics and school type, size and location.
7. Results of linear regression after controlling for teachers' gender, age, years of experience as a teacher, working full-time, collaborative school culture and teachers' reliance on their each other.

Source: OECD, TALIS 2018 Database, Tables I.2.15, I.3.57, I.4.47, I.4.53, I.5.14, II.2.42, II.3.28, II.4.16, and II.5.40.

StatLink http://dx.doi.org/10.1787/888934083221

Figure II.1.8 [2/2] **Relationship between TALIS predictors and self-efficacy**

+	Countries/economies with a **positive association** between the predictor and self-efficacy
	Countries/economies with **no statistically significant association** between the predictor and self-efficacy
–	Countries/economies with a **negative association** between the predictor and self-efficacy

	Index of self-efficacy								
	Dependent on:								
	Teacher characteristics: years of experience as a teacher[1]	Index of classroom disciplinary climate[2]	Took part in any induction activities at current school[3]	Induction activities at current school included team teaching with experienced teachers[3]	Professional development acitivities in the 12 months prior to the survey did have a positive impact on teaching practice[2]	Index of workplace well-being and stress[4]	Fixed-term contract: less than or one school year[5, 6]	Index of professional collaboration[7]	Index of target class autonomy[7]
	Vol I, Chapter 2	Vol I, Chapter 3	Vol I, Chapter 4	Vol I, Chapter 4	Vol I, Chapter 5	Vol II, Chapter 2	Vol II, Chapter 3	Vol II, Chapter 4	Vol II, Chapter 5
Malta	+	–		+	+			+	+
Mexico		–	+	+	+	–		+	+
Netherlands	+	–	+		+	–	w	+	+
New Zealand	+	–		+	+			+	+
Norway	+	–				–	–	+	+
Portugal		–	+		+	–		+	+
Romania	+	–	+	+	+	–	–	+	+
Russian Federation	m	m	m	m	m	m	m	m	m
Saudi Arabia		–	+	+	+	–	c	+	+
Shanghai (China)		–	+	+	+	–		+	+
Singapore	+	–		+		–		+	+
Slovak Republic	+	–		+	+	–		+	+
Slovenia		–			+	–		+	+
South Africa		–		+	+	–		+	+
Spain	+	–	+	+	+	–		+	+
Sweden	+	–		+	+	–	–	+	+
Turkey		–		+	+	–		+	+
United Arab Emirates	+	–	+	+	+	–		+	+
United States		a		+		–		+	+
Viet Nam		c	+	+		–	–	+	+
OECD average-31	**+**	**–**	**+**	**+**	**+**	**–**	**–**	**+**	**+**
OECD average-30	**..**	**..**	**..**	**..**	**..**	**..**	**–**	**..**	**..**
No. of education systems with a positive significant relationship	29	0	25	35	33	0	0	46	47
No. of education systems with a negative significant relationship	0	45	0	0	0	42	15	0	0

1. Results of linear regression after controlling for classroom characteristics, teachers' gender and working full-time.
2. Results of linear regression after controlling for teachers' gender, years of experience as a teacher, working full-time and classroom characteristics.
3. Results of linear regression after controlling for teachers' gender and years of experience as a teacher.
4. Results of linear regression after controlling for teachers' gender, age, years of experience as a teacher, working full-time and classroom characteristics.
5. In Australia, the participation rate of principals is too low to ensure comparability for principals' reports and country estimates are not included in the OECD average.
6. Results of linear regression after controlling for other employment characteristics, teachers' gender, age, years of experience as a teacher, working full-time, classroom characteristics and school type, size and location.
7. Results of linear regression after controlling for teachers' gender, age, years of experience as a teacher, working full-time, collaborative school culture and teachers' reliance on their each other.

Source: OECD, TALIS 2018 Database, Tables I.2.15, I.3.57, I.4.47, I.4.53, I.5.14, II.2.42, II.3.28, II.4.16, and II.5.40.

StatLink http://dx.doi.org/10.1787/888934083221

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Notes

1. Within selected in-scope schools, substitute, emergency or occasional teachers were excluded from the sample. Therefore, TALIS analysis on issues of workforce demographics for some education systems may not reflect these teachers' views'.
2. In Spain, the principals' training prerequisites are regulated by a Royal Decree (Ministerio de Educación, Cultura y Deporte, 2014[119]).
3. In Finland, for example, professional autonomy and agency are a key component of the teacher curricula. Efforts are made to preserve this component across initial teacher education and in-service training (Niemi, 2015[120]). Initial teacher education with a research-based orientation prepares Finnish teachers to be autonomous decision makers in their classrooms. In-service training, through induction activities and short courses, inculcates professional learning communities, which foster innovation and school-based projects.
4. The meta-analysis consisted of a review of 60 studies that employ causal research designs of the effect of coaching programmes on teachers' instructional practice and students' academic achievement. Combining results across these 60 studies, the researchers found pooled effect sizes of 0.49 standard deviations (SD) on instruction and 0.18 SD on achievement. Much of this evidence came from literacy coaching programmes for pre-kindergarten and elementary school teachers in the United States (Kraft, Blazar and Hogan, 2018[27]).
5. In TALIS, students with special needs are defined as "those for whom a special learning need has been formally identified because they are mentally, physically, or emotionally disadvantaged".
6. This refers to instructional activities that require students to evaluate, integrate and apply knowledge within the context of problem solving. They are more cognitively demanding but can challenge and motivate students and stimulate higher-order skills, such as critical thinking, problem solving and decision making (Lipowsky et al., 2009[45]).
7. These include team teaching, providing feedback based on classroom observations, engaging in joint activities across different classes and participating in collaborative professional learning, as well as exchanging teaching materials, discussing the learning development of specific students, working with other teachers to ensure common standards in evaluations and attending team conferences.
8. In TALIS 2018, "professional collaboration" includes team teaching, providing feedback based on classroom observations, engaging in joint activities across different classes and participating in collaborative professional learning.
9. In TALIS 2018, "exchanges and co-ordination" includes exchanging teaching materials, discussing the learning development of specific students, working with other teachers to ensure common standards in evaluations and attending team conferences.
10. Australia, Belgium and its French Community, CABA (Argentina), Chile, England (United Kingdom), Israel, South Africa and the United Arab Emirates.
11. TALIS questionnaires ask teachers whether they have received feedback from a range of different sources ("external individual or bodies"; "school principal or member[s] of the school management team"; and "other colleagues within the school") and through six methods (observation of teachers' classroom teaching; student survey responses related to teachers' teaching; assessment of teachers' content knowledge; external results of teachers' students; and school-based and classroom-based results and self-assessment of teachers' work).
12. The specific tasks concern having a considerable responsibility for appointing or hiring teachers, dismissing or suspending teachers from employment, establishing teachers' starting salaries, determining teachers' salary increases, deciding on budget allocations within the school, establishing student disciplinary policies and procedures, establishing student assessment policies, approving students for admission to the school, choosing which learning materials are used, determining course content and deciding which courses are offered.
13. The word "significant", as used here, does not refer to the statistical properties of the results, but to the wording used in the questionnaire to phrase the question to principals.
14. This is captured by the proportion of teachers under age 50 who report that they plan to leave their job in the next five years (i.e. before they reach retirement age). While not perfect, this measure provides a good indication of individuals who are likely to leave teaching prematurely, although TALIS data does not allow ruling out the possibility that they might leave their current teaching job to take up a more senior position.
15. To enable international comparisons, data on statutory salaries are converted using purchasing power parities.
16. This could be done, for instance, through an audit process to identify and eliminate duplications of requests, use of technology to gain in efficiency or having some tasks performed by support staff or teacher trainees.
17. Teachers' satisfaction with the non-salary terms of their employment seems mostly driven by considerations of opportunities for professional learning (captured through support for participation in professional development), teacher leadership (captured through opportunities to participate in school governance) and workload (captured through total working hours).
18. The scale for self-efficacy measures teacher self-efficacy in classroom management, instruction and student engagement. The scale for professional collaboration measures the extent to which teachers teach jointly as a team in the same class, provide feedback to other teachers about their practice, engage in joint activities across different classes and age groups, and participate in collaborative professional learning. The scale for satisfaction with autonomy in the target class measures the sense of control for determining course content, selecting teaching methods, assessing students' learning, disciplining students, and determining the amount of homework for the target class. The scale for job satisfaction measures satisfaction with the profession and the current work environment.

2

Boosting the prestige and standing of the profession

This chapter offers insights into teachers' and school leaders' perceptions of their working conditions and how they relate to the prestige and standing of the profession. To explore the prestige of the teaching profession, it examines to what extent teachers and school leaders consider their profession is valued in society. The chapter also contrasts teachers' and school leaders' levels of job satisfaction with both their working environments and their profession and how they have changed over time. In addition, new to this cycle of the Teaching and Learning International Survey (TALIS), it describes the level of stress teachers report experiencing in their work and explores the sources of stress. The chapter concludes by examining how teachers' perceptions of their working conditions are related to the risk of attrition.

Highlights

- On average across OECD countries and economies participating in the Teaching and Learning International Survey (TALIS), only 26% of teachers say that their profession is valued by society. Older and experienced teachers tend to see their profession as less valued by society than younger and novice teachers.
- On average across the OECD, more than 80% of teachers and school leaders feel satisfied with their current working conditions, and over 60% of them feel satisfied with their profession in general. However, in almost half of the countries and economies participating in TALIS with available data, the proportion of teachers reporting that they are satisfied with their profession has decreased slightly over the last five years.
- Only 20% of teachers in OECD countries and economies in TALIS would like to change to another school if given the chance. However, the desire to change schools is more common among younger teachers than among their older colleagues. Furthermore, teachers working in schools with a high concentration of socio-economically disadvantaged students are more likely to report a desire to change schools than those working in schools with lower concentrations of these students.
- Around one in five teachers say they experience stress a lot in their work, on average across OECD countries and economies in TALIS. The main reported causes of stress include having too much administrative work, being held responsible for students' achievement and keeping up with changing requirements from government authorities. Higher levels of stress are also more associated with administrative hours than with time spent teaching in the classroom.
- On average across OECD countries and economies in TALIS, 25% of teachers want to leave teaching within the next five years. This could be explained by an aging teacher workforce approaching retirement in certain countries and economies, since just 14% of teachers aged 50 years or less report wanting to leave teaching within the next five years.
- Teachers who experience stress a lot are almost twice as likely as colleagues with lower levels of stress to report that they will stop working as teachers in the next five years. For half of the countries with available data, stress remains strongly associated with teachers' intention to leave teaching, even after accounting for their levels of job satisfaction.

INTRODUCTION

Attracting, developing and retaining effective teachers is the core policy orientation education systems need to pursue in order to build a high-quality and professionalised teaching workforce (Ainley and Carstens, 2018[1]; Akiba, 2013[2]; OECD, 2019[3]; OECD, 2018[4]; OECD, 2005[5]; Viac and Fraser, 2020[6]). In fact, high-achieving educational systems attract highly skilled trainee teachers by offering career paths that recognise and retain quality professionals (Barber and Mourshed, 2007[7]; Darling-Hammond et al., 2017[8]; OECD, 2019[9]).

The prestige of the profession can certainly help boost the attractiveness of teaching careers among trainee teachers and improve retention of effective teachers (Ingersoll and Collins, 2018[10]; Price and Weatherby, 2018[11]). Usually, careers with the highest prestige are also the ones that are able to attract and retain highly skilled candidates, as is the case in medicine or engineering. Raising and maintaining the prestige of the teaching profession have been long-term endeavours of many educators, teacher organisations, social actors and policy makers invested in the professionalisation of the teaching workforce (Hargreaves, 2009[12]; Hargreaves, 2000[13]; Hoyle, 2001[14]; OECD, 2005[5]; Schleicher, 2018[15]).

The working conditions of teachers and school leaders play a crucial role in shaping the prestige of the profession (Borman and Dowling, 2008[16]). Indeed, research has shown that satisfaction with working conditions, decision making in the school and being recognised for good work are associated with teachers feeling valued in society (Price and Weatherby, 2018[11]). Good working conditions, such as the adequate allocation of resources, along with supportive and collaborative working environments, can improve teachers' overall well-being, job commitment and efficiency (Bakker et al., 2007[17]; Borman and Dowling, 2008[16]; Cochran-Smith, 2004[18]; Collie and Martin, 2017[19]; Hakanen, Bakker and Schaufeli, 2006[20]; Mostafa and Pál, 2018[21]). By contrast, unmanageable job demands and stressful working conditions can lead to low job satisfaction and well-being (Collie, Shapka and Perry, 2012[22]; Desrumaux et al., 2015[23]), lower levels of job commitment (Klassen et al., 2013[24]; Skaalvik and Skaalvik, 2016[25]) and burnout (Betoret, 2009[26]). They can also generate motivation to leave the profession (Skaalvik and Skaalvik, 2018[27]) and lead to attrition (Weiss, 1999[28]). Thus, it is important to acknowledge that improved prestige and working conditions can be an asset to retaining teachers and attracting strong candidates to the profession.

Using the Teaching and Learning International Survey (TALIS) 2018 indicators, this chapter describes the complex relations between prestige, job satisfaction, occupational stress and attrition.[1] The first section of the chapter examines the perceptions of teachers and school leaders on how society values their profession and how these perceptions have changed over time. The following section explores the perceptions of teachers and school leaders on their work, by reporting on satisfaction with their current working environment and their profession. Next, the chapter looks at occupational stress among teachers and school leaders, as well as the sources of stress, with a special focus on working hours and intensity of tasks. The final section deals with the risk of attrition among teachers and explores how it is linked to occupational stress, working conditions and teacher characteristics.

PRESTIGE AND STATUS OF THE PROFESSION AS ELEMENTS OF ITS ATTRACTIVENESS

A core component of teacher professionalism is the level of prestige and status teaching enjoys (Ingersoll and Collins, 2018[10]). Although there are multiple definitions of "prestige" in the literature, the notion used in TALIS is close to Hoyle's (2001[14]) concept of prestige. He refers to it as occupational esteem "... the regard in which an occupation is held by the general public by virtue of the personal qualities which members are perceived as bringing to their core task." (p.147).

Although research evidence on the link between teachers' perceptions of prestige and concrete outcomes is mixed, there have been some interesting findings about its impact. For example, statistical analysis based on interviews conducted with 99 teachers in Seville, Spain showed that teachers with a low perceived value of their profession tend to show higher levels of emotional exhaustion at work (Cano-Garcia, Padilla-Muñoz and Carrasco-Ortiz, 2005[29]), while a study in the United Kingdom using survey data from 849 teachers concluded that prestige may play a crucial role in retention of teachers (Fuller, Goodwyn and Francis-Brophy, 2013[30]). Finally, high-achieving education systems tend to display large proportions of teachers who feel valued in society, and there is a positive correlation between the overall prestige of the profession in society (as perceived by the overall population and by teachers in particular) and educational achievement of students (Dolton et al., 2018[31]; Schleicher, 2018[15]).

This section describes the perceptions of teachers and school leaders on how society values the teaching profession and on how these perceptions have changed over time. The analyses also cover how teachers' perceptions relate to the views of society as a whole, the relationship with job satisfaction and attractiveness of the profession.

Teachers' perceptions of the value of the teaching profession

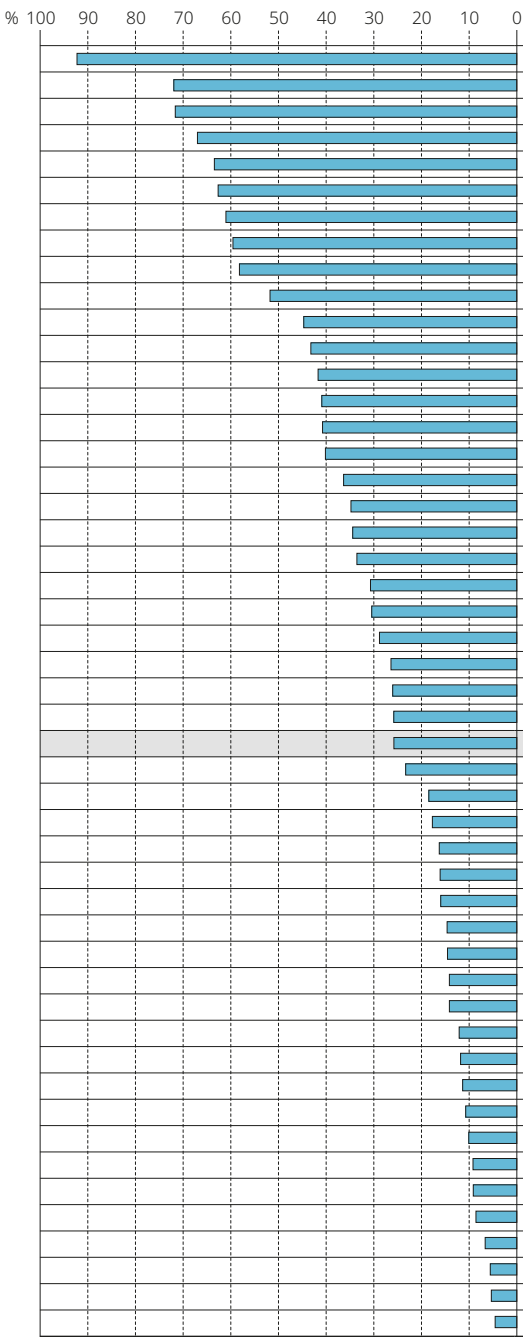
To get a sense of the perceived prestige of the profession, TALIS 2018 asked teachers and principals about their level of agreement ("strongly disagree"; "disagree"; "agree" and "strongly agree") on whether the teaching profession is valued in society. On average across the OECD countries and economies that participate in TALIS,[2] only 26% of teachers "agree" or "strongly agree" that their profession is valued in society (Figure II.2.1, Table II.2.1). From 6% to 9% of teachers agree with this statement in Ciudad Autónoma de Buenos Aires (hereafter CABA [Argentina]), Croatia, France, Portugal, and only 5% of teachers or less do so in the French Community of Belgium, the Slovak Republic and Slovenia. In contrast, the systems where a majority of teachers (at least 50%) consider that the teaching profession is valued in society are Viet Nam (92%), Singapore (72%), the United Arab Emirates (72%), Korea (67%), Kazakhstan (63%), Alberta (Canada) (63%), South Africa (61%), Shanghai (China) (60%), Finland (58%) and Saudi Arabia (52%).

Whether teachers think their profession is valued in society varies significantly by gender. On average across the OECD, 29% of male teachers consider that their profession is valued in society, compared to 24% of female teachers. This holds true for 32 TALIS countries and economies (Figure II.2.1,Table II.2.1). Notable differences are observed in Mexico (a difference of 13 percentage points) and Latvia (12 percentage points). The only countries showing a reverse pattern, where the proportion of female teachers feeling valued in society is higher than the proportion of male teachers, are Saudi Arabia (a difference of 16 percentage points), the United Arab Emirates (4 percentage points) and Viet Nam (2 percentage points).

These gender differences can be interpreted in several ways. Although there is evidence suggesting that teaching, along with other occupations with a large proportion of women, has lower prestige than other professional occupations, males within these female-dominated professions may have a special status and enjoy certain privileges (García-Mainar, Montuenga and García-Martín, 2018[32]; Williams, 1992[33]). For example, evidence has shown that in female-dominated work environments such as teaching, males are more likely than their female colleagues to occupy more prestigious roles, i.e. management/leadership roles (Cognard-Black, 2004[34]).[3] TALIS 2018 data indicate that there is indeed a higher proportion of males among school leaders than among teachers in nearly all countries and economies participating in TALIS, although school leaders are typically drawn from the ranks of teachers – see Table I.3.17 in *TALIS 2018 Results (Volume I)* (OECD, 2019[3]). In addition, male teachers could perceive their profession is more valued in society due to the subject matter they teach, in particular if these subjects are more valued in society (e.g. science, mathematics, technology).

Figure II.2.1 **Teachers' views of how society values their profession, by teacher characteristics**

Results based on responses of lower secondary teachers



+ Positive difference
– Negative difference
Difference is not significant
Missing values

	Difference by teacher characteristics		
	Male – Female	Age 50 and above – under age 30	Experienced – novice teacher[1]
Viet Nam	–		
Singapore		+	
United Arab Emirates	–		–
Korea	+		–
Kazakhstan	+	–	
Alberta (Canada)			
South Africa			
Shanghai (China)			–
Finland		–	–
Saudi Arabia	–	+	
Australia	+	–	
Russian Federation	+	–	–
Mexico	+	+	
Romania	+	–	–
Georgia	+	–	–
Colombia	+		
United States	+		
Norway		–	–
Japan		+	
New Zealand	+		
Netherlands			
Israel	+		
England (UK)			–
Estonia	+	–	–
Turkey			
Flemish Comm. (Belgium)	+	+	
OECD average-31	+	–	–
Latvia	+		–
Denmark			
Bulgaria	+	–	–
Belgium	+		
Austria	+		–
Czech Republic	+	–	–
Chile	+		
Malta	+	+	
Spain	+	–	–
Lithuania		–	
Italy	+	–	–
Hungary	+		–
Brazil	+		
Sweden		–	–
Iceland			
Croatia	+		–
Portugal	+		
CABA (Argentina)	+		
France	+		–
Slovenia	+		
French Comm. (Belgium)	+		–
Slovak Republic	+	–	
Education systems with a positive difference	**32**	**6**	**0**
Education systems with no difference	**14**	**26**	**27**
Education systems with negative difference	**3**	**16**	**22**

1. Experienced teachers are teachers with more than five years of teaching experience.

Countries and economies are ranked in descending order of the percentage of lower secondary teachers who "agree" or "strongly agree" that the teaching profession is valued in society.

Source: OECD, TALIS 2018, Table II.2.1.

StatLink http://dx.doi.org/10.1787/888934083240

Moreover, TALIS 2018 shows that the difference between the proportion of male and female teachers holding a positive view of the profession tends to be larger in systems that are female-dominated. In fact, the correlation at the level of countries and economies between the proportion of female teachers in the workforce and the difference of feeling valued in society between male and female teachers is positive among TALIS countries and economies (the linear correlation coefficient r is r=.41 among TALIS countries and economies).

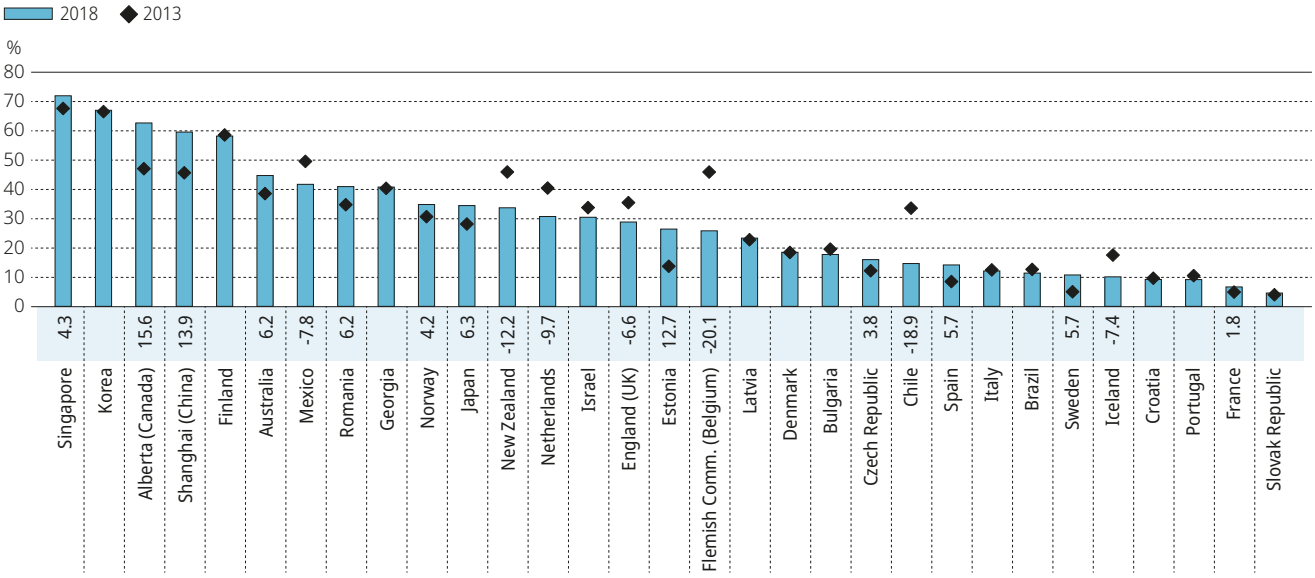
On average across the OECD, a lower share of teachers age 50 and above (26%) believe that their profession is valued in society, compared to teachers under age 30 (29%) (Figure II.2.1, Table II.2.1). This pattern holds true for 16 TALIS countries and economies. The highest differences (10 percentage points or more) are found in Bulgaria, Estonia, Georgia, Kazakhstan, Romania, the Russian Federation and Sweden. By contrast, in 6 TALIS countries and economies, the share of younger teachers who believe that their profession is valued in society is lower than the share of older teachers. Countries and economies displaying the highest differences (10 percentage points or more) are Malta, Mexico, Saudi Arabia and Singapore.

When considering the experience of teachers, a lower share of teachers with more than five years of experience (25%) believe that their profession is valued in society, compared to teachers with less than or equal to five years of experience (30%) (Figure II.2.1, Table II.2.1). This pattern holds true for 22 TALIS countries and economies. Countries and economies displaying particularly high differences (10 percentage points or more) are Bulgaria, Estonia, Romania, the Russian Federation and Sweden. It is noteworthy that, different to the data pattern observed by age group, no single country or economy shows a reverse pattern, which suggests a devaluation of the profession on the part of teachers as they gain more experience, with a progressive loss in the perceived value of the profession in nearly half of the TALIS countries and economies. A possible explanation is that the decrease in valorisation on the part of teachers is pushed by their satisfaction with their salaries. Indeed, Table II.3.58 in Chapter 3 of this volume shows that satisfaction with salary decreases with experience. Furthermore, teachers feeling valued in society and satisfaction with salaries shows a positive correlation across TALIS countries and economies (the linear correlation coefficient r is r=.46 among TALIS countries and economies).

Variation in the perceived value of the teaching profession by school characteristics (location, type and share of students with low socio-economic status, immigrant backgrounds and special needs) does not show a clear pattern across participating countries and economies, and the differences for most participants are quite small (Table II.2.4). This is good news, since it suggests that the overall perception of the teaching profession is not driven by school characteristics (Stromquist, 2018[35]).

Figure II.2.2 **Change in perceived societal value of teaching from 2013 to 2018**

Percentage of lower secondary teachers who "agree" or "strongly agree" that the teaching profession is valued in society



Notes: Only countries and economies with available data for 2013 and 2018 are shown.

Statistically significant changes in perceived societal value of teaching between 2013 and 2018 (TALIS 2018 – TALIS 2013) are found next to the country/economy name (see Annex B).

Countries and economies are ranked in descending order of the percentage of lower secondary teachers who "agree" or "strongly agree" that the teaching profession is valued in society in 2018.

Source: OECD, TALIS 2018 Database, Table II.2.5.

StatLink http://dx.doi.org/10.1787/888934083259

Furthermore, in a handful of systems, the share of teachers who think that their profession is valued in society is higher in schools located in rural areas or villages (up to 3 000 people) than the share in schools located in cities (with a population of over 100 000). This holds true for Austria, Brazil, Georgia, Hungary, Kazakhstan, Mexico, Romania, the Russian Federation and South Africa. More favourable opinions are also seen in a few countries among teachers who work in publicly managed schools (CABA [Argentina], Chile, Georgia, Kazakhstan and Viet Nam), in schools with a relatively high concentration of students from low socio-economic backgrounds (Colombia, Georgia, Israel and Italy), schools with a relatively high concentration of immigrant students (Finland, Sweden and the United Arab Emirates) and schools with a relatively high concentration of students with special needs (Belgium).

Has the perception of teachers on the value of their profession in society changed between 2013 and 2018? Results show a mixed pattern in the 32 countries and economies with available data over the period of interest (Figure II.2.2, Table II.2.5). In 8 systems, there has been a significant decrease in the percentage of teachers who think that their profession is valued in society. The TALIS countries and systems that have decreased the most (10 percentage points difference or more) are the Flemish Community of Belgium (-20 percentage points), Chile (-19 percentage points) and New Zealand (-12 percentage points). However, 12 countries and economies have experienced an increase in the percentage of teachers who think that their profession is valued in society. The most prominent cases (a difference of more than 10 percentage points) are Alberta (Canada) (+16 percentage points), Shanghai (China) (+14 percentage points) and Estonia (+13 percentage points). Sweden displays a more modest change (+5 percentage points) but, along with Estonia, showcases very interesting policy measures to enhance the attractiveness of the profession (Box II.2.1).

Box II.2.1. **Enhancing the prestige and attractiveness of the teaching profession in Sweden and Estonia**

Sweden

According to the Swedish National Agency for Education (Skolverket), upcoming recruitment needs will be difficult to meet, which suggests a future shortage of teachers. In 2014, the Swedish government introduced the National Gathering for the Teaching Profession, which contained measures to avoid this situation and boost the attractiveness of the profession. This legislation included financial incentives in the form of salary increases and more rapid wage progression for teachers, linked to their competences and development. In 2016, this was followed by the Teacher Salary Boost initiative (*Lärarlönelyftet*), which rewarded teachers after they completed professional development programmes.

A second axis of the government strategy was to facilitate and encourage entry to the profession by promoting alternative pathways to teaching and increasing government grants for new teachers. Grants were also implemented to improve working conditions and career possibilities, targeting dropout among teachers.

These measures were complemented by an information campaign entitled Pass it on (*För det vidare*), which was designed to attract more people to teaching, encourage retention of those already in the system and boost the social prestige of the profession. This media-based operation, in the form of a website, contains general information on the teaching profession, presents existing opportunities for teaching professionals and promotes entry to the profession through original materials.

Sources: Ministry of Finance (2015[36]), *Budgetpropositionen för 2015: Prop. 2014/15:1 [Budget bill for 2015]*, http://www.regeringen.se/rattsdokument/proposition/2014/10/prop.-2014151/; Swedish National Agency for Education (2015[37]), *An Assessment of the Situation in the Swedish School System 2015: Summary of Report 421*, https://www.skolverket.se/download/18.6bfaca41169863e6a65bba5/1553966393937/pdf3551.pdf.

Estonia

In Estonia, ensuring teachers' satisfaction and their image in society is at the core of the Lifelong Learning Strategy 2014-2020. Government action has included salary raises and reforms in work organisation to make the teaching profession highly valued in society. To attract the best candidates and make teaching a viable employment option, average salaries of teachers have been adjusted to make them consistent with the qualifications required and the set of skills developed. Novice teachers' salaries have been specifically targeted to boost the popularity of the teaching profession for young people. The salary system for teachers also incorporates incentives to motivate professional development, with the possibility of taking half a year away from teaching to fulfil definite developmental assignments.

In addition, the Youth to School programme (*Noored Kooli*) seeks to raise interest in teaching and education by awarding scholarships to a select group of university students who teach at school for two years while taking part in teaching and leadership training. Upon completion of the programme, students can keep working at school, return to university or work elsewhere.

Estonia also values the teaching profession through education awards to expand social recognition of education personnel. At the annual Teacher of the Year Gala, awards are distributed to celebrate contributions of the most outstanding education professionals to education quality and student support.

Source: Ministry of Education and Research, Republic of Estonia (2014[38]), *Estonian Lifelong Learning Strategy 2020*, https://www.hm.ee/en/estonian-lifelong-learning-strategy-2020; Ministry of Education and Research, Republic of Estonia (2015[39]), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools: Country Background Report, Estonia*, http://www.oecd.org/education/school/EST_Country_background_report_final_30.11.15_Version2.pdf.

As discussed previously, perceived prestige can be an important factor in its capacity to attract candidates to the profession. A proxy measure to understand the attractiveness of the teaching profession is whether teaching was considered a first choice as a career (defined as a paid job regarded as likely to form one's life's work).

On average across the OECD, after controlling for age, experience, type of contract and other relevant factors, teachers who report feeling valued in society are more likely to have decided on teaching as a first career choice (Table II.2.6). This holds true for 27 TALIS countries and economies. The results may suggest that, at least for this subset of countries and economies, the prestige of the profession may motivate potential candidates to consider teaching as a viable career option at the beginning of their professional life. The importance of opting for teaching as a first career choice should not be disregarded, since it could also be an indicator of retention and performance of teachers. *TALIS 2018 Results (Volume I)* showed that, for the majority of TALIS countries and economies, teachers who opted for teaching as a first-choice career were more likely to be satisfied with their job and to report higher levels of self-efficacy – see Table I.4.6 (OECD, 2019[3]).

However, the fact that the association between the prestige of the teaching profession and choosing teaching as a first choice is not significant for almost half of the TALIS countries and economies may indicate cross-country variations in factors relating to teaching as a first career choice. These could include institutional differences in the selection and certification processes of teacher candidates, as well as cultural differences in the ways individuals view their career paths and working life (OECD, 2019, p. 124[3]).[4]

The proportion of teachers who report feeling valued in society is also related to job satisfaction and reported self-efficacy. Although causal interpretations should be avoided, the regression analysis shows strong links between prestige (teachers feeling valued in society) and satisfaction (job satisfaction). Regression analyses show that, after controlling for teachers characteristics, teachers who report feeling valued in society have higher levels of satisfaction with their job (Table II.2.7). This holds true for all TALIS countries and economies except CABA (Argentina).

Box II.2.2. **Teachers' perceptions of the value of their profession, from primary to upper secondary education**

On average across the OECD, only 26% of lower secondary teachers think that their profession is valued in society (Table II.2.8). No clear pattern can be found when comparing this value for countries with available data for teachers in primary or upper secondary education.

In 4 of the 13 TALIS countries and economies with available data, the share of teachers who think they are valued in society is significantly higher in primary education than in lower secondary education, with the largest differences in the Flemish Community of Belgium and England (United Kingdom), both with a difference of 5 percentage points. However, 4 countries display the opposite pattern, with the share of teachers who think their profession is valued in society significantly lower in primary education than in lower secondary education, with the largest difference in Korea (7 percentage points) (Table II.2.2).

In upper secondary education, the share of teachers who think their profession is valued in society is significantly higher than in lower secondary education for 6 of the 11 countries and economies with available data. The three largest differences are observed in Denmark (20 percentage points), Portugal (5 percentage points) and Slovenia (4 percentage points). The only exception to this pattern is Alberta (Canada), where the share of teachers who think their profession is valued in society is lower in upper secondary education than in lower secondary education (a difference of 8 percentage points) (Table II.2.3).

The perspectives of principals and society on the value of the teaching profession

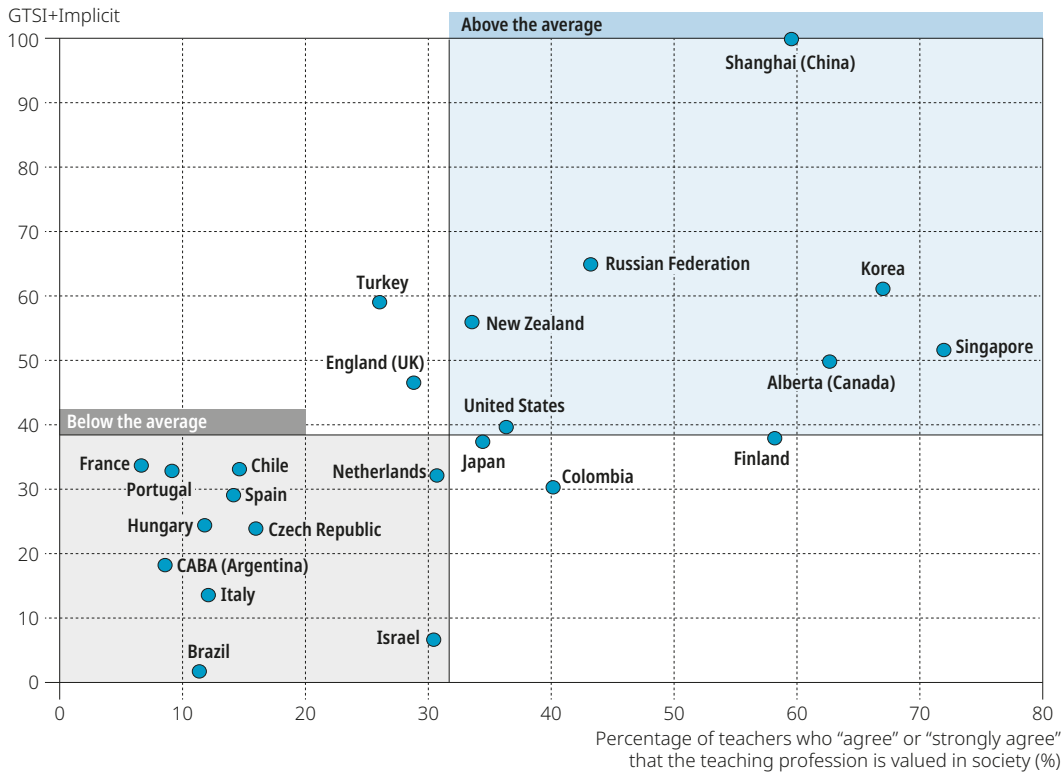
There is ample evidence that teachers generally tend to have a low opinion of how society perceives their work (Eurydice, 2004[40]; Fuller, Goodwyn and Francis-Brophy, 2013[30]; Pérez-Díaz and Rodríguez, 2014[41]; Smak and Walczak, 2017[42]). As such, it is interesting to compare teachers' perspectives on their profession with those of other relevant stakeholders. Since principals are involved in, if not responsible for, managing and supporting teachers, it is also relevant to explore their views on the appreciation of the teaching profession. TALIS 2018 attempts to explore these different perspectives by also asking principals whether they agree ("strongly disagree"; "disagree"; "agree"; or "strongly agree") with the statement that the teaching profession is valued in society.

On average across OECD countries, 37% of principals agree or strongly agree that the teaching profession is valued in society (Table II.2.8). This is noticeably higher than the corresponding average among teachers (26%) (Table II.2.1). Indeed, in almost all countries and economies participating in TALIS, principals are more likely than teachers to believe that their profession is valued in society. A possible explanation for these results can be found in the professional trajectories of principals. On average across the OECD, most of the working years of principals have been spent as teachers – see Table I.3.13 in *TALIS 2018 Results (Volume I)* (OECD, 2019[3]). Given that management/leadership roles tend to be considered more prestigious than teaching positions (Dolton et al., 2018[31]), principals may be conflating the relative prestige of their leadership role to how the teaching profession is valued in society.

Regarding the perspectives of society at large, international studies have shown that, in broad terms, societal views of the teaching profession are not unfavourable and teaching is usually ranked as a mid-level career (Dolton et al., 2018[31]; Ingersoll and Collins, 2018[10]; Smak and Walczak, 2017[42]). For example, surveys in the Flemish Community of Belgium, the French Community of Belgium and Spain have shown that teaching is a respected profession and that the value accorded to the profession has been maintained over time (IWEPS, 2019[43]; Pérez-Díaz and Rodríguez, 2014[41]; Verhoeven et al., 2006[44]).

Figure II.2.3 **Teaching status index and teachers' perceived value of their profession**

Results based on responses of lower secondary teachers and on the GTSI_2018+Implicit Index[1]



1. Four GTSI countries (Argentina, Canada, China and the United Kingdom) were counted as TALIS participants, since subnational entities from each of these countries participated in the TALIS study: CABA (Argentina), Alberta (Canada), Shanghai (China) and England (United Kingdom).

Note: Only countries and economies with available data for TALIS 2018 and the GTSI_2018+Implicit index are shown.

Sources: OECD, TALIS 2018 Database, Table II.2.1; Dolton, P. et al. (2018[31]), *Global Teacher Status: Index 2018*, https://www.varkeyfoundation.org/media/4867/gts-index-13-11-2018.pdf.

StatLink http://dx.doi.org/10.1787/888934083278

However, there might indeed be a great level of variation between education systems in the societal value of teaching, since a recent study showed that, in high-performing countries such as China and Singapore, teachers are as well respected as medical professionals (Dolton et al., 2018[31]). Moving beyond how teaching is ranked in relation to other professions, it is also important to examine whether teaching is sufficiently respected as a career option. For example, a recent Programme for International Student Assessment (PISA) study showed that teaching is not among the top career aspirations of 15-year-olds and that those who express a preference for teaching are usually not the top achievers (OECD, 2018[4]).

A measure that takes into account both the rating and the attractiveness of the teaching profession is the Global Teacher Status Index (GTSI), developed by the Varkey Foundation (Dolton et al., 2018[31]). The 2018 survey from which the index is developed (which had a previous cycle in 2013) sought to identify the level of respect for teachers among the general population in 35 countries (of which 24 participated in TALIS 2018). The index is a combination of a ranking of primary and secondary school teachers against other professions, a ranking of teachers' relative status based on the most similar comparative professions and a rating derived from the perceived respect of pupils for teachers.[5] The analysis produced an index with a scale of 0-100 on how much teachers are respected in each country.[6] The GTSI Index 2018 showed that teachers are much more respected in Asian countries than in other countries. Furthermore, Japan and the United Kingdom are the countries where the index experienced the highest increase in the last five years (Dolton et al., 2018[31]).

An additional GTSI index, captures spontaneous attitudes towards teachers (GTSI_2018+Implicit). These responses refer to "…unconscious, automatically activated feelings and associations we hold in relation to certain subjects or groups." (Dolton et al., 2018, p. 81[31]). As the report explains, capturing spontaneous responses is valuable: "Respondents may also hold positive or negative unconscious perceptions of teachers – feelings and associations of which they themselves are not fully aware. Measures which encourage spontaneous, unreflective responses may therefore offer an additional insight into the popular perception of teachers in the surveyed countries." (Dolton et al., 2018, p. 82[31]).[7]

Figure II.2.3 contrasts the values of the GTSI_2018+Implicit index with the system-level proportion of teachers who believe their profession is valued in society.[8] As the figure shows, there is a moderate positive correlation between the GTSI index and the proportion of teachers agreeing or strongly agreeing that their profession is valued in society (the linear correlation coefficient r is r=.64 among the countries for which data is available). In one quadrant of the figure are countries like Argentina, Brazil, the Czech Republic, Hungary and Italy, which have low values on the GTSI scale and low percentages of teachers who believe their profession is valued in society. In contrast, systems like Canada, Finland and Singapore display high values on the GTSI index and high percentages of teachers who believe their profession is valued in society. The results of this system-level correlation seem to support the notion that teachers' perceptions of prestige are more or less aligned to perceptions of the larger society.

JOB SATISFACTION WITH THE CURRENT WORKING ENVIRONMENT AND THE PROFESSION

Although many factors affect the prestige of the teaching profession, working conditions play a crucial role in shaping it (Guerriero, 2017[45]; Han, Borgonovi and Guerriero, 2018[46]; Price and Weatherby, 2018[11]). This section examines the responses of teachers and principals with respect to satisfaction with their current working environment and their profession.

Job satisfaction is the sense of fulfilment and gratification that teachers get from working (Ainley and Carstens, 2018[1]). Positive job satisfaction has a positive impact on teachers, school climate and students. In particular, research shows a positive relationship between teachers' job satisfaction and teachers' performance (Lortie, 1975[47]; Renzulli, Macpherson Parrott and Beattie, 2011[48]). Job satisfaction also plays a key role in teachers' attitudes, efforts and confidence (self-efficacy) in their daily work with children (Caprara et al., 2003[49]; Klassen et al., 2013[24]; Tschannen-Moran and Hoy, 2001[50]). It is important to explore teachers' job satisfaction, because it has strong implications for retention, attrition, absenteeism, burnout, commitment to education goals and teachers' job performance (Brief and Weiss, 2002[51]; Ingersoll and Collins, 2018[10]; Kardos and Johnson, 2007[52]; Klassen et al., 2013[24]; Lee, Carswell and Allen, 2000[53]; Lortie, 1975[47]; Price and Collett, 2012[54]; Renzulli, Macpherson Parrott and Beattie, 2011[48]; Somech and Bogler, 2002[55]). Job satisfaction has been less explored among principals than among teachers (Federici and Skaalvik, 2012[56]), but with the increasingly complex role of principals and the need for them to be both administrators and instructional leaders, it is imperative to know more about how they feel about their working conditions and their jobs more generally.

Job satisfaction can be analytically divided into two areas: satisfaction with the current work environment and satisfaction with the profession. Research evidence has shown the relevance of distinguishing one from the other, as teachers tend to express satisfaction with elements directly related to teaching, but dissatisfaction with elements related to working conditions (Butt and Lance, 2005[57]; Crossman and Harris, 2006[58]; Dinham and Scott, 1998[59]). Teachers could be satisfied with the teaching profession because it fulfils their personal goals but, at the same time, dissatisfied with their current job and working conditions (Mostafa and Pál, 2018[21]; Viac and Fraser, 2020[6]).

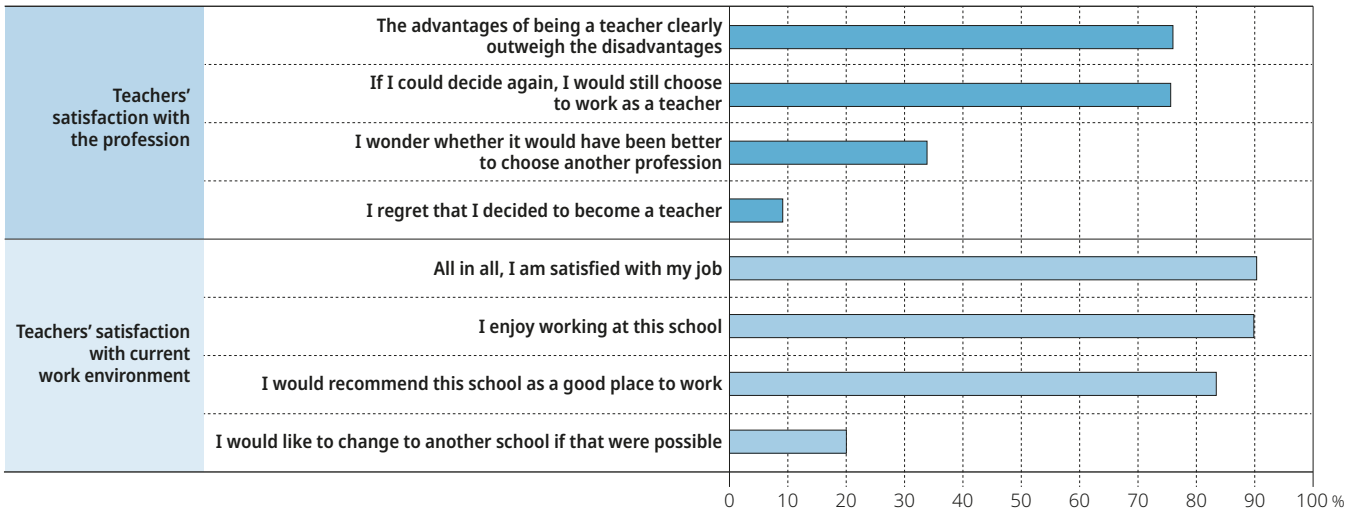
TALIS 2018 measures job satisfaction among teachers and principals by asking their level of agreement ("strongly disagree"; "disagree"; "agree"; or "strongly agree") with a set of specific statements covering both positive and negative connotations of their current work environment and their profession.

Job satisfaction among teachers

TALIS 2018 asked teachers about their satisfaction with the profession through four indicators. On average across the OECD, a large majority of teachers revealed their satisfaction with their profession, through their agreement with the following positive or negative statements: "the advantages of being a teacher clearly outweigh the disadvantages" (76% "agree" or "strongly agree"); "if I could decide again, I would still choose to work as a teacher" (76% "agree" or "strongly agree"); "I wonder whether it would have been better to choose another profession" (66% "strongly disagree" or "disagree"); and "I regret that I decided to become a teacher" (91% "strongly disagree" or "disagree") (Figure II.2.4, Table II.2.10). The proportion of teachers expressing satisfaction with the profession exceeds 70% for each of these four indicators in Austria, CABA (Argentina), Colombia, the Flemish Community of Belgium, Italy, Mexico, the Netherlands, Slovenia, Spain and Viet Nam.

Figure II.2.4 **Teachers' satisfaction with their profession and current work environment**

Percentage of lower secondary teachers who "agree" or "strongly agree" with the following statements (OECD average-31)



Values are grouped by type of satisfaction and ranked, within each group, in descending order of the proportion of lower secondary teachers who "agree" or "strongly agree" with each indicator.

Source: OECD, TALIS 2018 Database, Tables II.2.10 and II.2.16.

StatLink http://dx.doi.org/10.1787/888934083297

A closer examination of each indicator reveals interesting cross-country variation. For example, on average across the OECD, only 9% of teachers report regretting that they decided to become a teacher, but the percentages are double or more for Saudi Arabia (26%), Portugal (22%), Korea (19%), Malta (18%) and South Africa (18%) (Table II.2.10). Likewise, in six countries, more than half of teachers (50% or more) report wondering whether it would have been better to choose another profession: Lithuania (59%), Malta (58%), Saudi Arabia (52%), England (United Kingdom) (52%), Iceland (51%) and South Africa (51%). It is important to note that, with the exception of Iceland, Korea and Lithuania, all of the listed countries display percentages lower than the OECD average in support of the positive statements about the profession: "the advantages of being a teacher clearly outweigh the disadvantages" and "if I could decide again, I would still choose to work as a teacher", which may reflect an overall pattern of dissatisfaction with the profession for these countries.

A breakdown by teachers' characteristics shows that, in most countries and economies, younger (under 30 years) and novice teachers (less than or equal to 5 years of experience) are more likely than their older (50 years and above) and experienced counterparts (more than 5 years of experience) to wonder whether it would have been better to choose another profession (Table II.2.13). In the case of age differences, the difference exceeds 15 percentage points in Alberta (Canada), Israel, Kazakhstan, Malta, Singapore, Slovenia, the United States and Viet Nam. Singapore shows an exceptionally wide difference of 35 percentage points (59% of teachers aged 30 years or less report wondering about choosing another profession compared to only 25% of teachers aged 50 years or above). If a response of "wonder whether it would have been better to choose another profession" can be interpreted as a proxy measure for teachers' desire to remain in the profession, part of the cross-national variation could arise from differences in the vibrancy and diversity of the broader labour markets and hence differences in the availability of attractive, alternative career options open to both younger and older teachers in different countries and economies. Nonetheless, several age-related factors could explain this pattern. From a human capital perspective, younger teachers have accumulated less knowledge and fewer skills that are specific to the occupation. This could make them less risk-adverse and more willing than their more senior colleagues to take professional

risks and consider different career options. Teachers' desires to choose another profession diminish throughout their career as they build a greater amount of knowledge (Borman and Dowling, 2008[16]; Crossman and Harris, 2006[58]). Also, younger teachers may be more likely to face practice shock following their entry into the profession, logically prompting them to question their career choice. Indeed, findings discussed in *TALIS 2018 Results (Volume I)* showed that younger and novice teachers are more likely to work in more challenging environments (e.g. schools with a high concentration of students from socio-economically disadvantaged homes) than their more experienced and older colleagues (OECD, 2019[3]). Finally, considerations related to pension plans are more likely to constrain career moves for older teachers than for their younger peers, providing some additional context for these age differences in those considering switching schools or changing profession altogether (Goldhaber et al., 2015[60]). However, a low proportion of older teachers considering a career change could also be indicative of the fact that they have had a truly satisfying career as teachers thus far, especially in systems with deliberate efforts to make the teaching profession an attractive, lifelong career. Box II.2.3 presents policy examples related to enhancing teacher satisfaction; the Slovak Republic caters for teachers' satisfaction by providing flexible and multiple career options to keep teachers motivated within the profession, while Korea provides opportunities for training and professional development.

Box II.2.3. **Enhancing teacher satisfaction in the Slovak Republic and Korea**

Slovak Republic

The Slovak Republic's career structure allows teachers advancement following a vertical career structure and a horizontal career structure. The vertical career structure concerns their progress across four stages based on their growing professional competencies, their experience and their continual professional development training. These stages are beginning teacher, independent teacher, teacher with first certification and teacher with second certification.

In addition, a range of specialised positions provides opportunities for horizontal differentiation in the teaching career. These positions are not hierarchically organised but allow teachers to develop areas of expertise and engage more deeply with specific aspects of their job. School leaders decide on the definition of and assignment to career positions in their school. These typically include: class teacher, mentor teacher, educational advisor, head of subject committee (or study area), head of methodology association (or study programme), career advisor, ICT co-ordinator and co-ordinator for a specific area of work (e.g. children with special needs) within the school.

Source: Santiago, P., et al. (2016[61]), *OECD Reviews of School Resources: Slovak Republic 2015*, http://dx.doi.org/10.1787/9789264247567-en.

Korea

In 2016, to boost teachers' morale and satisfaction, the Ministry of Education implemented a Leave of Absence for Self-training System. It gives teachers the opportunity to take a one-time-only leave to undergo training or restore energy. Teachers must have at least ten years of teaching experience, and their leave cannot exceed one year. This measure aims to encourage professional development and self-improvement and also to retain teachers who might otherwise leave the profession. Korea has also set up Teacher Education Emotion Centres at the level of metropolitan and provincial offices of education. Their purpose is to provide effective support to educational professionals suffering from harassment or bullying and to protect teachers' rights by preventing infringement on their activities.

Source: OECD (2019[62]), *Education Policy Outlook 2019: Working Together to Help Students Achieve their Potential*, https://dx.doi.org/10.1787/2b8ad56e-en.

When considering school type, on average across the OECD, a higher share of teachers working in publicly managed schools than in privately managed schools wonder whether it would have been better to choose another profession (Table II.2.14). The most pronounced differences (over 10 percentages points) are observed in Singapore (24 percentage points), South Africa (19 percentage points), Hungary (14 percentage points), Malta (13 percentage points) and the United Arab Emirates (11 percentage points). These results could be attributed to differences in working conditions between privately managed schools and publicly managed schools that could affect the professional satisfaction of teachers. According to Crossman and Harris (2006, p. 40[58]), these differences could be attributed to factors in privately managed schools such as "...larger financial and non-financial resources being available, less state-driven bureaucracy, and greater freedom within the curriculum...".

However, some systems show a reverse pattern, with significantly higher shares of teachers in privately managed schools than in publicly managed schools wondering if it would have been better to choose another profession. Public sector activity usually operates under staffing regulations concerning certification and experience, from which private schools may be exempt. Publicly and

privately managed schools may differ in the age, experience, commitment and aspirations of teachers. For example, the difference in the pattern between publicly and privately managed schools could be explained by the concentration of novice teachers, which was shown to be associated with whether teachers would like to choose another profession. This could explain the relatively large public-private difference observed for Singapore, where a larger proportion of novice teachers work in publicly managed schools than in privately managed schools – see *TALIS 2018 Results (Volume I)* (OECD, 2019[3]), Table I.4.32. Similarly, the variation of teacher age profiles between publicly and privately managed schools could also explain why some systems show a reverse pattern, with significantly higher shares of teachers in privately managed schools than in publicly managed schools wondering if it would have been better to choose another profession. This is the case in Chile (a difference of 11 percentage points), CABA (Argentina) (9 percentage points), Georgia (8 percentage points) and Colombia (6 percentage points). In Colombia, for example, a larger proportion of novice teachers work in privately managed schools – see *TALIS 2018 Results (Volume I)* (OECD 2019[3]), Table I.4.32.

On average across the OECD, 93% of teachers report being satisfied with their performance in their school (Table II.2.16). This high level of satisfaction can also be observed in their opinions of their current work environment, since teachers' overall satisfaction levels are remarkably high, for each of the four job satisfaction indicators: "all in all, I am satisfied with my job" (90% "agree" or "strongly agree"); "I enjoy working at this school" (90% "agree" or "strongly agree"); "I would recommend this school as a good place to work" (83%"agree" or "strongly agree"); and "I would like to change to another school if that were possible" (80% "strongly disagree" or "disagree") (Figure II.2.5, Table II.2.16). For Austria, CABA (Argentina), Colombia, the Czech Republic, Georgia, Iceland, Norway and Viet Nam, 90% of teachers or more express satisfaction with at least three of these four indicators.

Although the OECD average is high for each of these satisfaction indicators, there is a considerable degree of cross-country variation in the indicator of whether teachers would like to change to another school if possible (Table II.2.16). Compared to the OECD average (20%) a high percentage of teachers report that they would like to change to another school if that were possible in Saudi Arabia (47%), South Africa (45%), Singapore (39%), the United Arab Emirates (38%), Turkey (37%), Korea (35%) and Japan (31%). However, all these countries also have a relatively high percentage of teachers stating that, all in all, they are satisfied with their job (equal to 80% or more). Thus, the indicator of whether teachers would like to change to another school should be examined with caution, since it may not necessarily be an indicator of dissatisfaction with the work environment but rather an expression of teachers' aspirations to career progression. For example, in Singapore, after three years of teaching, teachers are assessed annually to see which of three career paths would best suit them, master teacher, curriculum or research specialist, or school leader. Each stage involves a range of experience and training to prepare candidates for school leadership and innovation (OECD, 2011[63]). Thus, Singapore's relatively high proportion on this indicator could reflect the success of how it has designed career development pathways for its teachers.

On average across the OECD, a higher share of teachers under 30 compared to their colleagues above 50 report that they would like to change to another school. This trend is observed in 31 countries and economies participating in TALIS (Table II.2.19). Countries with particularly wide differences between teachers under 30 and teachers above 50 are Turkey (24 percentage points), Mexico, (21 percentage points), Saudi Arabia (20 percentage points), the United Arab Emirates (16 percentage points) and France (15 percentage points). Iceland is the only country displaying a different pattern, with more teachers aged 50 years or above than teachers under 30 expressing a desire to change to another school (15 percentage points). Levels of experience display the same overall pattern showed by age. In 14 of the countries and economies participating in TALIS, novice teachers report wishing to change schools more often than their more experienced peers do. This might be related to the fact that novice teachers have limited choices regarding which school they work in and that they often work in more challenging schools (Mostafa and Pál, 2018[21]; OECD, 2019[3]). It may also reflect national legislation on school assignment and career development. For example, in France, older teachers are more likely to obtain a transfer, while novice teachers are not able to choose their first school assignment (OECD, 2005[5]).

On average across the OECD, a higher share of teachers who report working in schools with a relatively high concentration of students from socio-economically disadvantaged homes report wishing to change schools compared to the share of colleagues in schools with lower concentrations of such students (Table II.2.20). The countries and economies displaying the widest differences are Alberta (Canada) (19 percentage points), Saudi Arabia (17 percentage points), Bulgaria, (16 percentage points) and France (15 percentage points). These results align with the research finding that teachers in disadvantaged schools are more predisposed to changing to schools that serve families with higher socio-economic status (Hanushek, Kain and Rivkin, 2004[64]). For some countries and economies, results show similar patterns for teachers in schools with a high concentration of students with special needs (Austria, Bulgaria, France, Hungary and the Slovak Republic) or immigrant students (Alberta [Canada], Austria, Belgium and its French Community, England [United Kingdom], France, Norway and the United Arab Emirates). In addition, as was the case for novice teachers, these findings could reflect national legislation on school assignment and career progress development, as teachers may not be posted to challenging schools by choice.

To further understand what is behind the responses, a logistic regression analysis is run between, on the one hand, the reported willingness to change to another school and their satisfaction with the profession and, on the other hand, other demographic characteristics (Table II.2.22). On average across the OECD, teachers who wish to leave their school are less satisfied with the

profession, did not choose teaching as a first choice career, are slightly younger and less experienced in their current school, and are more likely to work full-time and to report teaching in a target class with a slightly higher concentration of disadvantaged students, low academic achievers and students with behavioural problems. The profiles of teachers who wish to leave their school change substantially from country to country, since these indicators are not all statistically significant for all countries and economies participating in TALIS. Nevertheless, the one consistent result across all participating countries and economies is that teachers with higher levels of satisfaction with the profession are less likely to report wishing to leave their school.

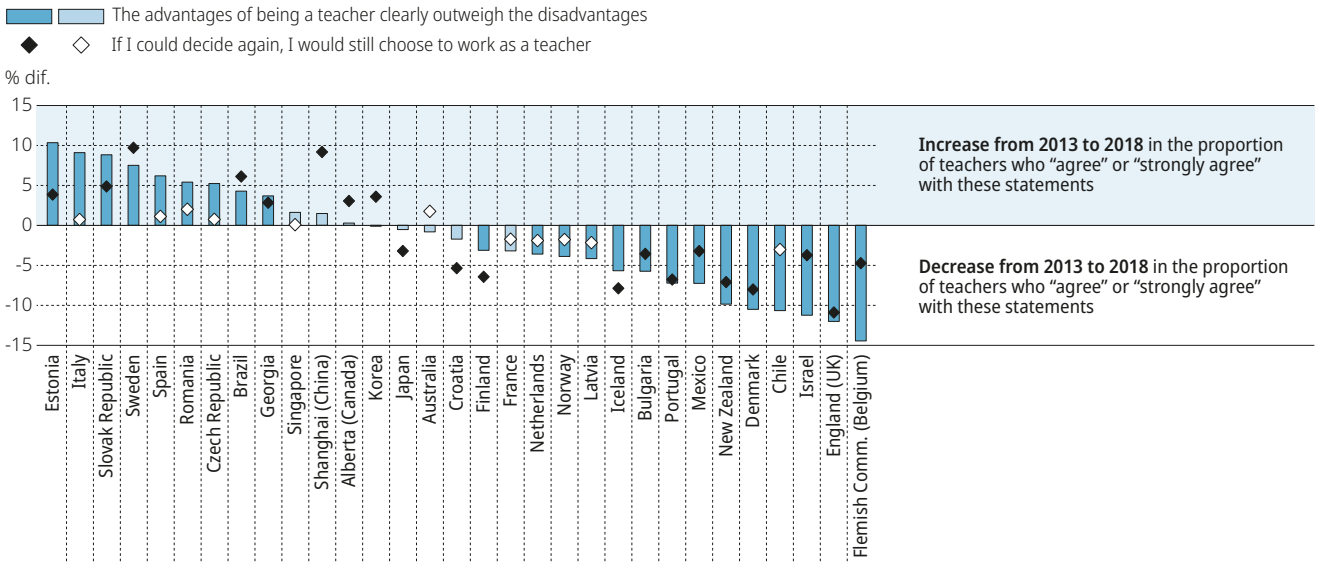
With respect to changes over time, only a handful of countries and economies show significant changes between 2013 and 2018 for job satisfaction indicators related to the current working environment. The indicator with the largest number of countries and economies displaying a significant change is "all in all, I'm satisfied with my job" (18 countries and systems) (Table II.2.21). However, the difference over five years is relatively small (5 percentage points or less), and no clear pattern is observed, since 10 of these countries have experienced a decrease in job satisfaction, while 8 have experienced some increase.

As for satisfaction with the profession, significant changes are observed between 2013 and 2018 for each of the indicators. In 15 countries and economies with available data, there has been a significant decrease in the percentage of teachers agreeing ("agree" or "strongly agree") that the "the advantages of being a teacher clearly outweigh the disadvantages" (Table II.2.15), while the opposite trend is observed for 9 countries and economies. Likewise, a decrease is observed in 13 systems with respect to the indicator "if I could decide again, I would still choose to work as a teacher", while the opposite trend is observed for 7 systems. Furthermore, the percentage of teachers reporting that they regret having become a teacher has significantly increased in 8 systems but decreased in the same number of systems. There has also been an increase in 13 systems in the percentage of teachers wondering whether it would have been better to choose another profession, while a decrease is observed in 7 systems.

Although changes over time regarding satisfaction with the profession display a mixed pattern, more insights can be provided by undertaking a country-by-country approach. For example, Estonia and Sweden display a significant increase for both of the positive statements ("the advantages of being a teacher clearly outweigh the disadvantages" and "if I could decide again, I would still choose to work as a teacher") (Figure II.2.5, Table II.2.15), along with a significant decrease for the negative statements ("I regret that I decided to become a teacher" and "I wonder whether it would have been better to choose another profession"). Over the same period, Denmark, England (United Kingdom), Finland, Israel, New Zealand and Portugal showed a significant decrease for both positive statements and an increase for both negative statements (Figure II.2.6, Table II.2.15).

Figure II.2.5 **Change in teachers' satisfaction with the profession from 2013 to 2018 – positive statements**

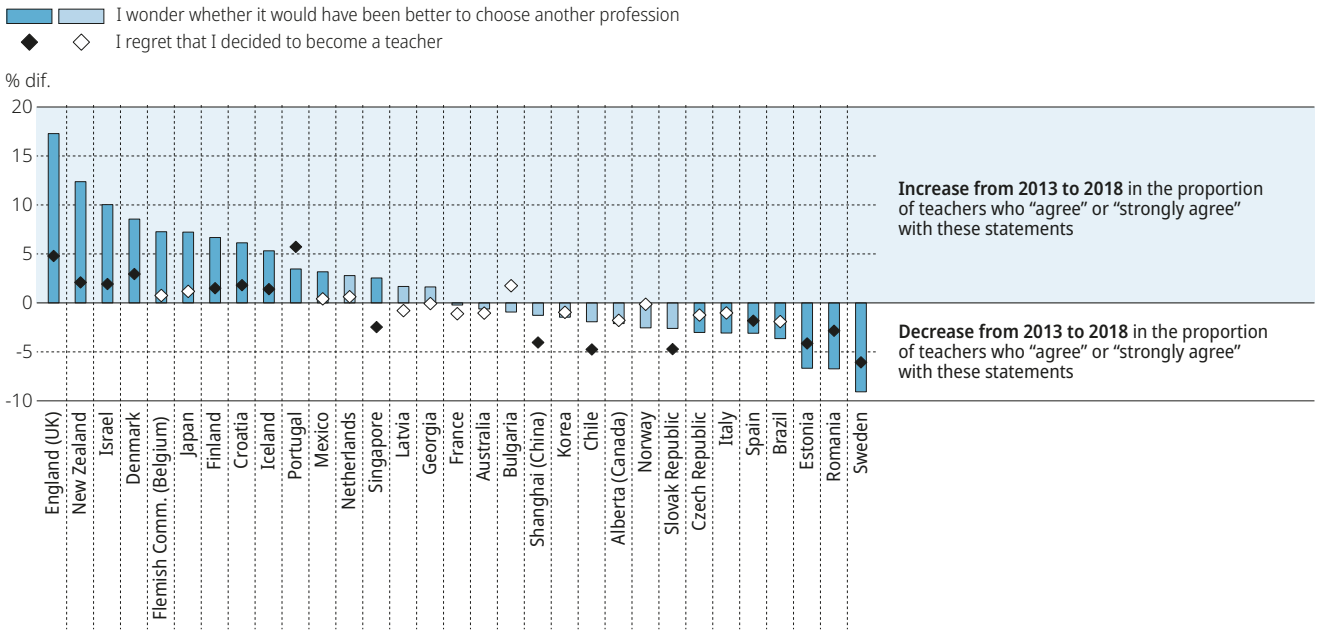
Percentage point differences between 2013 and 2018 in the share of lower secondary teachers who "agree" or "strongly agree" with the following statements



Notes: Only countries and economies with available data for 2013 and 2018 are shown.
Statistically significant values are marked in a darker tone (see Annex B).
Countries and economies are ranked in descending order of the change between 2013 and 2018 in the percentage of teachers who "agree" or "strongly agree" with the statement "The advantages of being a teacher clearly outweigh the disadvantages" (TALIS 2018 – TALIS 2013).
Source: OECD, TALIS 2018 Database, Table II.2.15.
StatLink http://dx.doi.org/10.1787/888934083316

Figure II.2.6 **Change in teachers' satisfaction with the profession from 2013 to 2018 – negative statements**

Percentage point differences between 2013 and 2018 in the share of lower secondary teachers who "agree" or "strongly agree" with the following statements



Notes: Only countries and economies with available data for 2013 and 2018 are shown.
Statistically significant values are marked in a darker tone (see Annex B).
Countries and economies are ranked in descending order of the change between 2013 and 2018 in the percentage of teachers who "agree" or "strongly agree" with the statement "I wonder whether it would have been better to choose another profession" (TALIS 2018 – TALIS 2013).
Source: OECD, TALIS 2018 Database, Table II.2.15.
StatLink http://dx.doi.org/10.1787/888934083335

Although the percentage of teachers satisfied with the profession remains quite high over the years for some countries (e.g. Denmark), the fact that there is significant systematic change in the responses to both positive connotations and negative connotations suggests that particular reforms or policy initiatives may be affecting this level of satisfaction (Box II.2.3).

Job satisfaction with the current work environment and with the profession both shows a positive association with teachers' reported levels of self-efficacy. After controlling for teacher characteristics, in almost all TALIS countries and economies, teachers with higher levels of job satisfaction with the current work environment also report higher levels of self-efficacy (Table II.2.24). The same pattern is observed for all TALIS countries and economies regarding the relationship between satisfaction with the profession and self-efficacy (Table II.2.25). These results suggest the importance of teachers' sense of purpose for their work, their profession and individual performance. However, results should be interpreted with caution, as the explanatory power of the model is limited (the coefficients of determination R^2 are low).

What drives teachers' job satisfaction?

How can systems boost satisfaction with the profession? TALIS 2013 showed that positive relationships exist between job satisfaction and teachers' opportunities to participate in decision making at school, their perception that appraisal and feedback lead to changes in their teaching practice, and participation in collaborative professional development or engagement in collaborative practices five times a year or more (OECD, 2014[65]).

However, in order to have a better understanding of where efforts should be directed to improve levels of job satisfaction, it is useful to know how much of the variation in job satisfaction is across schools and how much is within schools. Is the variation in job satisfaction related to the school where the teachers work (e.g. school type, culture of the schools, administrative procedures of the school, etc.) or to differences between teachers (e.g. teacher experience or teachers teaching different student groups)?

The share of variance in teachers' responses that is accounted for by school differences in the items on satisfaction with the current work environment and items on satisfaction with the profession is estimated (Table II.2.26). Overall, for both satisfaction with the current work environment and satisfaction with the profession, only a small percentage of the total variance comes

from differences between schools. Variance attributable to the school level is particularly low for satisfaction with the profession, since only 4% is accounted for by school-level differences. In other words, teachers' satisfaction with the profession does not vary substantially from school to school. These results signal that efforts to change the level of teachers' satisfaction with the profession are more likely to have an impact if they are directed to all schools rather than targeting specific schools, since all schools seem to do about equally in this regard.

Nevertheless, it is interesting to observe that satisfaction with the current work environment is more dependent on school factors, given that 13% of the variance is accounted for by school differences (Table II.2.26). These results should not come as a surprise. Items on satisfaction with the current work environment measure elements related to the school (hence relatively higher variance at the school level), while items on satisfaction with the profession measures elements related to the individual professional trajectory and aspirations of teachers (hence relatively lower variance at the school level).

There is also an important cross-country difference in the share of variance of satisfaction with the current work environment accounted for at the school level (Table II.2.26). Close to one-fifth (17% or more) of the variance in teachers' satisfaction with their current work environment is accounted for by school factors in Australia, Brazil, Bulgaria, France, Korea, New Zealand, South Africa and Turkey. But less than 7% of the variance is accounted for by schools in Kazakhstan, Shanghai (China) and Slovenia. To enhance satisfaction with the current work environment, systems with higher levels of variance between schools might find it more effective to intervene in a certain set of schools, rather than having a one-size-fits-all policy. More research is warranted to identify those schools where teachers' satisfaction with the current working environment is particularly low.

These results highlight the importance of disentangling job satisfaction indicators corresponding to the profession from those corresponding to the current work environment, as the level of intervention (i.e. at teacher level or school level) may differ considerably.

Box II.2.4. **Teachers' satisfaction with their current working environment and the teaching profession, from primary to upper secondary education**

Significant differences between these satisfaction indicators could reflect not only different working environments, but also teacher profiles with different career aspirations across educational levels.

Satisfaction with the current working environment

On average, across the OECD, the percentage of teachers who feel satisfied with their current working environment is remarkably high (Table II.2.16). Overall, across all the indicators of satisfaction with the current working environment, teachers' levels of satisfaction seem to decrease at higher levels of education, although the differences are relatively small.

Teachers in primary education seem to be slightly more satisfied with their current working environment than their colleagues in lower secondary education (Table II.2.17). For example, in 5 of the 13 countries and economies with available data, a significantly higher share of teachers in primary education than in lower secondary education respond positively to "all in all, I'm satisfied with my job". The highest differences are displayed by England (United Kingdom) (6 percentage points) and Japan (4 percentage points).

A country-by-country analysis reveals other relevant findings following this trend. For example, in England (United Kingdom), on the four indicators of satisfaction with the current working environment, primary education teachers feel more satisfied than their colleagues in lower secondary education, with the largest differences displayed for "I would recommend this school as a good place to work" (a difference of 7 percentage points) (Table II.2.17). In Japan, a higher share of teachers in primary education than in lower secondary education state that they would recommend their school as a good place to work (a difference of 7 percentage points). In France, a lower share of teachers in primary education than in lower secondary education state that they would like to change to another school (a difference of 6 percentage points).The results for France could be explained by the fact that the school assignment mechanism for teachers entering the profession differs across the ISCED levels. For ISCED 1, the location of training institutions determines the location of a teacher's first school. This means that ISCED 1 novice teachers are more able than ISCED 2 novice teachers to choose the "académie" (regional school district) of their first school.

By contrast, in Denmark, for three of the four indicators in this category, primary teachers tend to be less satisfied with their current working environment than their lower secondary colleagues, with the largest differences displayed for "all in all, I'm satisfied with my job" and "I would recommend this school as a good place to work" (both with a difference of 4 percentage points).

• • •

Teachers in upper secondary education seem to be less satisfied with their current working environment than their colleagues in lower secondary education, although the differences are quite small (Table II.2.18). Denmark displays a consistent pattern: on three of the four indicators of satisfaction with the current working environment, teachers in upper secondary education are less satisfied than their colleagues in lower secondary education. The greatest differences are observed for "I would recommend this school as a good place to work" and "I would like to change to another school if that were possible" (both with a difference of 5 percentage points).

Satisfaction with the profession

Regarding overall satisfaction with the profession, teachers in upper secondary and primary education seem to be more satisfied than their colleagues in lower secondary education, in the countries and economies with available data.

In the case of primary education, in 7 of the 13 countries and economies with available data, a significantly lower percentage of teachers in primary education than in lower secondary education wonder if it would have been better to choose another profession (Table II.2.11). In addition, in 5 of the 13 countries and economies with available data, a significantly higher percentage of teachers in primary education than in lower secondary education state that if they could decide again, they would still choose to work as a teacher. In England (United Kingdom) and Japan, on three of the four indicators of satisfaction with the profession, the share of teachers in primary education is significantly higher than the share in lower secondary education. In Spain, this pattern is observed on all four indicators of satisfaction with the profession.

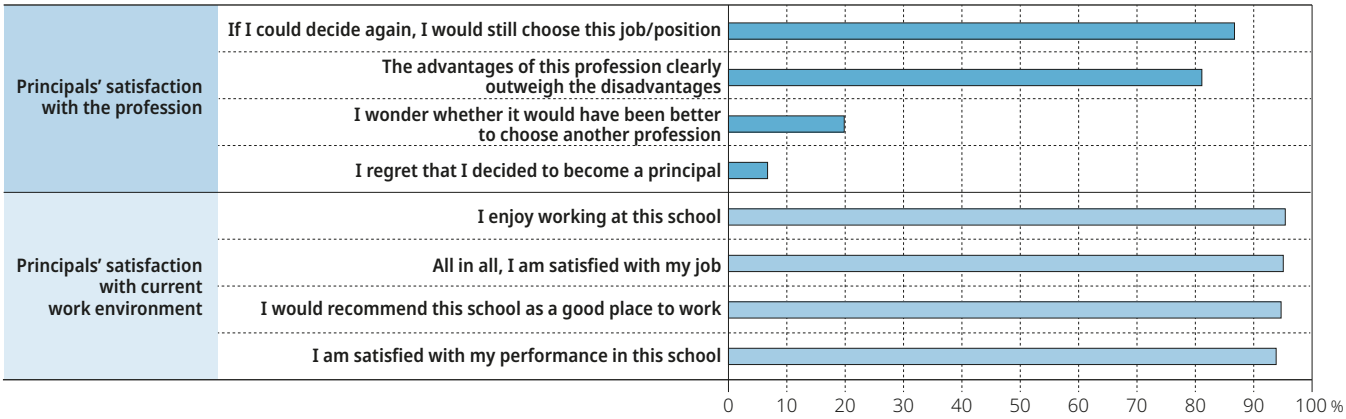
Regarding the comparison with upper secondary education, there does not seem to be a significant difference between teachers in lower secondary education and upper secondary education, except in a few countries (Table II.2.12). For example, for 3 of the 11 countries with available data, namely Croatia, Denmark and Portugal, teachers in upper secondary education report wondering whether to choose another profession less often than their peers in lower secondary education. A similar pattern can be observed for Denmark, Portugal and Sweden for reporting that the advantages of being a teacher outweigh its disadvantages, and that if they could decide again, they would still choose to work as a teacher.

Job satisfaction among principals

On average across the OECD, principals' satisfaction with their current work environment is remarkably high. Around 95% of principals "agree" or "strongly agree" with all of the positive statements: "I enjoy working at this school" (96%); "all in all, I am satisfied with my job" (95%)"; "I would recommend this school as a good place to work" (95%); and "I am satisfied with my performance in this school" (94%) (Figure II.2.7, Table II.2.27). In 36 TALIS countries and economies, at least 90% of principals state that they agree or strongly agree with all these four indicators. Cross-country variations in each of these indicators are narrow, with almost all countries and economies having values between 80% and 100%.[9] In the majority of countries and economies with available data, there are no significant changes for principals in the indicators of satisfaction with the current work environment between 2013 and 2018 (Table II.2.31).

Figure II.2.7 **Principals' satisfaction with their profession and current work environment**

Percentage of lower secondary principals who "agree" or "strongly agree" with the following statements (OECD average-30)



Values are grouped by type of satisfaction and ranked, within each group, in descending order of the proportion of lower secondary principals who "agree" or "strongly agree" with each indicator.

Source: OECD, TALIS 2018 Database, Tables II.2.27 and II.2.32.

StatLink http://dx.doi.org/10.1787/888934083354

Regarding satisfaction with the profession, on average across the OECD, at least 80% of principals express satisfaction for each of the four indicators of satisfaction with the profession: "if I could decide again, I would still choose this job/position" (87%); "the advantages of this profession clearly outweigh the disadvantages" (81%); "I wonder whether it would have been better to choose another profession" (20%); and "I regret that I decided to become a principal" (7%) (Figure II.2.7, Table II.2.32). The countries and systems with at least 80% of principals expressing satisfaction for each of these four indicators (by agreeing with positive statements and disagreeing with negative statements) are Austria, CABA (Argentina), Chile, Colombia, Denmark, Estonia, Israel, Korea, Mexico, the Netherlands, Singapore, Slovenia, Spain, the United Arab Emirates, the United States and Viet Nam.

Some systems are worth highlighting as their satisfaction patterns are in stark contrast with the OECD average. In Bulgaria and the French Community of Belgium, only 40% of principals state that the advantages of the profession outweigh the disadvantages (compared to 81% of principals on average across the OECD) (Table II.2.32). Likewise, more than 20% of principals report regretting their decision to become principals in Alberta (Canada), Bulgaria, Saudi Arabia and Turkey (compared to the OECD average of 7%). In addition, more than 30% of principals report that they wonder whether it would have been better to choose another profession in Bulgaria, Lithuania, Malta, Saudi Arabia, South Africa and Turkey (compared to the OECD average of 20%). The percentages of principals who agree with this statement are particularly high in Lithuania (77%) and Saudi Arabia (50%).

Box II.2.5. **Principals' satisfaction with their current working environment and the teaching profession, from primary to upper secondary education**

Significant differences between these satisfaction indicators could reflect not only different working environments, but also different principal profiles with different career aspirations and opportunities across educational levels.

Satisfaction with current working environment

In the case of principals, there is practically no significant variation between educational levels regarding satisfaction with their working environment. However, France is a notable exception: only 13% of principals in primary education state that they would like to change to another school if that were possible, compared to 48% of principals in lower secondary education (a gap of 35 percentage points) (Table II.2.28). For lower secondary education, France has the highest percentage of principals stating that they would like to change schools if that were possible (Table II.2.27). This situation could reflect career plans rather than satisfaction with school environment, since 95% of French school leaders also report enjoying working at their current school while 88 % would recommend this school as a good place to work. Indeed, school principals in lower secondary education in France are encouraged to change schools (Ministère de l'Éducation nationale et de la Jeunesse, 2019[66]).

Regarding upper secondary education, there are only a few cases worth highlighting. In Slovenia, lower secondary principals are more likely to recommend their school as a good place to work than their colleagues in upper secondary education (a gap of 7 percentage points) and, in Turkey, principals in upper secondary education seem to be more satisfied than their colleagues in lower secondary education with their performance in the school (a gap of 7 percentage points) and with their job (a gap of 10 percentage points) (Table II.2.29).

Satisfaction with the profession

Like satisfaction with the working environment, there is practically no significant variation across educational levels in principals' satisfaction with their profession. But there are a few exceptions worth highlighting. In France and the Flemish Community of Belgium, principals in primary education seem to be less satisfied with their profession than their colleagues in lower secondary education. In France, a lower percentage of principals in primary education than in lower secondary education state that the advantages of the profession clearly outweigh its disadvantages (a gap of 20 percentage points) and that they would still chose their job (a gap of 12 percentage points). Likewise, for the Flemish Community of Belgium, there is a higher percentage of principals in primary education than in lower secondary education wondering if it would have been better to choose another profession (a gap of 16 percentage points). By contrast, Japan exhibits the opposite pattern, with a higher percentage of principals in primary education than in lower secondary education stating that the advantages of the profession outweigh its disadvantages (a gap of 13 percentage points) (Table II.2.33).

When comparing with upper secondary education, significant differences across educational levels are virtually non-existent, except in two countries. In Brazil and Turkey, the share of principals in upper secondary schools stating they would still chose their profession is higher than the share of their colleagues in lower secondary education who state the same (a gap of 10 percentage points) (Table II.2.34).

SOURCES AND LEVELS OF STRESS AMONG TEACHERS AND SCHOOL LEADERS

Work-related stress can be viewed as an imbalance between work demands and environmental or personal resources at work. Workers can experience stress when the work demands placed on them do not match their support at work, knowledge, skills or ability to cope at work (Kyriacou, 2001[67]). These responses manifest in disturbances to emotional, social, and/or physical health. The indicators used in TALIS are restricted to stress reactions from the workplace and occupation and do not include general anxiety or life-event stress (Viac and Fraser, 2020[6]). Several international studies have acknowledged the existence of a link between working conditions and occupational stress (Collie, Shapka and Perry, 2012[22]; Desrumaux et al., 2015[23]; Klassen et al., 2013[24]; Skaalvik and Skaalvik, 2016[25]). Stressful environments and situations can affect the practices of teachers and principals, their motivation for their work and even student achievement (Viac and Fraser, 2020[6]). Indeed, research has associated high levels of stress with lower self-efficacy for teaching, lower job satisfaction, lower commitment (Collie, Shapka and Perry, 2012[22]), burnout (Schaufeli, Leiter and Maslach, 2009[68]) and teachers' leaving the profession (Kyriacou, 2001[67]).

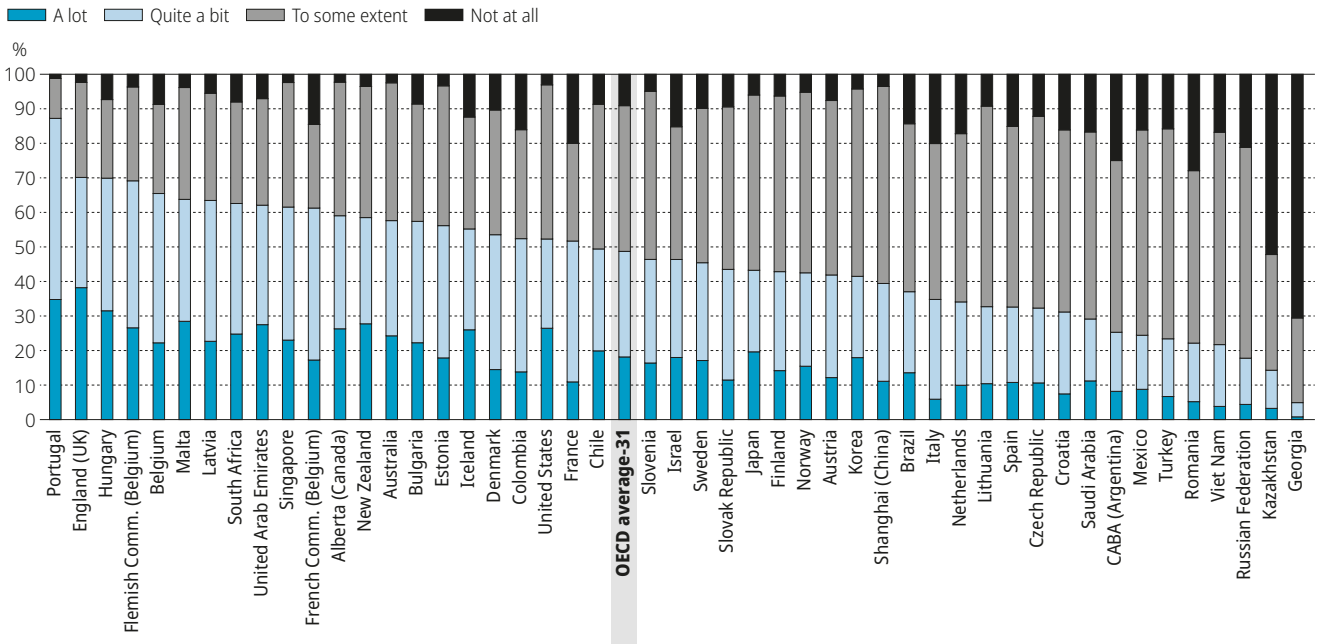
The next section describes the levels of stress reported by teachers and what they report as their main sources of stress. It then explores the relationships between stress levels and certain characteristics of working conditions, with specific emphasis on working hours and administrative workload, which teachers most often report as sources of stress.

Teachers' stress levels

TALIS 2018 asked teachers, for the first time, to what extent they experience stress in their work ("not at all"; "to some extent"; "quite a bit"; "a lot"). On average across the OECD, 18% of teachers report experiencing stress a lot in their work (Figure II.2.8, Table II.2.36). However, there is a great deal of variation across the countries and economies participating in TALIS. More than 30% of teachers report experiencing stress a lot in England (United Kingdom), Hungary and Portugal. By contrast, less than 5% of teachers report experiencing stress a lot in their work in Georgia, Kazakhstan, the Russian Federation and Viet Nam.

Figure II.2.8 **Teachers' experience of stress in their work**

Percentage of lower secondary teachers reporting the extent of stress in their work



Countries and economies are ranked in descending order of the percentage of lower secondary teachers who experience stress in their work "quite a bit" or "a lot".

Source: OECD, TALIS 2018 Database, Table II.2.36.

StatLink http://dx.doi.org/10.1787/888934083373

When considering the proportion of teachers who report not experiencing stress at all, it is important to observe that, on average across the OECD, only 9% of teachers report not experiencing stress at all (Figure II.2.8, Table II.2.36). However, this is the case for 20% of teachers or more in CABA (Argentina), France, Georgia, Italy, Kazakhstan, Romania and the Russian Federation. Results are quite exceptional in Georgia, where 71% of teachers report not experiencing stress at all in their work, and also in Kazakhstan, where 52% of teachers report no work stress. The great cross-country variation in the level of teachers' stress

may reflect the cross-country variation of stress of the general population and other subjective measures of well-being, as measured by the Gallup World Poll (Ng et al., 2009[69]). The reported level of stress of the general population may depend on economic development, but it is also associated with the needs, goals and culture of specific countries and economies. Diener and Tay (2015[70]) found that countries with high levels of stress not only have high income levels, but are also shown to have high longevity and satisfaction with life.

Looking at how results differ according to teachers' characteristics, female teachers report experiencing stress a lot more frequently than their male peers (20% of female teachers compared to 15% of male teachers). In 32 TALIS countries and economies, a significantly larger proportion of female teachers than male teachers report experiencing stress a lot in their work (Table II.2.39). Differences are particularly large (10 percentage points or more) in Malta (14 percentage points), Portugal (13 percentage points) and Alberta (Canada) (10 percentage points). International research has also found that female teachers are more likely than their male colleagues to report high levels of stress (Antoniou, Polychroni and Vlachakis, 2006[71]; Klassen, 2010[72]). However these results should be interpreted carefully, as there might be a series of mediating factors explaining these differences, such as workload, position in the job hierarchy and social support (Antoniou, Polychroni and Vlachakis, 2006, p. 688[71]).

Also, on average across the OECD, teachers under 30 report experiencing stress a lot more often than their colleagues age 50 or above (20% of teachers under 30 compared to 15% teachers of 50 or above) (Table II.2.39). This holds true for 19 TALIS countries and economies. Among the countries and economies displaying the greatest differences (15 percentage points or more) are the United States (18 percentage points), New Zealand (18 percentage points), Korea (16 percentage points) and Singapore (15 percentage points). These differences could be explained by experience patterns, since younger teachers are more likely to be starting their teaching career and, thus, may still be developing strategies to balance their job demands (Antoniou, Polychroni and Vlachakis, 2006[71]). By contrast, teachers age 50 or above in Bulgaria are more likely to experience stress a lot than teachers under 30 (23% of teachers age 50 or above compared to 13% of teachers under 30).

In addition, teachers working in schools in city areas, publicly managed schools and schools with a high concentration of disadvantaged students (i.e. students from socio-economically disadvantaged homes, students with special needs and students with a migrant background) are more likely to report experiencing stress a lot than their colleagues in schools in villages or rural areas, privately managed schools and schools with lower concentrations of students from socio-economically disadvantaged homes (Table II.2.40). Differences in stress reported by teachers working in schools in different geographic locations are particularly wide in five countries and economies: Alberta (Canada) (16 percentage points), New Zealand (14 percentage points), South Africa, (13 percentage points), Colombia (13 percentage points) and Chile (11 percentage points). It is important to keep in mind that there might be other factors carrying these correlations. For example, younger and novice teachers are more likely to work in schools with higher concentrations of students (OECD, 2019[3]) and, as displayed in the previous paragraph, a greater proportion of these teachers report experiencing stress "a lot" than their older and more experienced colleagues.

TALIS also asked teachers about the extent to which their job negatively affects their mental and physical health ("not at all"; "to some extent"; "quite a bit"; "a lot"). On average across the OECD, 7% of teachers report that their job negatively impacts their mental health a lot, while 6% report that it negatively impacts their physical health a lot (Table II.2.36). More than 10% of teachers answer "a lot" for each of both indicators in England (United Kingdom), the French Community of Belgium, Korea, Portugal, Saudi Arabia, South Africa and the United Arab Emirates.

Another indicator of the impact of teachers' stress is whether the work leaves room for the individual's own personal time. It is argued that an important element of work-life balance is having the ability to unwind after work hours or being able to switch off from work responsibilities (Cropley and Millward Purvis, 2003[73]). On average across the OECD, only 6% of teachers consider that their work never leaves room for their personal life (Table II.2.36). However, there is a great degree of variation across TALIS countries and economies on this indicator. Only 1% of teachers in Denmark and Norway state that their work does not leave room (i.e. "not at all") for personal time, but more than 15% of teachers in Iceland, Japan, Kazakhstan, Korea, South Africa and Viet Nam so report. This share is particularly high in Iceland (27%) and Viet Nam (39%).

How does teachers' stress relate to their work? In order to answer this question, the four items of stress (the extent teachers experience stress in their work; if work leaves room for personal time; the impact on their mental health; and the impact on their physical health) were grouped into a scale of teachers' well-being and stress. Regression results display a significant negative association between teachers' well-being and stress and teachers' job satisfaction and self-efficacy (Tables II.2.41 and II.2.42). Teachers with higher levels of stress tend to report lower job satisfaction. This relationship holds true for all TALIS countries and economies. It is noteworthy that job satisfaction accounts for a considerable variation of the stress in all TALIS countries and economies (given the relative medium-to-high levels of R^2 of all models) (Table II.2.42). These results echo the findings of international studies that display the interconnectedness between job satisfaction and stress (Betoret, 2009[26]; Collie, Shapka and Perry, 2012[22]; Desrumaux et al., 2015[23]). For example, research analyses based on surveys applied to 298 French elementary, middle, and high school teachers found that satisfaction with competence, autonomy and relatedness at work ameliorated the relationship between job constraints and well-being and distress (Desrumaux et al., 2015[23]).

In addition, teachers with higher levels of stress also tend to report lower levels of self-efficacy. This relationship holds true for all TALIS countries and economies with available data except Alberta (Canada), Estonia, Korea, Malta and New Zealand. Given the impossibility of determining the direction of this relation, a couple of interpretations are possible. On the one hand, the results could imply that high levels of stress undermine teachers' confidence in performing effectively in the classroom. On the other hand, lower levels of self-efficacy could be causing teachers' stress, as they lack the confidence to manage their tasks. Nevertheless, caution is recommended in interpreting these results, since the explanatory power of this model is limited (the coefficients of determination R^2 are low) (Table II.2.42).

Box II.2.6. **Teachers' levels of stress, from primary to upper secondary education**

In analysing teachers' experience of stress across educational levels, there do not seem to be significant differences, except in a handful of countries. A higher percentage of teachers in primary education than in lower secondary education report experiencing stress a lot in CABA (Argentina) (a difference of 8 percentage points), the Flemish Community of Belgium (4 percentage points) and Denmark (3 percentage points) (Table II.2.37). The opposite pattern is displayed in England (United Kingdom), where the share of teachers experiencing stress a lot is lower in primary education than in lower secondary education (a difference of 7 percentage points). Upper secondary teachers tend to experience stress a lot to a lower extent than their lower secondary colleagues in Portugal (a difference of 5 percentage points), Slovenia (4 percentage points) and the United Arab Emirates (3 percentage points) (Table II.2.38).

Overall, the variation across educational levels for the other stress-related indicators (time for personal life; impact of the job on mental and physical health) is not significant, except for a few countries. Teachers in primary education report, to a lower extent than their colleagues in lower secondary education, that their job leaves a lot of time for their personal life in France (a difference of 6 percentage points), CABA (Argentina) (2 percentages points), the Flemish Community of Belgium (2 percentage points) and the United Arab Emirates (2 percentage points). However, teachers in primary education report, to a higher extent than their colleagues in lower secondary, that their job leaves time for their personal life a lot in Korea (4 percentage points), Spain (2 percentage points) and Japan (1 percentage point) (Table II.2.37). In CABA (Argentina), primary teachers tend to report, to a greater extent than their lower secondary colleagues, that their work negatively impacts their mental and physical health, while the opposite pattern can be observed in France, although the magnitude of these differences is quite small (Table II.2.37).

In Denmark, teachers in upper secondary education report, to a lesser extent than their colleagues in lower secondary education, that their job leaves time for their personal life (a difference of 6 percentage points). The opposite pattern is observed in Portugal, where teachers in upper secondary education report, to a greater extent than their lower secondary colleagues, that their job leaves time for their personal life (a difference of 2 percentage points) and that it negatively impacts their mental and physical health a lot (3 percentage points each) (Table II.2.38). The same pattern, with the exception of physical health, can be observed in Slovenia (Table II.2.38).

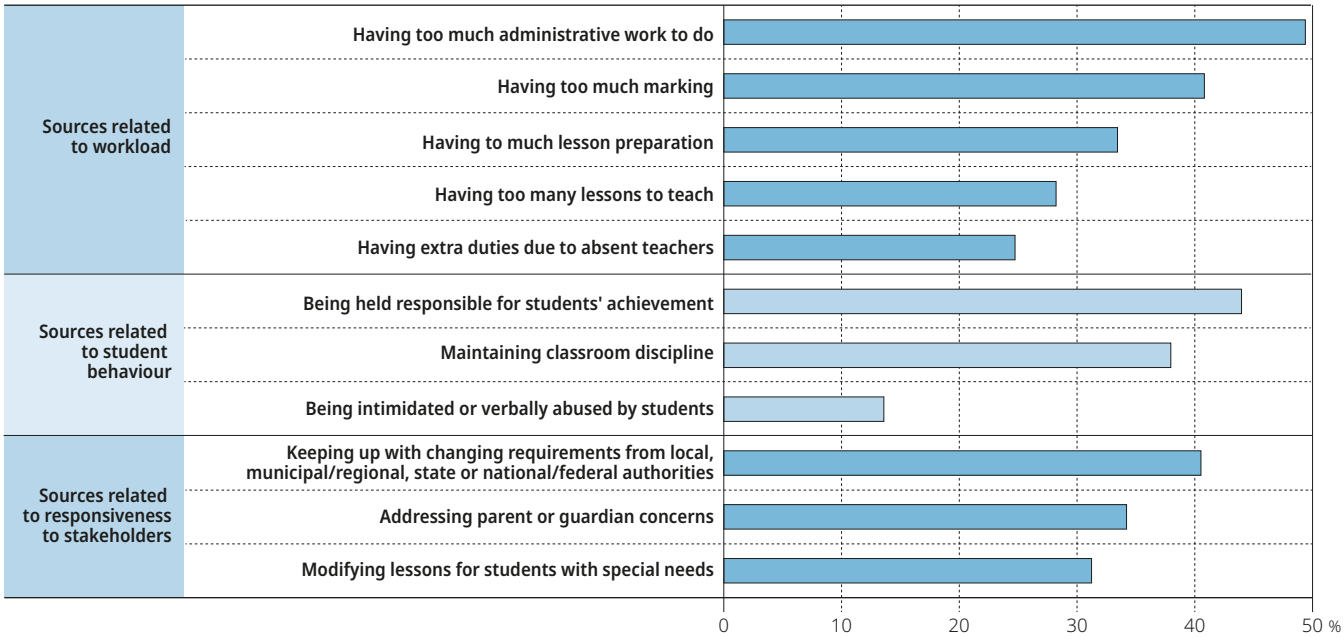
Sources of stress for teachers and principals

Beyond the magnitude and impacts of stress, it is also useful to explore the factors that contribute to teachers' stress in their work. Over the past 15 years, a number of studies have explored sources of stress, in particular the association between working conditions and teachers' levels of stress (Bakker et al., 2007[17]; Betoret, 2009[26]; Chan, 2002[74]; Collie, Shapka and Perry, 2012[22]; Hakanen, Bakker and Schaufeli, 2006[20]; Klassen et al., 2013[24]; Montgomery and Rupp, 2005[75]). A relevant conclusion of this research is that the prevalence of stress differs depending on its sources. For example, stress linked to classroom activities and student interactions seems more predominant than stress related to the support coming from the school and the government (Antoniou, Polychroni and Vlachakis, 2006[71]; Klassen, 2010[72]). TALIS 2018 has sought to further explore the issues behind stress by asking both teachers and principals to what extent a series of work-related tasks constituted a source of stress ("not at all"; "to some extent"; "quite a bit"; "a lot"). The sources of stress for teachers were classified into three different groups following the TALIS 2018 conceptual framework (Ainley and Carstens, 2018[1]): workload stress; student behaviour stress; and stress related to responsiveness to stakeholders.

The research literature has identified workload as a source of stress, as it shows a strong association with teachers' life balance and burn out (Bakker et al., 2007[17]; OECD, 2013[76]). On average across the OECD, the workload-related sources of stress reported by teachers ("quite a bit" or "a lot") are the following: "having too much administrative work to do" (49%); "having too much marking" (41%); "having too much lesson preparation" (33%); "having too many lessons to teach" (28%); and "having extra duties due to absent teachers" (25%) (Figure II.2.9, Table II.2.43). Among the TALIS countries and economies displaying the highest shares (50% or more teachers across the five items, on average) are Denmark, Portugal, South Africa and the United Arab Emirates. Among the countries and economies displaying the lowest shares (below 20%, on average) are CABA (Argentina), Finland, Georgia and Mexico.

Figure II.2.9 **Teachers' sources of stress**

Percentage of lower secondary teachers for whom the following are sources of stress "quite a bit" or "a lot" (OECD average-31)



Values are grouped by type of source and, within each group, ranked in descending order of the percentage of lower secondary teachers reporting that the corresponding activities are a source of stress "quite a bit" or "a lot".

Source: OECD, TALIS 2018 Database, Table II.2.43.

StatLink http://dx.doi.org/10.1787/888934083392

With respect to administrative work, much variation by teachers' years of experience can be observed. In 28 of the 48 TALIS countries and economies, significantly fewer novice teachers than their more experienced peers report administrative work as a source of stress (Table II.2.46). The largest differences are found in Portugal (24 percentage points), France, (18 percentage points) and the Slovak Republic (17 percentage points).

Another set of sources of stress relates to managing classrooms and student behaviour. Disruptive pupil behaviours are considered a major cause of psychological strain for teachers (Hakanen, Bakker and Schaufeli, 2006[20]). Results from TALIS 2013 showed that job satisfaction and self-efficacy diminished as the proportion of students with behavioural problems increased (OECD, 2014[65]). Three TALIS indicators consider these elements: "being held responsible for students' achievement" (reported "quite a bit" or "a lot" as a source of stress by 44% of teachers across the OECD); "maintaining classroom discipline" (38%); and "being intimidated or verbally abused by students" (14%) (Figure II.2.9, Table II.2.43). TALIS countries and economies displaying the highest shares (50% or more across three items, on average) are Bulgaria, France, the French Community of Belgium, Latvia, Lithuania, Portugal, Saudi Arabia and South Africa. The countries and economies displaying the lowest shares (below 20%, on average) are CABA (Argentina), Georgia, Mexico and Norway. These findings echo research results that have also shown that the type of stress experienced by teachers differs by their experience, with novice teachers experiencing stress closely related to classroom management, while more experienced teachers tend to report higher levels of stress related to their workload (Antoniou, Ploumpi and Ntalla, 2013[77]; Antoniou, Polychroni and Vlachakis, 2006[71]).

Finally, a last set of indicators refers to teachers' ability to respond to the requirements and needs of evolving educational systems and stakeholders. The additional tasks generated by these responsibilities can create extra work pressure on teachers and can negatively affect teachers' sense of professional well-being (Valli and Buese, 2007[78]). On average across the OECD, 41% of teachers consider that "keeping up with changing requirements from local, municipal/regional, state or national/federal authorities" is a predominant source of stress; 34% of teachers do so with respect to "addressing parent or guardian concerns". In addition, shifts in societal demands regarding the inclusion of special needs students in regular schools have brought about additional demands for teachers, such as "modifying lessons for students with special needs", which 31% of teachers report as a source of stress (Figure II.2.9, Table II.2.43). TALIS countries and economies displaying the highest shares (50% or more across the three items, on average) are France and Portugal. The countries and economies displaying the lowest shares (below 20% of teachers, on average) are CABA (Argentina) and Georgia.

With respect to school leaders, on average across the OECD, "having too much administrative work to do" is the source of stress with the highest percentage of principals reporting experiencing it "quite a bit" or "a lot" (69%) (Table II.2.47). More than 90% of principals experience this issue "quite a bit" or "a lot" in the Czech Republic, the French Community of Belgium and Portugal. Another set of sources of stress derives from the engagement of principals with the requirements and needs of evolving educational systems and stakeholders. For "keeping up with changing requirements from local, municipal/regional, state or national/federal authorities", the OECD average is 55%, with the highest values displayed by Portugal (91%) and Latvia (82%). "Being held responsible for students' achievement" is another common source of school leaders' stress (OECD average 46%). The highest values are seen in Portugal (94%), Latvia (85%) and Lithuania (81%). "Addressing parent or guardian concerns" (OECD average 47%) displays the highest values in Portugal (88%) and Italy (74%).

An interesting pattern in relation to principals' sources of stress is that, on average across the OECD, 71% of principals of publicly managed schools report administrative work as a source of stress "quite a bit" or "a lot", compared to only 61% of principals of privately managed schools (Table II.2.50). A significant positive difference is observed in nine countries, and the gap is particularly pronounced in CABA (Argentina) (a difference of 50 percentage points), the United States (44 percentage points) and New Zealand (41 percentage points). A possible explanation for this difference might be due to the variation in administrative procedures between publicly and privately managed schools, specifically in the degree of bureaucratisation (Dronkers and Robert, 2008[79]). Publicly managed schools are often perceived as more bureaucratic than privately managed schools, which might be associated with principals' levels of stress.

Work hours and stress

Research has consistently shown that time pressures and workload are among the main factors affecting teachers' stress and well-being (Bakker et al., 2007[17]; Collie, Shapka and Perry, 2012[22]; Hakanen, Bakker and Schaufeli, 2006[20]; Klassen and Chiu, 2010[80]). However, it has been argued that it is important to use more granular indicators of workload, such as the number of hours that teachers spend on certain activities, specifically on teaching and non-teaching tasks (Skaalvik and Skaalvik, 2018[27]). Indeed, teachers spend significant time on non-teaching tasks, such as administrative issues, which could be automated or dealt with by non-professionals. This time spent on administrative tasks may lead to early attrition (Benham Tye and O'Brien, 2002[81]).

In order to gain further insight into sources of stress, it is useful to explore stress levels in relation to the amount of time teachers spend on given tasks.[10] TALIS asked teachers to count the number of 60-minute hours they spent on specific tasks during their most recently completed calendar week. On average across the OECD, teachers report working a total of 38.8 hours per week, with a little bit more than half of the time (20.8 hours) devoted to teaching – Table I.2.27 in *TALIS 2018 Results (Volume I)* (OECD, 2019[3]).[11]

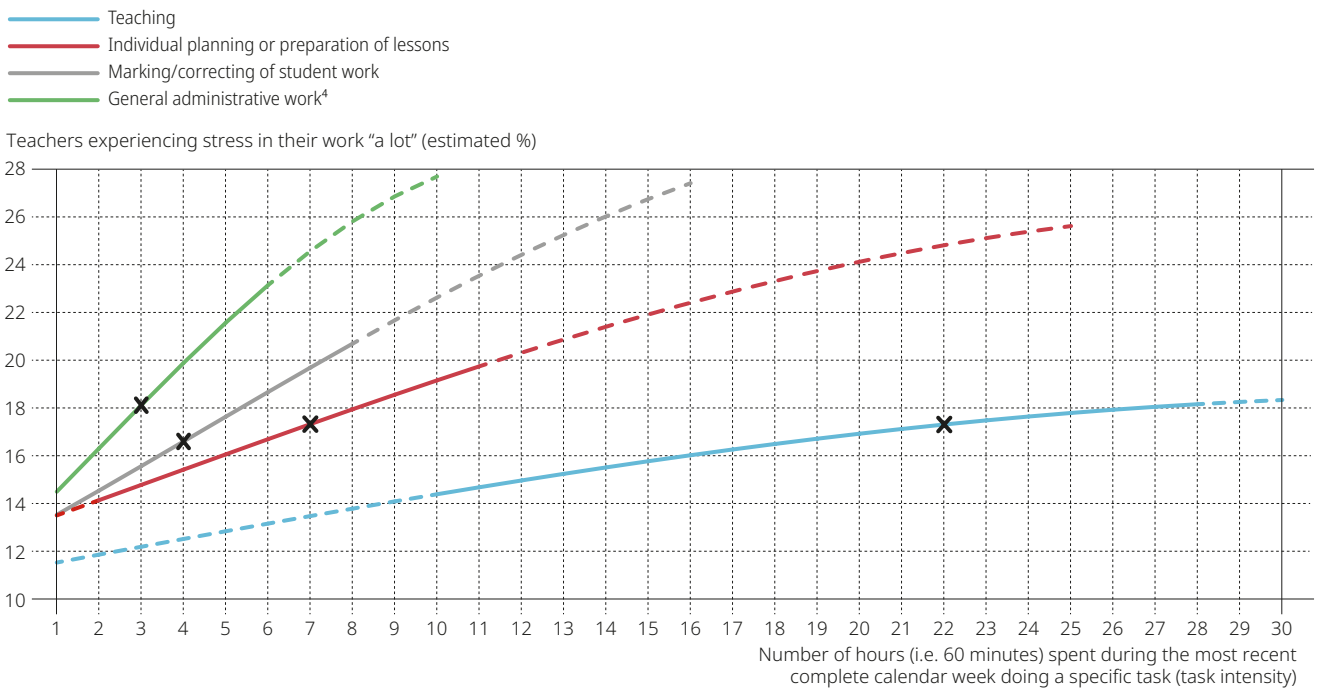
Overall across the OECD, the most time-consuming non-teaching tasks are: "individual planning or preparation of lessons either at school or out of school" (6.5 hours); "marking/correcting of student work" (4.2 hours)"; "general administrative work" (2.7 hours); and "team work and dialogue with colleagues within this school" (2.7 hours) – Table I.2.27, in *TALIS 2018 Results (Volume I)* (OECD, 2019[3]). The time spent on marking and administrative work aligns with teachers' reported sources of stress, such as "having too much administrative work" and "having too much marking". Among the countries and economies participating in TALIS, the time spent on marking exceeds seven hours in Shanghai (China) and Singapore, and six hours in Colombia, England (United Kingdom), Portugal and South Africa. Regarding administrative work, the burden is highest in Japan and Korea, where teachers spend at least five hours per week on administrative work, as well as in Australia and New Zealand, where teachers spend on average four hours per week on this type of work.

Figure II.2.10 shows the relationship between task intensity and teachers' stress. The horizontal axis corresponds to the number of hours a teacher spends performing specific tasks (task intensity) and the vertical axis corresponds to the estimated share of teachers (OECD-31 average) reporting that they experience stress a lot. Each line in the chart shows the estimated share of teachers reporting that they experience stress a lot by level of task intensity, for a given task. The chart confirms the results of the correlation analysis. Based on this estimation, on average across the OECD, 17% of the teachers who spend 21 hours teaching report they experience stress a lot (Table II.2.53). This percentage does not differ greatly for each additional hour of teaching, suggesting that teachers' stress is just slightly related to teaching intensity.

Figure II.2.10 shows that the estimated proportion of teachers reporting that they experience stress a lot in their work increases more sharply for planning, marking and particularly for administrative tasks (Tables II.2.54, II.2.55 and II.2.56). For example, on average across the OECD, an estimated 18% of the teachers who spend three hours on administrative tasks report experiencing stress a lot in their work. However, if teachers spend five hours (i.e. 2 hours more) on administrative tasks, this increases to an estimate of 22% of teachers. This activity shows the highest increase rate per additional hour across the four activities in the figure.

Figure II.2.10 **Relationship between teachers' experience of stress at work and task intensity**

Estimated percentage of teachers experiencing stress in their work "a lot", by task intensity (OECD average-31)[1, 2, 3]



1. Results of binary logistic regression based on responses of lower secondary teachers.
2. The "**X**" in the figure represents the share of teachers experiencing stress in their work "a lot", given an average task intensity (OECD average-31).
3. Continuous lines cover 80% of the lower secondary teacher population across OECD countries and economies participating in TALIS; dashed lines are used to indicate the expected percentage of teachers experiencing stress "a lot" in their work below and above the 1st and 9th decile of the task intensity distributions.
4. Estimates for "general administrative work" are obtained considering a task intensity ranging between 0 and 49 hours.

Source: OECD, TALIS 2018 Database, Tables II.2.53, II.2.54, II.2.55 and II.2.56.

StatLink http://dx.doi.org/10.1787/888934083411

These results seem to suggest that teachers who spend many hours doing administrative tasks are more likely to report high levels of stress than those who spend many hours teaching in the classroom. This result echoes similar findings displayed in the TALIS national report of England (United Kingdom), which showed that working hours, particularly for non-teaching tasks, had a strong association with the proportion of primary and lower secondary teachers reporting their tasks as unmanageable (Jerrim and Sims, 2019[82]). Box 2.7 shows the example of a policy initiative in England to reduce stress-induced workload and how the Slovak Republic followed this example.

Box II.2.7. **Reducing teacher workload in England (United Kingdom) and the Slovak Republic**

England (United Kingdom)

In 2014, the Department for Education launched the Workload Challenge to tackle the volume of teachers' workload and to support quality education. The online consultation collected suggestions and feedback on unnecessary and unproductive workload. The main sources of unnecessary and unproductive workload given by respondents were data management, lesson planning and ineffective marking. Three independent review groups were formed to address these burdensome tasks and investigate practical and sustainable solutions that would not have a negative impact on student outcomes. Their reports were published in March 2016. The Department for Education has also undertaken a range of actions to tackle workload. This includes the publication, in March 2018, of practical tools and resources to help schools review and reduce workload, publishing examples from schools about what they have done to reduce workload, establishing the Workload Advisory Group to tackle excessive data burdens in schools and, in November 2018, publishing their report and a response that accepted all the recommendations.

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The Department for Education has also undertaken robust research to understand working hours and perceptions of workload, with reports published in February 2017 and October 2019. The findings from the Teacher Workload Survey 2019 suggest there has been a reduction between 2016 and 2019 in reported working hours of five hours a week for teachers, middle leaders and senior leaders. Following the 2014 Workload Challenge, while respondents reported spending similar amounts of time teaching, they reported spending less time on non-teaching activities, with reductions concentrated in the Department for Education's areas of focus.

Source: Department for Education, UK (2018[83]), *Reducing school workload*, https://www.gov.uk/government/collections/reducing-school-workload, (accessed on 9 January 2020).

The Slovak Republic

Following the United Kingdom's initiative, the Slovak Republic has endeavoured to reduce the extensive administrative workload, which is a burden to teachers. In 2015, the Ministry of Education, Science, Research and Sport tasked a working group composed of education representatives and ministry officials to relieve teachers of administrative work. Accordingly, procedures were simplified, automated or even eliminated. The country has declared its commitment to addressing workload issues through statements in the government manifesto and in the first action plan of the National Reform Programme for Education (2018-19).

Sources: Ministry of Finance of the Slovak Republic (2019[84]), *National Reform Programme of the Slovak Republic 2019*, https://www.mfsr.sk/en/finance/institute-financial-policy/strategic-documents/national-reform-program/.

What drives teachers' levels of stress?

How can educational systems affect the well-being and stress levels of teachers? An important first step to answering this question is understanding whether stress is a phenomenon mainly explained by school differences or by teacher differences. Depending on the answer, systems will know whether it would be more effective to elaborate policies targeting schools or targeting teachers. To this end, the share of variance accounted for by school differences in teachers' responses to well-being and stress measures (i.e. the extent to which teachers experience stress in their work; if work leaves room for personal time; the impact on their mental health; and the impact on their physical health) and in teachers' responses to workload stress measures (i.e. teacher stress due to lessons to prepare and to teach, to marking, to administrative work and to extra duties due to absent teachers) is estimated (Table II.2.57).

TALIS 2018 results showed that, on average across the OECD, only 6% of the variance in teachers' well-being and stress is accounted for by school differences (Table II.2.57). In other words, most of the variance in teachers' well-being and stress is accounted for by differences among teachers within schools. Nevertheless, there is important cross-country variation, with 10% of the variance or more accounted for by schools in Brazil, Bulgaria, Colombia, Kazakhstan, Mexico, Saudi Arabia, South Africa, the United Arab Emirates and Viet Nam, and less than 3% of the variance lies in the differences between schools in the Flemish Community of Belgium and the Netherlands. Relatively higher levels of variance accounted for by schools signal that there may be school factors associated with the levels of well-being of teachers.

On average across the OECD, only 7% of the variance in teachers' workload stress is accounted for by school differences (Table II.2.57). It is worth noting that these results may appear somewhat counter-intuitive, since it might have been expected that teachers' stress due to workload would have a strong link with school elements, such as school composition or location. However, the results indicate that teachers' responses to these items lies in the differences between teachers. Once again, it is possible to observe important cross-country variation, with 10% or more of the variance accounted for by schools in Brazil, Colombia, Denmark, Estonia, Georgia, the Russian Federation, Saudi Arabia, South Africa, the United Arab Emirates and Viet Nam, while less than 3% of the variance lies in the differences between schools for schools in Australia, the Flemish Community of Belgium, the French Community of Belgium, France, the Netherlands and Slovenia. Results are particularly high for Denmark (23%). In the case of those systems with a relatively high proportion of the variance accounted by school differences, it would be advisable to have a better understanding of what the school elements are that explain these differences in order to develop policies targeting those schools where stress levels may seem particularly elevated.

The amount of variance within schools can have several explanations that could be linked to teachers' allocation to different classrooms and student groups or their assigned workload. Another possible explanation for the considerable share of variance in teachers' responses is that they could be linked to teachers' individual traits, such as resilience and coping mechanisms

(Curry and O'Brien, 2012[85]; Gu and Day, 2007[86]; Kyriacou, 2001[67]). Resilience is understood as teachers' capacity to react assertively and efficiently when facing adversity in their workplace (Gu and Day, 2007[86]). A qualitative study conducted in eight schools in South Adelaide, Australia, displayed how a series of elements, such as a sense of agency, pride in achievements and notions of self-competence, worked as protective factors to cope with stressful situations. At the same time, the study highlighted the importance of school factors, such as a caring leadership team, to effectively build these levels of resilience in their staff (Howard and Johnson, 2004[87]). Indeed, although resilience may be an individual trait, environmental characteristics can foster this attribute in teachers to help them cope with their challenges (Gu and Day, 2007[86]).

Box II.2.8. **Sources of stress for teachers and school leaders, from primary to upper secondary education**

From the countries with available data, it is interesting to note the degree of variation across educational levels in responses on sources of stress from both teachers and school leaders. These differences could indicate possible differences in the responsibilities of staff and school leaders across educational levels.

Teachers

Remarkable and significant variation in sources of stress can be observed across educational levels in the countries and economies with available data. Modifying lessons for students with special needs seems to be a source of stress for teachers that decreases as educational levels increase. In 10 of the 13 countries and economies with available data, primary education teachers report, to a greater extent than their colleagues in lower secondary education, that modifying lessons for students with special needs is a source of stress. The greatest differences are observed in France (20 percentage points) and the Flemish Community of Belgium (18 percentage points) (Tables II.2.43 and II.2.44). Following this pattern, in 9 of the 11 countries with available data, teachers in upper secondary education report, to a lesser extent than their colleagues in lower secondary education, that modifying lessons for students with special needs is a source of stress, with the largest difference observed for Denmark (30 percentage points) (Tables II.2.43 and II.2.45). These results could be partially explained by the fact that, as the results from TALIS Volume I showed, the levels of student diversity seem to decrease across educational levels in the countries with available data. In particular, in 5 out of 10 countries and economies with available data for ISCED 2 and 3 (including Denmark), fewer teachers teach in schools that enrol at least 10% of special needs students – see Tables I.3.26, I.3.27 and I.3.28 in *TALIS 2018 Results (Volume I)* (OECD, 2019[3]).

Addressing parent or guardian requests also seems to be a source of stress more present at lower levels of education than at higher levels. In 8 of the 13 countries and economies with available data, teachers in primary education report, to a greater extent than their colleagues in lower secondary education, that addressing parent or guardian requests is a source of stress, with the greatest difference observed in France (21 percentage points) (Tables II.2.43 and II.2.44). Following this pattern, in 9 of the 11 countries with available data, teachers in upper secondary education report to a lesser extent than their colleagues in lower secondary education that addressing parent or guardian requests is a source of stress, with the largest difference observed in Denmark (34 percentage points) (Tables II.2.43 and II.2.45).

In contrast, stress due to having too much marking seems to increase the higher the educational level. In 8 of the 13 countries and economies with available data, teachers in primary education report, to a lesser extent than their colleagues in lower secondary education, that too much marking is a source of stress, with the greatest difference shown in Denmark (19 percentage points) (Tables II.2.43 and II.2.44). Likewise, in 4 of the 11 countries and economies with available data, teachers in lower secondary education report, to a lesser extent than their colleagues in upper secondary education, that having too much marking is a source of stress. The largest differences are observed in Brazil (9 percentage points) and Denmark (7 percentage points) (Tables II.2.43 and II.2.45).

In 7 of the 13 countries with available data, teachers in primary education report, to a greater extent than their colleagues in lower secondary education, that being held responsible for student achievement is a source of stress, with the largest difference seen in France (24 percentage points) (Tables II.2.43 and II.2.44).

Another source of stress worth highlighting is classroom discipline. Regarding the comparison between lower secondary education and upper secondary education, in 10 of the 11 countries with available data, upper secondary teachers report, to a lesser extent than their colleagues in lower secondary, that maintaining classroom discipline is a source of stress, with the largest difference observed in Portugal (13 percentage points) (Tables II.2.43 and II.2.45).

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School leaders

There are no clear significant patterns across the three levels of education regarding the sources of stress reported by principals, but there are some results worth mentioning. In 5 of the 13 countries and economies with available data, principals in primary education report, to a lesser extent than their colleagues in lower secondary education, that maintaining school discipline is a source of stress, with the greatest difference observed in the Flemish Community of Belgium (19 percentage points) (Tables II.2.47 and II.2.48).

For the most part, the comparison with upper secondary education does not highlight significant changes. However, in Slovenia, principals in upper secondary education report five sources of stress to a lesser extent than their colleagues in lower secondary education: "addressing parent or guardian concerns" (39 percentage points), "keeping up with changing requirements from local, municipal/regional, state or national/federal authorities" (a difference of 28 percentage points), "having extra duties due to absent school staff" (13 percentage points), "accommodating students with special needs" (12 percentage points) and "being intimidated or verbally abused by students" (6 percentage points)" (Tables II.2.47 and II.2.49).

TEACHERS' RISK OF ATTRITION

Attrition among teachers has become a severe problem that threatens the stability of several educational systems across the world (Viac and Fraser, 2020[6]). Attrition, unlike turnover (which refers to teachers permanently leaving their school) refers to teachers leaving the profession altogether (Borman and Dowling, 2008[16]; Bradley, Green and Leeves, 2007[88]).

Attrition can have a detrimental impact on student learning (Borman and Dowling, 2008[16]; Ronfeldt, Loeb and Wyckoff, 2013[89]). Indeed, attrition can affect student achievement by having a negative impact on the school climate and on the implementation of the curriculum (Guin, 2004[90]). Furthermore, attrition can lead to severe problems of staff shortages, especially when they affect disadvantaged schools (Boe and Cook, 2006[91]; Ingersoll, 2001[92]). Such actions also imply significant financial costs for educational systems, as they need to replace qualified teachers in the affected schools (Barnes, Crowe and Schaefer, 2007[93]). This also entails significant opportunity costs, as the resources devoted to training new staff could have been spent on other related policy areas, such as teacher training. Finally, attrition also entails efficiency costs for schools, as they need to spend time and resources integrating new teachers into the school organisation and culture (Darling-Hammond and Sykes, 2003[94]). TALIS 2018 includes questions that may function as proxies for measuring attrition and are able to capture this form of absence and provide a descriptive picture of the situation.[12]

One proxy measure for the risk of attrition is the intention of teachers to remain in teaching. Both teachers and principals were asked how many more years they would like to keep working. Although this indicator is influenced by the age of respondents, due to retirement-related attrition, it can still provide useful information on teachers' career plans or aspirations. In interpreting these results, it is important to keep in mind that TALIS does not provide information on the reasons why teachers or school leaders may want to stop working in their respective roles. It is possible that, although teachers and school leaders report planning to stop work relatively soon, they may want to continue in the profession in another capacity, such as on the school management team or a role outside the school, such as in the local or national administration or as a researcher. Nevertheless, whatever plans teachers and school leaders may have, the indicator provides an idea of when they expect to stop being in their classroom or being in charge of the school. This provides useful information for education systems on replacement efforts likely to be required.

On average across the OECD, teachers report that they would like to continue working as teachers for an additional 15 years (Table II.2.61). Since the average age of teachers across the OECD is 44 (OECD, 2019[3]), an additional 15 years takes teachers close to retirement age for the majority of countries and economies participating in TALIS. The range of results spreads from just 9 additional years in Lithuania to 19 years in the Flemish Community of Belgium. On average across the OECD, principals intend to work eight more years (Table II.2.62). Given the fact that, across the OECD, the average age of principals is 52 (OECD, 2019[3]), it could also be speculated that principals are thinking about retirement age when declaring the number of years they would like to remain as a principal. The range of results spreads from just 3 additional years in Korea and Japan to 11 additional years in Denmark, Finland and United States.

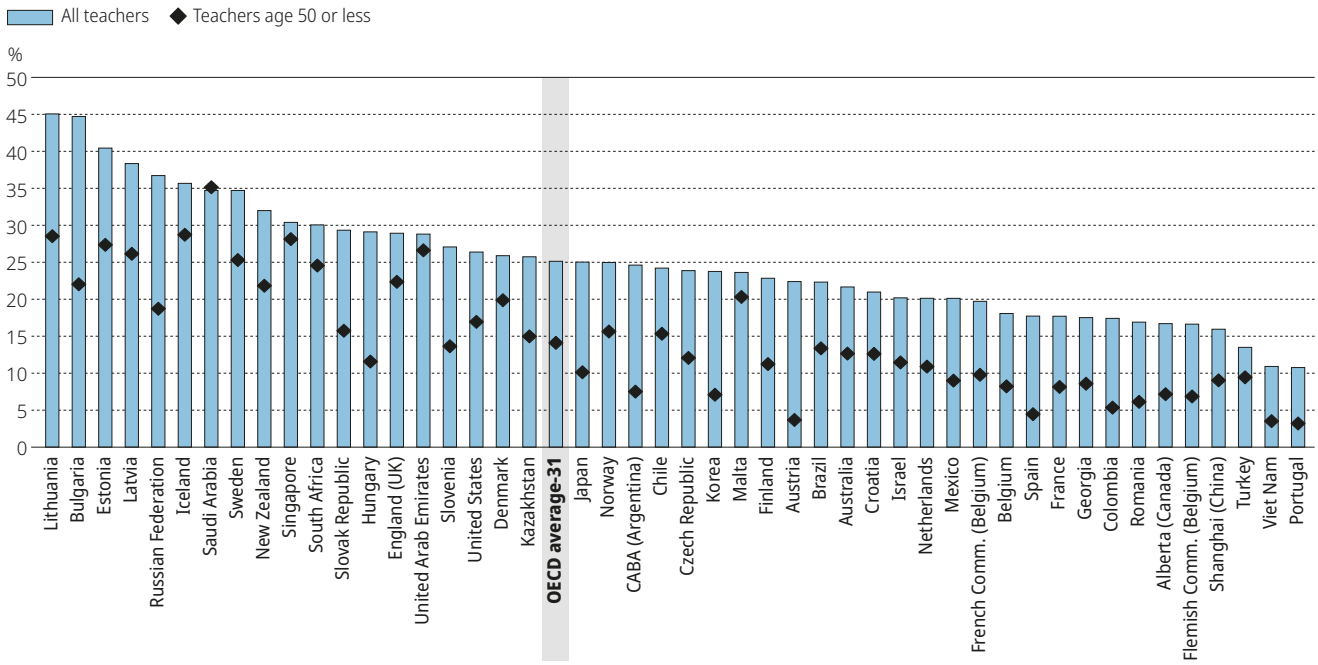
In order to identify those countries and economies experiencing more pressing concerns for the renewal of the teaching workforce, the following analyses takes into consideration the percentages of teachers who want to leave teaching within the next the next five years. On average across the OECD, 25% of teachers state they want to leave teaching within the next five years (Figure II.2.11, Table II.2.63). The countries and economies with particularly high percentages (equal to or above 40) are Lithuania (45%), Bulgaria (45%) and Estonia (40%). The average age of the teacher population workforce could explain these

high percentages. Indeed, all these three countries have a teacher population older than the OECD average – see Table I.3.1 in *TALIS 2018 Results (Volume I)* (OECD, 2019[3]). There is also a moderate positive country-level correlation between teachers wanting to leave teaching and the proportion of teachers age 50 and above (the linear correlation coefficient r is r=.44 among TALIS countries and economies). As such, these results could be understood as part of the regular life cycle of the teacher workforce in each country.

More pertinent findings could be gained by conducting an analysis of the years teachers and principals wish to remain as teachers or school leaders by their age. To highlight the potential risks of attrition and reduce the risk of bias by teachers leaving due to retirement, the following analysis restricted the sample to teachers aged 50 years or less. On average across the OECD, 14% of teachers aged 50 years or less want to leave teaching within next five years (Figure II.2.11, Table II.2.63). More than 25% of teachers want to leave teaching within the next five years in Estonia, Iceland, Lithuania, Saudi Arabia, Singapore and the United Arab Emirates, while 5% or less of teachers express this wish in Austria, Portugal and Viet Nam.

Figure II.2.11 **Teachers' wanting to leave teaching within the next five years**

Percentage of lower secondary teachers wanting to leave teaching within the next five years



Countries and economies are ranked in descending order of the percentage of lower secondary teachers wanting to leave teaching within the next five years.

Source: OECD, TALIS 2018 Database, Table II.2.63.

StatLink http://dx.doi.org/10.1787/888934083430

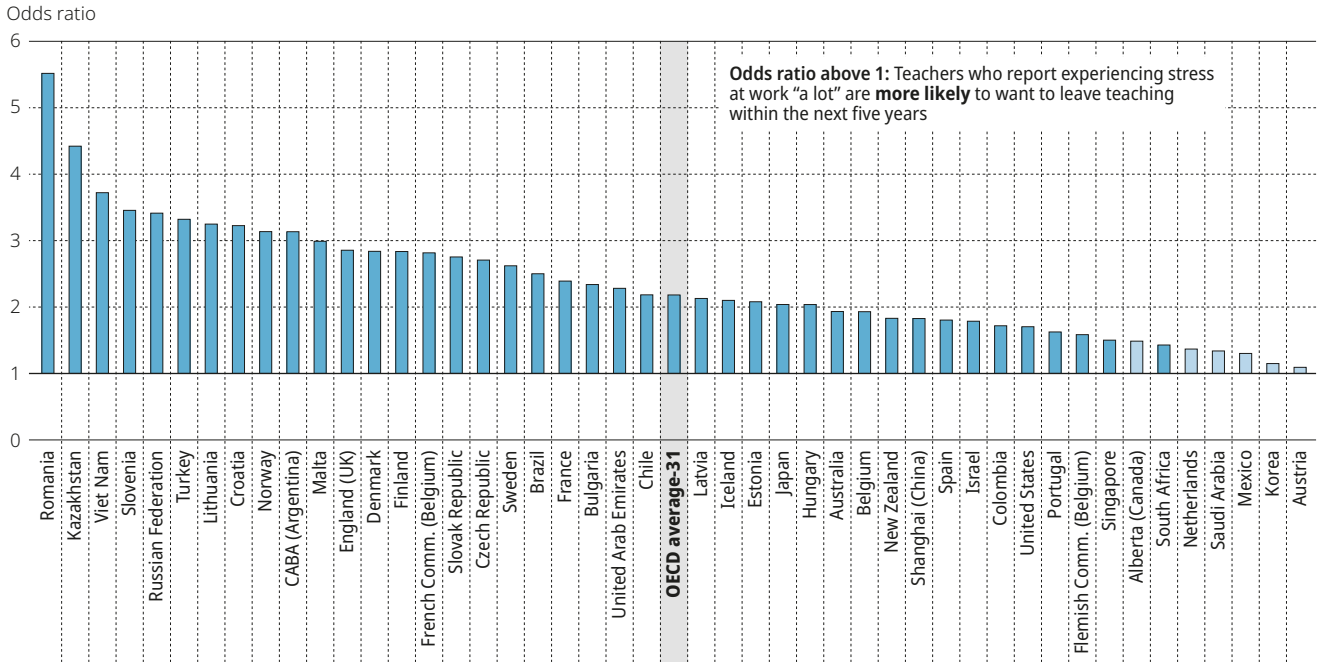
A high proportion of young teachers wishing to leave their work within the next five years can be problematic as it may present countries and economies with unexpected teacher shortages. The proportion of teachers under age 35 wanting to leave teaching within the next five years is particularly problematic in Estonia (41%) and Singapore (40%) as it may present severe challenges for the renewal of the teaching profession, given that the average age of teachers is 50 (OECD, 2019[3]) (Figure II.2.11, Table II.2.63). A higher percentage of young teachers wishing to leave teaching in the next five years may be an indicator of professional aspirations, career path and mobility opportunities embedded in each educational system. Whether these issues translate into an actual teacher shortage will depend on the capacity of each system to replace these teachers in their schools.

A higher share of teachers age 50 or less in city schools than the share of colleagues in rural or village schools want to leave teaching within the next five years (Table II.2.66). This holds true for the OECD average and for 12 TALIS countries and economies. Countries and economies with particularly large differences are the United States (a difference of 17 percentage points), New Zealand (a difference of 12 percentage points) and in South Africa and Sweden (both with a difference of 10 percentage points). However, for Lithuania, teachers in schools in rural areas or villages report more often than their colleagues in city schools that they wish to leave teaching within the next five years: a difference of 10 percentage points.

What are the main factors associated with teachers wanting to leave their work? In exploring this question, this chapter links several of the items presented above. The analysis starts by exploring the association between stress and the intention to leaving teaching within the next five years. Indeed, research evidence has highlighted that stress levels might play an important role in teachers' decisions to leave teaching (Kyriacou, 2001[67]). Figure II.2.12 (Table II.2.67) shows that teachers who report experiencing stress a lot in their work are more likely to report that they wish to leave teaching within the next five years. This holds true on average across the OECD and for almost all countries and economies participating in TALIS with available data, after controlling for teachers' age, gender, experience at the current school and type of contract, as well as characteristics of the target class. Exceptions to this pattern are Alberta (Canada), Austria, Korea, Mexico, the Netherlands, Saudi Arabia and Viet Nam.

Figure II.2.12 **Relationship between wanting to leave teaching within the next five years and experiencing stress at work**

Likelihood of wanting to leave teaching within the next five years related to experiencing stress at work "a lot"[1, 2, 3, 4]



1. Results of binary logistic regression based on responses of lower secondary teachers.

2. An odds ratio indicates the degree to which an explanatory variable is associated with a categorical outcome variable. An odds ratio below one denotes a negative association; an odds ratio above one indicates a positive association; and an odds ratio of one means that there is no association.

3. The predictor is a dummy variable: the reference category refers to lower secondary teachers experiencing stress at work "quite a bit", "to some extent", "not at all".

4. Controlling for gender, age, years of experience working at the school, working full-time and classroom composition of the target class (i.e. share of low achiever students, share of students with behavioural problems, share of students from socio-economically disadvantaged homes).

Note: Statistically significant values are marked in a darker tone (see Annex B).

Countries and economies are ranked in descending order of the likelihood of wanting to leave teaching within the next five years related to experiencing stress at work "a lot".

Source: OECD, TALIS 2018 Database, Table II.2.67.

StatLink http://dx.doi.org/10.1787/888934083449

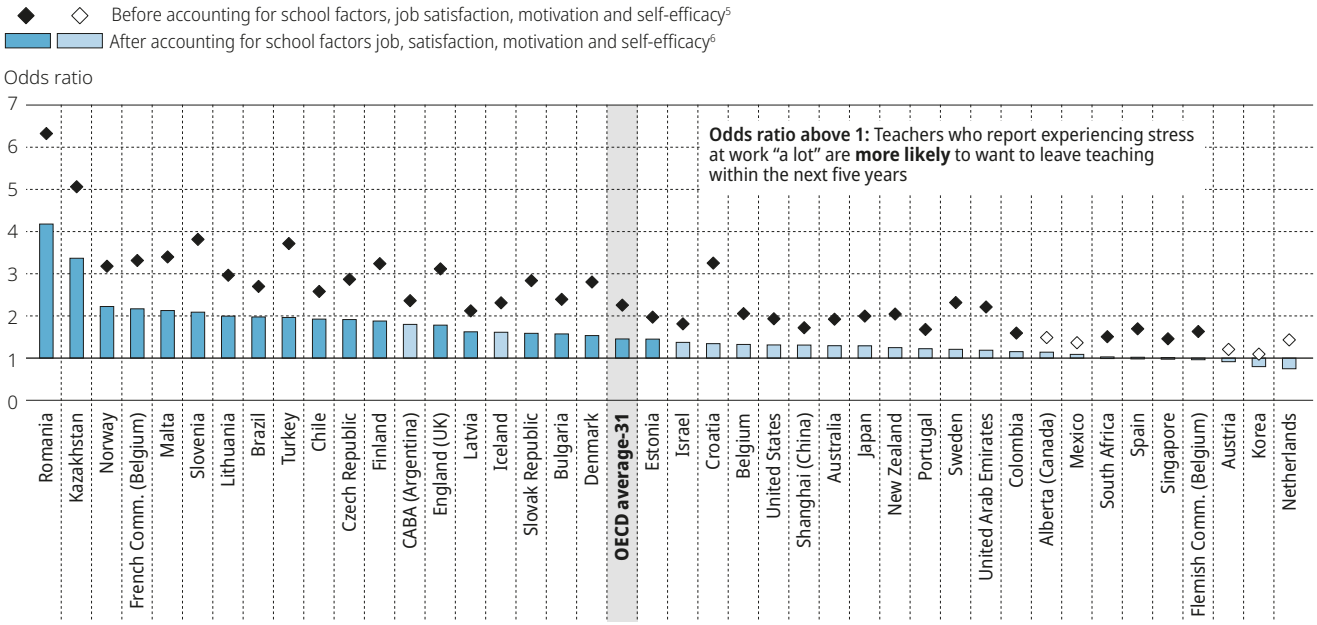
However, schools may have the capacity to limit the negative association that stress has with attrition. As was described in the section on the drivers of stress levels, coping mechanisms allow teachers to soften the detrimental effects of stress (Curry and O'Brien, 2012[85]; Gu and Day, 2007[86]; Kyriacou, 2001[67]). For example, research has found that motivation, work engagement and self-efficacy are able to mediate the relationship between stress and the desire to leave the profession (Collie, Shapka and Perry, 2012[22]; Gu and Day, 2007[86]; Klassen et al., 2013[24]; Skaalvik and Skaalvik, 2018[27]). Furthermore, research evidence has shown that working conditions and school support play a pivotal role in the retention of teachers (Bakker et al., 2007[17]; Borman and Dowling, 2008[16]; Hakanen, Bakker and Schaufeli, 2006[20]). In particular, the level of autonomy and peer collaboration seems to play an important role in improving the well-being of teachers (Chan, 2002[74]; Collie and Martin, 2017[19]; Desrumaux et al., 2015[23];

Hakanen, Bakker and Schaufeli, 2006[20]). To account for these mediating effects, a series of indicators were introduced to the original regression model between the indicators for stress and for the intention to leave teaching within the next five years. To account for individual motivation and self-efficacy, the model introduced the question of whether the teaching profession is valued in society (as a proxy for motivation) and the scale for self-efficacy. To account for school support, such as autonomy and peer-collaboration, the model introduced a scale measuring teachers' professional collaboration and another one measuring teachers' satisfaction with autonomy. Participation in formal induction activities and effective professional development was also included as a component of work support for teachers. Finally, the model introduced the job satisfaction scale to have an overall measure of teachers' perceptions of their work environment (Tables II.2.68 and II.2.69).[13]

Figure II.2.13 shows that, after accounting for job satisfaction, school support, motivation and self-efficacy, the relationship between stress and the intention to leave teaching within the next five years stops being significant for 18 TALIS countries and economies. A detailed look at the association between these indicators and the intention by teachers to leave teaching within the next five years reveals that this loss in significance between stress and the intention to leave work may be due to the introduction of the job satisfaction scale in the model (Tables II.2.68 and II.2.69). Indeed, for 42 TALIS countries and economies, the higher the level of job satisfaction, the less likely teachers are to express an intent to leave their work in the next five years.

Figure II.2.13 **Relationship between wanting to leave teaching within the next five years and experiencing stress at work, by school factors, motivation and self-efficacy**

Likelihood of wanting to leave teaching within the next five years related to experiencing stress at work "a lot"[1, 2, 3, 4]



1. Results of binary logistic regression based on responses of lower secondary teachers.

2. An odds ratio indicates the degree to which an explanatory variable is associated with a categorical outcome variable. An odds ratio below one denotes a negative association; an odds ratio above one indicates a positive association; and an odds ratio of one means that there is no association.

3. The predictor is a dummy variable: the reference category refers to lower secondary teachers experiencing stress at work "quite a bit", "to some extent", "not at all".

4. The analysis is restricted to teachers reporting that their teaching in the target class is not directed entirely or mainly at special needs students. These data are reported by teachers and refer to a randomly chosen class they currently teach from their weekly timetable.

5. Controlling for gender, age, years of experience working at the school, working full-time and classroom composition of the target class (i.e. share of low achiever students, share of students with behavioural problems, share of students from socio-economically disadvantaged homes).

6. Controlling for gender, age, years of experience working at the school, working full-time and classroom composition of the target class and satisfaction with target class autonomy, effective professional development, participation in formal induction activities at current school, professional collaboration in lessons among teachers, teachers' views of how society values their profession, self-efficacy and job-satisfaction.

Note: Statistically significant values are marked in a darker tone (see Annex B).

Countries and economies are ranked in descending order of the likelihood of wanting to leave teaching within the next five years related to experiencing stress at work "a lot".

Source: OECD, TALIS 2018 Database, Tables II.2.68 and II.2.69.

StatLink http://dx.doi.org/10.1787/888934083468

The fact that the rest of variables used in the model do not show significant results for most of the TALIS countries and economies could be explained by how closely they are related to the concept of job satisfaction itself. This chapter revealed the positive association between perceptions of the value of the profession and self-efficacy and job satisfaction (Tables II.2.7, II.2.24 and II.2.25), while satisfaction with target class autonomy and peer collaboration are identified in Chapters 4 and 5 of this volume (Tables II.4.13, and II.5.41). In other words, for these 18 countries, job satisfaction, regardless of the level of stress, is the main factor associated with teachers reporting whether they would like to leave teaching. Overall, the result hints at the pivotal role that job satisfaction may play in retaining teachers in the profession.

Having said that, for an equal amount of 18 TALIS countries and economies, the relationship between stress and the intention to leave teaching within the next five years remains significant after accounting for job satisfaction, school support, motivation and self-efficacy (Figure II.2.13, Tables II.2.68 and II.2.69). In other words, for these 18 countries and economies, the extent to which stress is experienced still plays a pivotal role in teachers reporting their wish to leaving teaching in the next five years. The fact that this association is still persistent for these countries and economies, even after taking into account support measures, hints that teachers' stress levels should be taken seriously in those countries.

Box II.2.9. **The risk of attrition, from primary to upper secondary education**

In 3 of the 13 countries and economies with available data, teachers aged 50 years or less in primary education report, to a greater extent than their colleagues in lower secondary education, that they wish to leave teaching within the next five years. The differences range between 3 percentage points (CABA [Argentina] and Viet Nam) and 5 percentage points (Turkey). In contrast, in 5 of the 13 countries and economies with available data, it is possible to observe that a smaller share of teachers aged 50 years or less in primary education than in lower secondary education report wishing to leave teaching within the next five years. The highest differences (5 percentage points or more) are displayed by England (United Kingdom) and Sweden (6 and 7 percentage points, respectively). The Flemish Community of Belgium, Denmark, France and the United Arab Emirates show no significant differences (Table II.2.64).

A higher share of teachers aged 50 years or less in upper secondary education than in lower secondary education report wishing to leave teaching within the next five years in 3 out of the 11 countries with available data. The largest difference is observed in Turkey (6 percentage points), followed by Croatia and Portugal (3 and 2 percentage points, respectively). Only Viet Nam shows the opposite results: in this country, the proportion of upper secondary teachers aged 50 years or less wishing to leave teaching within the next 5 years is about 2 percentage points lower than the one of their colleagues in lower secondary education. Alberta (Canada), Brazil, Denmark, Slovenia, Sweden, and the United Arab Emirates display no significant differences (Table II.2.65).

The variation in the response of teachers aged 50 years or less may reflect the different profiles of teachers across educational levels, as well as the different working conditions characterising each level (Tables II.2.64 and II.2.65).

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Notes

1. This chapter focuses on the subjective indicators of working conditions as they pertain to the perceptions, feelings and aspirations of teachers and school leaders. Chapter 3 focuses on the objective indicators of working conditions, meaning the objective elements of teachers' occupational well-being (job security, time flexibility, evaluation processes) that can be observed by an external party (Viac and Fraser, 2020[6]).

2. The OECD average corresponds to the arithmetic mean of the estimates of the OECD countries and economies that participate in TALIS, with adjudicated data.

3. Results from Chapter 3 of this volume show that female teachers are more likely to work part-time than male teachers. It would be worth exploring whether contractual arrangements play a role behind the difference in the perception of how much teaching is valued in society, which could also explain the gender differences behind these results.

4. The results could also be explained by a misalignment of the time reference of each indicator. Teachers are being asked about how they feel their profession is being valued in society at the time of the survey and their response may be different to the one they might have given when they chose teaching as a career.

5. Authors asked people to rank 14 occupations in order of how they are respected. These occupations were: primary school teacher; secondary school teacher; head teacher; doctor; nurse; librarian; local government manager; social worker; website designer; police officer; engineer; lawyer; accountant; and management consultant. These occupations were deliberately chosen as graduate (or graduate-type) jobs. They were also chosen carefully with respect to how similar or dissimilar the work might be to teaching. By giving respondents many alternatives, the authors were able to extract a precise ranking of occupations. The authors asked respondents to rank each occupation in a drag-and-drop ladder on the computer screen and also asked them to name the single occupation that they felt was most similar to a teacher in terms of social status (Dolton et al., 2018, p. 136[31]).

6. The authors used principal component analysis (PCA) to create an index of teacher status as a summary of the information contained in a set of variables related to teacher status: rank of primary school teachers; rank of secondary school teachers; ranking of teachers according to their relative status; proportion of the survey sample by country who state that they "strongly agree" or "tend to agree" with the statement "pupils respect teachers". The index of teacher status comes from the first component extracted in the PCA. It explains the largest amount of total variance in the observed variables, so it is significantly correlated with some of the observed variables. For more technical information on the construction of the GTSI, please consult Appendix B of the Global Teacher Status Index report (Dolton et al., 2018, p. 136[31]).

7. In order to measure respondents' spontaneous, unreflected perceptions of teachers, the report added a word-association task to the survey (prior to the main body of the questionnaire, so as to not have responses conditioned by prior answers). Respondents were presented with a sequence of word pairs. For each pair of words, respondents were asked to select the word that best described the teaching profession in their country. They were told to choose as quickly as possible, within a time limit of ten seconds per word pair (Dolton et al., 2018, p. 82[31]). To determine whether spontaneous measures of teacher status provide additional insight into popular perceptions of teachers, the authors added responses to the following three word-pairs to the PCA model: "High-flyer/Mediocre"; "Respected/Not respected"; "High status/Low status" (Dolton et al., 2018, p. 139[31])

8. For the purposes of Figure II.2.3, four GTSI countries (Argentina, Canada, China and the United Kingdom) were counted as TALIS participants, since subnational entities from each of these countries participated in the TALIS study: CABA (Argentina), Alberta (Canada), Shanghai (China) and England (United Kingdom).

9. The only exception to this pattern is Japan: 63% of principals agree with "I am satisfied with my performance in this school". These results mirror the findings for teachers, where 49% agree with that statement (Table II.2.16). The statement closely resembles a self-efficacy indicator (i.e. an indicator measuring the level of confidence of teachers over their practices). A possible explanation for the results of Japan could be found in cross-cultural self-efficacy studies. Japan, among with other Asian countries has usually been identified as a country that reports a low percentage of agreement for self-efficacy indicators.

10. The analysis is conducted with the full sample of teachers in order to preserve the statistical power of these analyses. The estimations of hours by type of activity do not differ much by limiting the analysis to only full-time teachers, as the results from Table II.2.52 show.

11. The sum of hours spent on different tasks may not be equal to the total number of working hours, because teachers were asked about these elements separately. Therefore, the share of total working time teachers spend on each of the reported activities should be interpreted with great care. It is also important to note that the data represent the averages from all the teachers surveyed, including part-time teachers. Yet, on average across the OECD, the share of total work hours spent on teaching is very similar for full-time teachers (53%) and part-time teachers (54%) (OECD TALIS 2018 database).

12. Proxies of absenteeism and turnover are covered in TALIS 2018 by asking principals about the number of teachers (full-time or part-time) who were absent the most recent Tuesday that school was in session and the number of teachers who permanently left their school during the 12 months prior to the survey. Principals were asked to report the head count using the following response ranges: 0; 1-5; 6-10; 11-15; and 16 or more. Principals' responses about the number of absences and the number of teachers who left the schools were recoded as the low value of the response ranges: 0; 1; 6; 11 and 16. Based on this answer, a proxy of the school's teacher absence and turnover ratio was estimated for the proportion of teachers absent from their school compared to the overall teaching staff. However, reporting a ratio based on a categorical measure (head counts of absent teachers and teachers who have left) and continuous measure (overall teaching staff) leads to problematic results, as measures are heavily dependent on the school size. Therefore, results for absenteeism and turnover are not reported in the main text, but the results can be found in Table II.2.60.

13. The scale for self-efficacy measures teacher self-efficacy in classroom management, instruction and student engagement. The professional collaboration scales measures the extent to which teachers teach jointly as a team in the same class, provide feedback to other teachers about their practice, engage in joint activities across different classes and age groups, and participate in collaborative professional learning. The satisfaction with autonomy in the target class scale measures the sense of control for determining course content, selecting teaching methods, assessing students' learning, disciplining students, and determining the amount of homework for the target class in a randomly selected target class. The job satisfaction scale measures satisfaction with the profession and the current work environment.

3

Providing teachers and school leaders with secure, flexible and rewarding jobs

This chapter depicts the working conditions of teachers and school leaders, including appraisal processes, as well as their satisfaction with them. It begins by discussing job security among teachers, along with the prevalence of part-time work for teachers and principals, and teaching in multiple schools. The chapter then reviews the characteristics of formal teacher appraisal procedures across the Teaching and Learning International Survey (TALIS) countries and economies: the agents conducting appraisals, the methods used and the consequences of these evaluations. Finally, it discusses teachers' and principals' satisfaction with their salary and other working conditions.

Highlights

- The proportion of teachers reporting that they are employed on a temporary contract of any duration is less than 20%, on average across OECD countries and economies participating in the Teaching and Learning International Survey (TALIS), but it is much higher for teachers under 30 (about 50%). Around 20% of teachers report that they work part-time, with a higher proportion among female teachers, younger teachers and teachers working in privately managed schools.
- The proportion of teachers reporting that they work part-time has increased significantly since 2013 in 15 of the 32 TALIS countries and economies with available data and has decreased in only two countries/economies.
- Teachers working on a fixed-term contract of less than one year tend to feel less confident in their teaching in about one-third of the TALIS countries and economies with available data. The same is true for teachers working part time.
- The outcomes following teacher appraisals are changing across the countries and economies participating in TALIS. For example, between 2013 and 2018, the proportion of teachers working in schools where appraisal sometimes results in a salary increase or a financial bonus increased significantly in 18 of the 32 countries and economies with available data.
- Teacher appraisal is more likely to affect a teacher's career if the management team of the school has a certain degree of authority to make relevant administrative decisions. For example, the proportion of teachers working in schools where appraisal can result in a salary increase or a bonus is 30% in schools where managers do not have much of a say on teachers' salaries, compared to 55% in schools where managers have this authority.
- A minority of teachers (39%) and principals (47%) report that they are satisfied with the salary they receive for their work, though satisfaction with salary is higher in privately managed schools, especially for principals. By contrast, two-thirds of all teachers and principals report that they are satisfied with the other terms of their employment.
- Teachers who receive support for their continuous professional development and who participate in school governance tend to be more satisfied with their terms of employment in the large majority of TALIS countries and economies with available data. Teachers who are more satisfied with their terms of employment are less likely to desire changing to another school.

INTRODUCTION

Working conditions are a broad set of work-related characteristics that determine the quality of a job. They include remuneration, working hours and contractual arrangements, the physical and social environment of the job, work intensity, career growth prospects, employee autonomy, participation in decision making, teamwork and trust. Good working conditions are important for workers, enterprises and societies. They are positively associated with health, well-being, skills development and productivity (Cazes, Hijzen and Saint-Martin, 2015[1]; Eurofound and International Labour Organization, 2019[2]). In the case of teachers, by contributing to their motivation, engagement and well-being, the quality of the working environment is also crucial to fostering effective learning environments (Bascia and Rottmann, 2011[3]; Gomendio, 2017[4]; Robalino Campos and Körner, 2005[5]; Viac and Fraser, 2020[6]).

Quality jobs go well beyond offering good salaries and career growth prospects. They also provide workers with a chance to fulfil their ambitions, by recognising their contribution to their communities and providing them with constructive feedback and opportunities for training and professional development (Cazes, Hijzen and Saint-Martin, 2015[1]). In many education systems across the world, teacher effectiveness is neither financially nor professionally rewarded, partly because it is difficult to measure (Crehan, 2016[7]). Carefully designed appraisal systems can help to improve recognition of teachers' efforts and competencies, leading to more satisfied and motivated teachers (Crehan, 2016[7]; OECD, 2013[8]; Isoré, 2009[9]). This chapter discusses appraisal systems that aim to provide formal evaluations of teachers, with the goal of informing teachers' professional development or decisions about their careers. Informal feedback received from colleagues, the school management team or other sources is discussed in Chapter 4.

This chapter focuses primarily on objective indicators of working conditions, elements of teachers' occupational well-being (job security, time flexibility, evaluation processes) that can (at least in principle) be observed by a third party (Viac and Fraser, 2020[6]). It also explores teachers' satisfaction with some of these objective conditions (salary and other terms of employment).

Finally, it describes how these indicators vary across teachers (e.g. by gender and age) and schools (e.g. in privately managed schools and in schools serving disadvantaged areas), and how they relate to various outcomes, for example, self-efficacy and turnover intentions. It is complementary to Chapter 2 of this report, which focuses on subjective indicators of working conditions, for example, teachers' and principals' appreciation of the prestige, satisfaction and well-being of their profession and their working environment.

Ensuring good working conditions in all schools for teachers and principals is important for their well-being and for the functioning of education systems. Good working conditions across schools help to:

- **Attract good candidates to the teaching profession:** If working conditions are attractive, people of all ages are more motivated to enrol in teacher education programmes, to apply for registration/certification as teachers and to apply for teaching jobs. Attracting talented individuals to the teaching profession is a necessary condition to ensure teaching quality and is a pressing concern in many OECD countries (OECD, 2019[10]; OECD, 2005[11]).
- **Retain good teachers:** Good working conditions improve teachers' occupational well-being and their willingness to stay in the profession – especially in schools in disadvantaged areas, which experience the most severe retention problems (Viac and Fraser, 2020[6]). Keeping teachers in the profession is essential when facing a shortage of qualified teachers, a problem in many OECD countries (OECD, 2019[10]) (Table I.3.63). In addition, retaining teachers means giving them opportunities to improve their effectiveness with experience. Experience helps teachers to manage their complex jobs, potentially improving their ability to relate to their students and promote student learning (Berliner, 2001[12]; Ladd and Sorensen, 2017[13]; Melnick and Meister, 2008[14]).
- **Improve teachers' motivation and self-efficacy:** Good working conditions can make teachers feel that their contribution to the community is valued and can also reduce stress levels, especially if teachers have financial and job security and ways to combine their responsibilities within and outside the school. Well-being and motivation help teachers to perform their jobs effectively and contribute as much as possible to student learning (Leithwood and McAdie, 2010[15]).
- **Provide the right incentives for career and professional development:** adequate evaluation of teachers' strengths and weaknesses, connected with good opportunities for career advancement (or differentiation) and support for continuous professional development, help teachers to develop professionally and find jobs that make the best use of their interests, knowledge and skills (Crehan, 2016[7]; OECD, 2019[10]).

In most education systems, governments set the framework and provide the funding for the employment and career progression of most teachers and principals (OECD, 2019[10]). This gives governments the opportunity to shape working conditions in schools, but it also involves trade-offs. For example, staff compensation accounts for almost 80% of the total cost of education in primary, secondary and post-secondary non-tertiary education (OECD, 2019[16]). But commitments to increase the financial remuneration of teachers and principals and to secure it through permanent contracts can compete with the need to limit costs and ensure flexibility in government expenditure. As another example, teacher appraisal systems aim to stimulate professional development and make teachers accountable for their performance. However, the developmental function of appraisal benefits from a non-threatening context. It can be undermined when appraisals are too closely associated with high-stakes accountability (OECD, 2013, p. 333[8]).

Given the difficult balance governments must strike among their objectives, there is no one-size-fits-all approach to designing policies on teachers' working conditions. When choosing among different arrangements, governments must take into consideration the context, strengths and weaknesses of their education systems. Recognising that, this chapter reviews international data on objective indicators of the working conditions of teachers and principals and their perceptions of them. The chapter begins by discussing job security, part-time work and work in multiple schools. It then turns to performance appraisal and its role in teachers' career progression. The chapter also reviews teachers' and school principals' satisfaction with their salary and other working conditions. Other aspects of teachers' working conditions are dealt with elsewhere in the report.[1]

JOB SECURITY AND FLEXIBLE TIME ARRANGEMENTS IN SCHOOLS

The attractiveness of the teaching profession to current and potential teachers depends, in part, on the terms of employment they are offered (Béteille and Evans, 2019[17]; Gomendio, 2017[4]). Offering more attractive jobs helps to recruit talented new teachers and also to retain those who are currently in service. In turn, retaining teachers gives them opportunities to learn through experience, collaborate with other teachers and further their training. More experienced teachers tend to be better at managing their complex jobs and relating to their students (Berliner, 2001[12]; Ladd and Sorensen, 2017[13]; Melnick and Meister, 2008[14]). The available evidence shows that experienced teachers are, on average, more effective than novice teachers at promoting student learning (Abbiati, Argentin and Gerosa, 2017[18]; Kini and Podolsky, 2016[19]; Papay and Kraft, 2015[20]).

In addition to salary (on which TALIS collects no direct information), job security, part-time work and other employment arrangements (for example, working in multiple schools) affect the attractiveness of teaching jobs. Each of these characteristics has positive and negative aspects. Job security is desirable for teachers, but it reduces flexibility for governments and schools in the utilisation of their human resources (Bertoni et al., 2018[21]; Bruns, Filmer and Patrinos, 2011[22]). Part-time work allows teachers and principals to reduce their workload and spend more time with their family or on other activities. However, in some circumstances, part-time work (which can be voluntary or involuntary, e.g. due to a lack of full-time job opportunities) also carries a penalty in terms of career progression and earnings-related pensions (OECD, 2017[23]; OECD, 2010[24]). The possibility of working in multiple schools can give teachers the opportunity to work some additional hours and allow schools to share resources (Bertoni et al., 2018[21]; OECD, 2019[10]). However, it also increases the demands on teachers, potentially reducing time available for collaboration with other teachers and other valuable activities (OECD, 2019[10]).

This section discusses some of the trade-offs involved in the use of these terms of employment and presents descriptive evidence on their prevalence across TALIS countries and economies.

Teachers working on a fixed-term contract

Fixed-term contracts are those with a specified duration. When fixed-term contracts expire, teachers can keep working for the same employer only if their contracts are renewed or extended. The possibility to employ staff on fixed-term contracts makes it easier for schools and education authorities to respond to changes in their organisational and teaching needs (Bertoni et al., 2018[21]; Bruns, Filmer and Patrinos, 2011[22]). Fixed-term employment also gives schools opportunities to evaluate novice teachers' skills and fit with the school environment before giving them a permanent contract (OECD, 2019[10]).

By its nature, fixed-term employment involves some degree of insecurity and unpredictability, which may cause strain and prevent some employees from functioning optimally in their work environment (De Cuyper, De Witte and Van Emmerik, 2011[25]). Fixed-term teacher employment (when co-existing with different contractual arrangements) can create dual markets where teachers have different statutory rights, potentially reducing their opportunities and incentives to collaborate and develop professionally. In addition, job insecurity for teachers can translate into uncertainty for students, as they cannot know in advance which staff they will deal with in the near future (OECD, 2019[10]).

Fixed-term work arrangements can vary significantly and have different consequences on teachers and school systems. For example, fixed-term contracts differ in duration, providing different time horizons to teachers, ranging from a few months to several years. In addition, some fixed-term work relationships are a stepping stone to permanent employment, with no serious effect on worker strain or effectiveness, while others may offer no future prospects with the same employer (De Cuyper, De Witte and Van Emmerik, 2011[25]).

On average across OECD countries and economies in TALIS,[2] 82% of teachers have permanent contracts, 6% have fixed-term contracts for more than one year, and 12% have a fixed-term contract for one year or less (Figure II.3.1, Table II.3.1). However, there are large differences across countries and economies. In Denmark and Saudi Arabia, over 95% of teachers have permanent contracts. Other countries make wider use of short-term contracts. For example, in Georgia, Italy, Spain and the United States, at least 25% of teachers work on contracts of one year or less.[3]

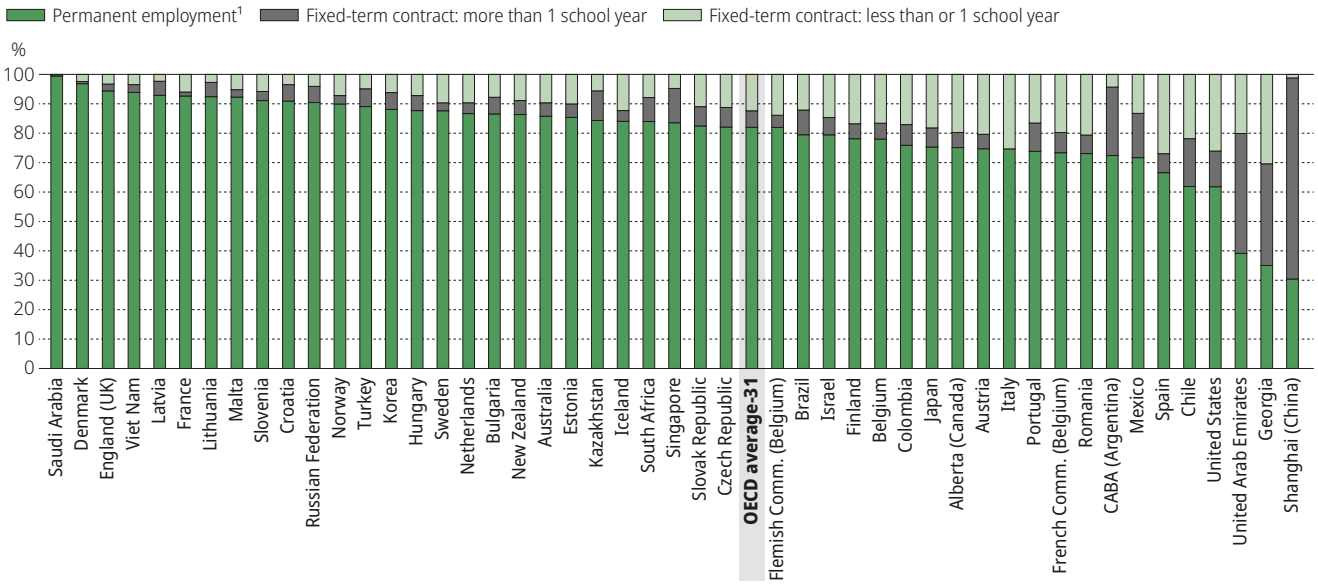
The share of teachers reporting that they work on fixed-term contracts is strongly related to teachers' age (Figure II.3.2, Table II.3.4). On average across OECD countries and economies in TALIS, the proportion of teachers employed on a fixed-term contract of any duration is 18%, but it is much higher among teachers under age 30 (48%). In Austria, Italy, Shanghai (China) and Spain, 80% or more of teachers under age 30 report that they have fixed-term contracts.

Within education systems, it can generally be expected that a larger proportion of young teachers than older teachers will be employed on fixed-term contracts. Young teachers are more likely to have recently joined the profession, so they could be on probationary periods or have concrete prospects of receiving a permanent contract in the near future. However, a very high proportion of young teachers on fixed-term contracts can be worrying. According to teacher unions around the world, teachers on fixed-term contracts tend to be less protected by pension schemes, less often awarded study leave, and less entitled to benefits and rights, including family benefits and annual holiday pay (Stromquist, 2018[26]). This risks making the teaching profession less attractive to young people, despite the widely affirmed goal of making teaching a "profession of first choice for young people", in order to attract 69 million new teachers worldwide by 2030 (UNESCO, Director-General, ILO, UNICEF, Education International and UNDP, 2019[27]).

In about two-thirds of the TALIS countries and economies with available data, the share of teachers on fixed-term contracts in privately managed schools differs significantly from the share among teachers in publicly managed schools. On average across the OECD, the share of teachers on fixed-term contracts in privately managed schools is 9 percentage points higher than the share of teachers in publicly managed schools (Table II.3.5).

Figure II.3.1 **Teachers' employment on fixed-term contracts**

Percentage of lower secondary teachers reporting that they work on a fixed-term or a permanent contract



1. Permanent employment refers to an ongoing contract with no fixed end-point before the age of retirement.

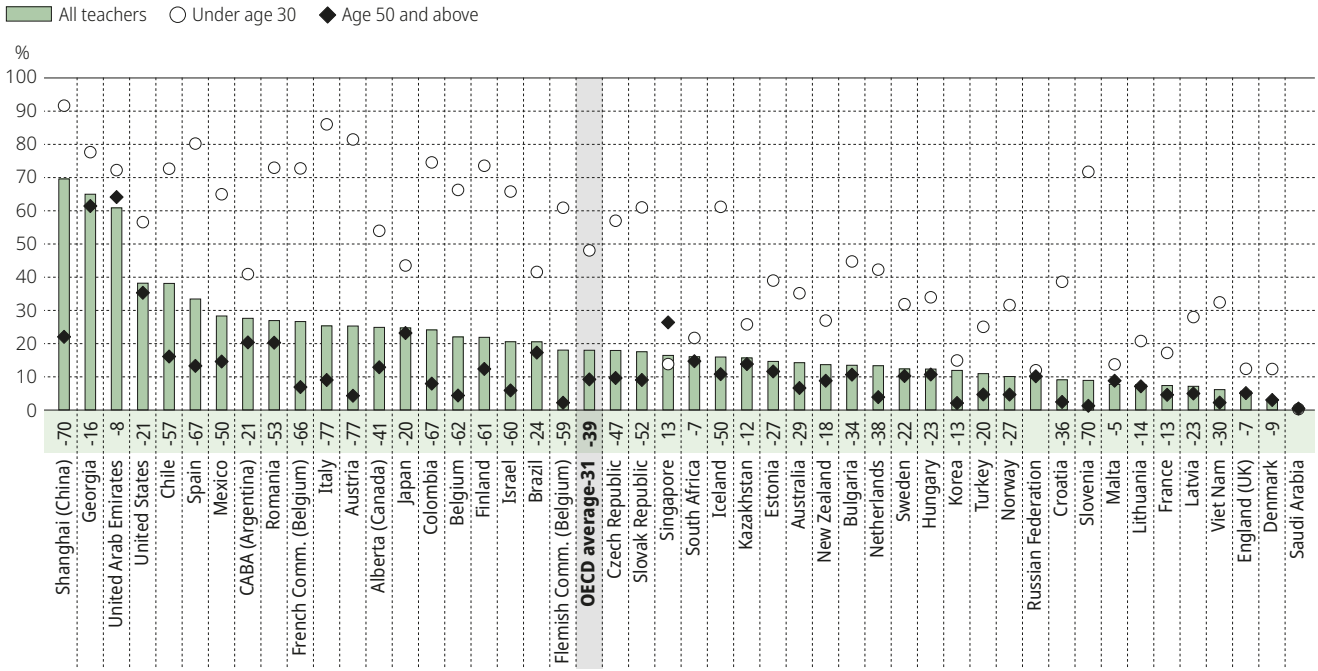
Countries and economies are ranked in descending order of the percentage of lower secondary teachers who have permanent employment.

Source: OECD, TALIS 2018 Database, Table II.3.1.

StatLink http://dx.doi.org/10.1787/888934083487

Figure II.3.2 **Teachers' employment on fixed-term contracts, by age**

Percentage of lower secondary teachers reporting that they work on a fixed-term contract[1]



1. Includes teachers answering that they have a fixed-term contract for a period of "more than 1 school year" or "1 school year or less".

Note: Statistically significant differences between teachers age 50 and above and teachers under age 30 are shown next to the country/economy name (see Annex B).

Countries and economies are ranked in descending order of the percentage of lower secondary teachers reporting that they work on a fixed-term contract.

Source: OECD, TALIS 2018 Database, Table II.3.4.

StatLink http://dx.doi.org/10.1787/888934083506

But there is a large variation across countries. For teachers working on fixed-term contracts, the difference between privately managed schools and publicly managed schools exceeds 40 percentage points in Singapore (+72 percentage points for teachers working in privately managed schools), Colombia (+66 percentage points), Turkey (+58 percentage points), Viet Nam (+49 percentage points) and Mexico (+49 percentage points). However, in Ciudad Autónoma de Buenos Aires (hereafter CABA [Argentina]), the share of teachers in privately managed schools working on fixed-term contracts is 43 percentage points lower than the share of those in publicly managed schools (Table II.3.5).

The proportion of teachers reporting working on a fixed-term contract in schools with over 30% of students from socio-economically disadvantaged homes (according to principals – henceforth, "disadvantaged schools") is not significantly different than in other schools, on average across the OECD. However, there are important differences across education systems. For example, in CABA (Argentina), the proportion of teachers on a fixed-term contract is 26 percentage points larger in schools with a higher concentration of students from socio-economically disadvantaged homes than in other schools, while in Colombia, it is 36 percentage points lower.

In ten TALIS countries and economies (half of those with available data), there has been no significant change in the share of teachers employed on permanent contracts between 2008 and 2018 (Table II.3.6). The share of teachers with permanent contracts decreased significantly in Mexico (-15 percentage points), Austria (-15 percentage points), Spain (-9 percentage points), Korea (-8 percentage points), Italy (-6 percentage points) and Malta (-4 percentage points). It increased significantly in Iceland (+9 percentage points), Slovenia (+8 percentage points), Portugal (+6 percentage points) and Brazil (+5 percentage points). In all these countries, with the exception of Portugal, the change in the share of teachers with permanent contracts corresponded with an opposite change in the share of teachers with contracts of less than one year.

From 2013 to 2018, the share of teachers working on permanent contracts increased significantly in four TALIS countries and economies, and it decreased significantly in five (Table II.3.6). With the exception of Korea and Mexico, this change has largely been attributable to an opposite change in the share of teachers working on contracts of less than one year,[4] thereby illustrating the policy trade-offs made by education authorities. Some education systems, like the Flemish Community of Belgium, are taking policy action to improve job security among teachers in the coming years (Box II.3.1).

Box II.3.1. **Improving job security for young teachers in the Flemish Community of Belgium**

In 2018, the Flemish government concluded three new collective bargaining agreements (*collectieve arbeidsovereenkomsten*, CAOs) with its social partners concerning labour opportunities in education. Several measures were approved to bring more stability to the teaching career and to strengthen job security for new teachers. The salary grid was revised, and job security was increased by simplifying contractual progression for starting teachers. Minimum requirements to acquire a temporary appointment of continuous duration have been reduced from three years to two years and from 720 days of teaching to 690 days. This upgraded contract ensures starting teachers an automatic renewal if their school has been funded for the associated teaching hours. In 2018, to support this initiative, the Flemish Community set up a teacher platform in selected primary schools and secondary schools. In this pilot project, starting and temporary teachers were offered contracts of at least a full school year, in the form of long-term replacements of experienced teachers or other meaningful pedagogical tasks. Preliminary analysis of the platform shows that, among the 3 300 teachers who signed up, only 10% have not yet been used. However, only about 10% have been offered permanent contracts. This limits the chances of starting teachers teaching the same class for a year, suggesting that the impact of the platform has not fully met its initial aims. In addition, the government has opened 6 000 new positions for permanent appointments in cases where the tenured teacher is absent due to certain leave programmes. Finally, the CAOs also introduced compulsory initial mentoring or guidance for entrants and allocated extra resources to schools to develop induction processes for new teachers.

Source: Eurydice (2019[28]), *Belgium – Flemish Community: National Reforms in School Education*, https://eacea.ec.europa.eu/national-policies/eurydice/content/national-reforms-school-education-3_en.

Teachers and principals working part-time

Part-time work is increasingly common among workers in OECD countries (OECD, 2017[23]; OECD, 2010[24]). It can help individuals to achieve work-life balance and personal well-being, and it encourages participation in the labour force among workers with pressing demands on their time due to family or other commitments. Many individuals, especially women, choose to work part-time and are satisfied to trade wages and career opportunities for working-time arrangements that are better aligned to their lives (OECD, 2019[29]; OECD, 2017[23]; OECD, 2010[24]).

However, part-time work often carries a penalty in terms of career progression and earnings-related pensions. In addition, working part-time can be involuntary, implying either that individuals work less than the desired amount of time or that their contracts reflect only a part of the time they actually spend on their jobs. Therefore, the over-representation of some demographic groups (for example, women) among part-time workers has some negative implications in terms of equity (OECD, 2019[29]; OECD, 2017[23]; OECD, 2010[24]). Since teachers often work in the public sector in a highly regulated environment, the association of part-time work with career progression, wages and pension rights may depend on the broader rules on working conditions that are in place (OECD, 2005[11]).

In a number of education systems, part-time work for teachers is associated with more flexibility in the utilisation of human resources and a higher ability for school principals to regulate costs and teaching supply (Bertoni et al., 2018[21]; OECD, 2019[10]). However, in some instances, teachers' part-time work also requires additional administration to manage personnel and timetables, and it can constrain the availability of teachers if too few are willing to increase the number of work hours when needed (OECD, 2019[29]; Weldon, 2015[30]).

TALIS asks teachers to report their employment workload at their school and across all teaching employment combined. Teachers can report working full-time (more than 90% of full-time hours) or part-time (divided into three categories: "71-90% of full-time hours"; "50-70% of full-time hours"; and "less than 50% of full-time hours"). TALIS also asks principals to report if they are employed full-time ("more than 90% of full-time hours") as a principal and if they have teaching obligations.

Part-time work among teachers

On average across the OECD, 79% of teachers reported that they are employed full-time in 2018 (all teaching employments included). A much smaller proportion report that they are employed as teachers between 71% and 90% of full-time hours (10%), between 50% and 70% of full-time hours (7%), or less than 50% of full-time hours (4%). However, there are large differences across countries (Table II.3.7). In Brazil, Mexico, the Netherlands and Saudi Arabia, the majority of teachers report that they are employed part-time. The share of teachers who report being employed less than 50% of full-time hours across all teaching employment is particularly large in Mexico and Saudi Arabia (over 20%). In contrast, in the Netherlands, 53% of teachers report that they are employed between 50% and 90% of full-time hours, and the share of teachers reporting that they are employed for less than 50% of full-time hours is relatively small (6%).

Between 2013 and 2018, the proportion of teachers reporting that they are employed part-time has significantly increased in around one-half of the TALIS countries and economies with available data, and it has significantly decreased in two countries (Georgia and Sweden) (Figure II.3.3, Table II.3.10). Particularly large increases in the share of teachers reporting to be employed part-time have been observed in Chile (+12 percentage points), Portugal (+11 percentage points) and Spain (+10 percentage points), while a significant decrease has been observed only in Georgia (-8 percentage points) and Sweden (-4 percentage points).

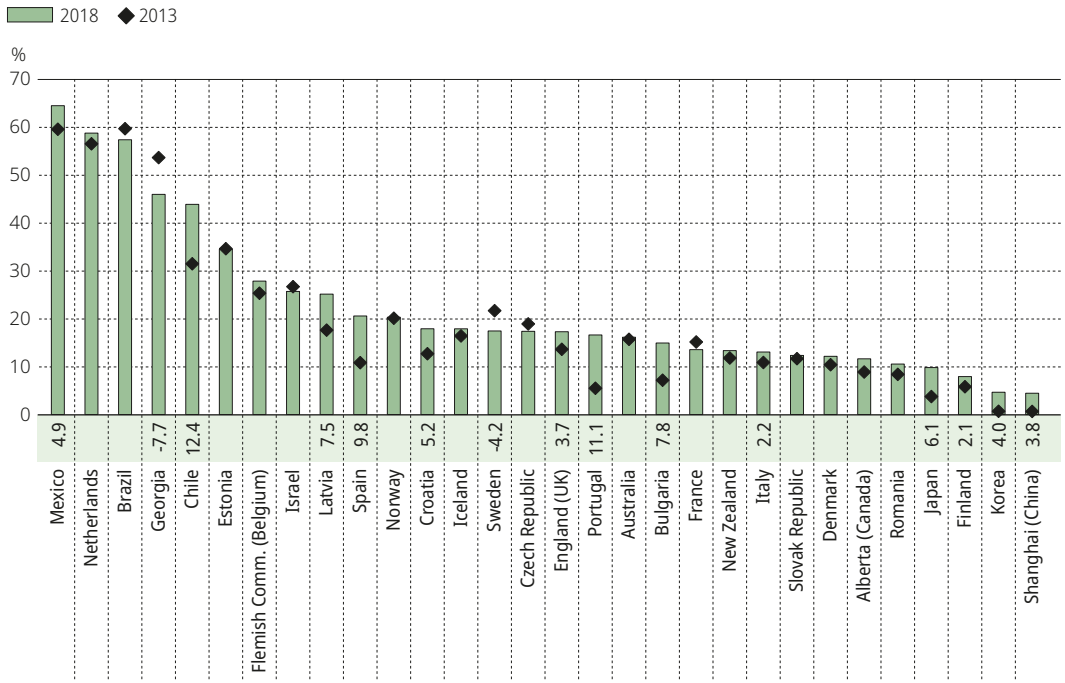
Current projections of teacher shortages across countries assume that the share of part-time teachers is constant (Education for All Global Monitoring Report; UNESCO Education Sector, 2015[31]; UNESCO Institute for Statistics, 2016[32]), an assumption that is not consistent with the evidence presented in this chapter. On the one hand, the trend towards a larger share of part-time teachers could mean that education systems will have to recruit more teachers to avoid the prospect of shortages. On the other hand, part-time is seen as a tool to increase labour force participation by enabling individuals to reconcile the demands of work and personal life (OECD, 2019[29]; OECD, 2017[23]; OECD, 2010[24]), so more options to work part-time could also encourage more teachers to join and stay in the profession.[5]

The prevalence of (self-reported) part-time work varies across education systems, as well as across groups of teachers (Figure II.3.4, Table II.3.11). In 2018, female teachers report working part-time more often than their male colleagues (a difference of 4 percentage points, on average across the OECD). The difference between women and men is 10 percentage points or larger in Alberta (Canada), Australia, Austria, Belgium and its Flemish Community, England (United Kingdom), the Netherlands, New Zealand and Norway. In contrast, in Estonia, Latvia and Lithuania, the proportion of men reporting that they work part-time is over 10 percentage points larger than for women. In addition, the proportion of teachers under age 30 who report that they are employed part-time is significantly higher than for teachers who are at least age 50 in 20 TALIS countries and economies, and significantly lower in 10 countries and economies with available data.

In 18 TALIS education systems with available data, part-time employment is significantly more frequent among teachers in privately managed schools than among their colleagues in publicly managed schools (Figure II.3.4, Table II.3.12). In Brazil and Norway, the difference between the shares of teachers working part-time in privately managed schools and publicly managed schools exceeds 20 percentage points. In contrast, in Georgia, Kazakhstan and Turkey, teachers in publicly managed schools are significantly more likely to report being employed on part-time contracts than their colleagues in privately managed schools. In some countries and economies, privately managed schools represent only a small fraction of all schools in the education system.[6]

Figure II.3.3 **Change in the share of part-time teachers from 2013 to 2018**

Percentage of lower secondary teachers reporting that they work part-time[1]



1. Part-time teachers are defined as those who work up to 90% of full-time hours.

Notes: Only countries and economies with available data for 2013 and 2018 are shown.

Statistically significant changes between 2013 and 2018 (TALIS 2018 – TALIS 2013) are found next to the category and the country/economy name (see Annex B).

Countries and economies are ranked in descending order of the percentage of lower secondary teachers working part-time in 2018.

Source: OECD, TALIS 2013 and TALIS 2018 Databases, Table II.3.10.

StatLink http://dx.doi.org/10.1787/888934083525

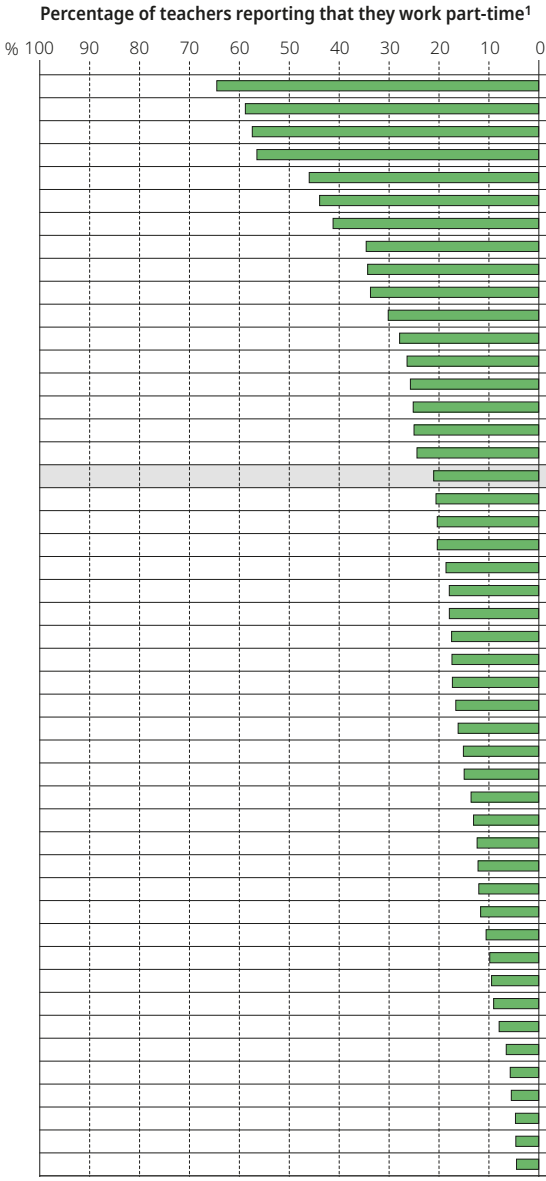
Schools with over 30% of students from socio-economically disadvantaged homes do not have a significantly different share of part-time teachers than other schools in the large majority of countries and economies with available data. The only exceptions are Alberta (Canada), Austria, Denmark, England (United Kingdom) and France, where the proportion of teachers reporting to work part-time is between 3 and 10 percentage points lower in schools with a higher concentration of students from socio-economically disadvantaged homes than in other schools.

Some teachers may report that they work a substantial number of hours, despite stating that they are employed part-time. On average across OECD countries and economies in TALIS, 23% of teachers who report that they are employed with contracts of up to 70% of full-time hours at the school in which they were surveyed also report working 35 or more hours on tasks related to their job at the same school during the week prior to the survey. This proportion exceeds 40% in Chile, Colombia, Kazakhstan, Shanghai (China), Singapore, the United Arab Emirates and Viet Nam. This result could mean that many teachers in these education systems work more than their contract hours, that teachers' work intensity is very different across weeks,[7] or that standard working time for full-time teachers is well above 40 hours per week (Table II.3.13). The total statutory working time at school of full-time teachers in the public sector in general lower secondary education varies substantially across OECD education systems, from 1 178 hours per year in Israel to 1 800 or more in Chile, Colombia, Iceland, Japan and the United States – see Table D4.1b in *Education at a Glance 2019* (OECD, 2019[16]). However, internationally comparable data on weekly statutory workloads are not available.

Part-time teachers tend to distribute their time across different tasks in a similar way to other teachers. On average across the OECD, part-time teachers spend 32 hours per week on all the tasks related to their job in their surveyed school, of which 17 hours are devoted to teaching (Table II.3.14). In other words, teachers spend slightly more than half (54%) of their working time teaching classes, a share very similar to that of all teachers (53%) – Table I.2.27, *TALIS 2018 Results (Volume I)* (OECD, 2019[33]).[8] The distribution of part-time teachers' time across non-teaching tasks is also very similar to that of all teachers, with "individual planning or preparation of lessons either at school or out of school" and "marking/correcting of student work" being the most time-consuming tasks.

Figure II.3.4 **Part-time teachers, by teacher and school characteristics**

Results based on responses of lower secondary teachers and principals



+ Positive difference
– Negative difference
Difference is not significant
Missing values

	Difference by teacher and school characteristics		
	Male – Female	Age 50 and above – under age 30	Private[2] – Public[3]
Mexico	-	-	
Netherlands	-		
Brazil	-	-	+
Saudi Arabia	-	-	
Georgia	+		-
Chile			+
CABA (Argentina)			
Estonia	+		
Lithuania	+	-	
Viet Nam	+		
Kazakhstan	+	-	-
Flemish Comm. (Belgium)	-	+	
Colombia		-	+
Israel	-	-	
Latvia	+	-	
Austria	-		+
Belgium	-	+	+
OECD average-31	-	-	+
Spain		-	+
French Comm. (Belgium)	-	+	+
Norway	-	+	+
Turkey		+	-
Croatia		-	
Iceland	-		
Sweden	-		
Czech Republic			
England (UK)	-	+	
Portugal			+
Australia*	-	+	
New Zealand	-		
Bulgaria		-	
France	-	-	+
Italy		-	+
Slovak Republic	+		
Denmark	-		+
Slovenia		-	
Alberta (Canada)	-		
Romania	+	-	
Japan	-		+
Hungary		+	
United Arab Emirates	-	-	
Finland		-	+
Malta			+
United States			
Singapore	-	+	+
Korea		-	
South Africa			+
Shanghai (China)	+	+	
Education systems with a positive difference	**9**	**10**	**17**
Education systems with no difference	**17**	**18**	**16**
Education systems with negative difference	**21**	**18**	**3**

* For this country, estimated differences between privately managed schools and publicly managed schools need to be interpreted with great care. See Annex A for more information.

1. Part-time teachers are defined as those who work up to 90% of full-time hours.

2. A privately managed school is a school whose principal reported that it is managed by a non-governmental organisation (e.g. a church, trade union, business or other private institution). In the principal questionnaire, this question does not make any reference to the source of the school's funding, which is reported in the preceding question. In some countries, the privately managed schools category includes schools that receive significant funding from the government (government-dependent private schools).

3. A publicly managed school is a school whose principal reported that it is managed by a public education authority, government agency, municipality, or governing board appointed by government or elected by public franchise. In the principal questionnaire, this question does not make any reference to the source of the school's funding, which is reported in the preceding question.

Countries and economies are ranked in descending order of the percentage of lower secondary teachers working part-time.

Source: OECD, TALIS 2018 Database, Tables II.3.11 and II.3.12.

StatLink http://dx.doi.org/10.1787/888934083544

Part-time work among school leaders

Part-time employment is far less common for principals than for teachers. On average across the OECD, 96% of principals report that they are employed full-time (Table II.3.16). The proportion of part-time principals is below 25% in all TALIS countries and economies except for Alberta (Canada) (26%), Georgia (26%), Romania (32%) and CABA (Argentina) (51%). In Alberta (Canada) and Georgia, the relatively large share of part-time principals is due to a higher prevalence of part-time work among principals in schools in rural areas or villages (up to 3 000 inhabitants) and, to some extent, in towns (up to 100 000 inhabitants). In both Alberta (Canada) and Georgia, the proportion of part-time principals is below 10% in larger cities (Table II.3.19).

Even when principals are employed full-time, they may not dedicate themselves full-time to managing the school if they have teaching obligations. The presence of substantial teaching duties can increase the demands on principals' schedules and their ability to devote themselves to school leadership. On average across the OECD, 31% of all principals report that they are employed full-time with some teaching obligations, and 2% report that they are employed part-time with some teaching obligations (Table II.3.16). The allocation of teaching assignments to principals is very common in some education systems and very rare in others. For example, over 90% of principals have teaching obligations in Bulgaria, the Czech Republic (where principals are legally obliged to teach), Israel, Romania and the Slovak Republic. In contrast, less than 5% of principals have teaching obligations in Belgium (including its Flemish and French Communities), Colombia, Croatia, Japan, Korea, Malta, Saudi Arabia, Sweden and the United States.

On average across the OECD, the proportion of principals with teaching obligations is particularly large in rural areas or villages (7 percentage points larger than in cities), in privately managed schools (12 percentage points larger than in publicly managed schools), and in schools with less than 500 students (8 percentage points larger than in other schools) (Tables II.3.20 and II.3.21). However, these averages mask a very heterogeneous pattern across education systems. For example, the difference between urban and rural areas in the proportion of school principals with teaching obligations ranges between -60 percentage points in New Zealand and +23 percentage points in Italy. The difference between privately managed schools and publicly managed schools ranges from -69 percentage points in Turkey to +70 percentage points in Italy.

The allocation of teaching assignments to principals may also reflect school leadership based on the concept of *primus inter pares*.[9] This approach to leadership views the school as a professional community of teachers, where principals are viewed as experienced teachers carrying some additional administrative and managerial burden (Peetz, 2015[34]). In the Slovak Republic, for example, principals need to meet specific requirements in terms of their teaching experience and the number of hours they teach every week (Santiago et al., 2016[35]).

Between 2013 and 2018, the proportion of principals reporting that they work part-time has changed significantly only in Brazil (+7 percentage points) and the Flemish Community of Belgium (+3 percentage points) where the prevalence of part-time work among principals has increased (Table II.3.22). In contrast, the proportion of principals with teaching obligations has changed significantly in nine countries and economies with available data. A significant increase has been observed only in Israel (+22 percentage points) and Georgia (+15 percentage points), while substantial decreases have been observed in Latvia (-22 percentage points), Alberta and Denmark (both -18 percentage points), Finland (-12 percentage points) and Iceland (-11 percentage points).

Teachers working in multiple schools

Some teachers teach in multiple schools. In some education systems, this makes it possible for schools to share resources and gives teachers wishing to work additional hours an opportunity to do so (Bertoni et al., 2018[21]; OECD, 2019[10]). Working in multiple schools could also reflect opportunities for horizontal diversification in teaching careers, as teachers can take on specific responsibilities across schools in some education systems (e.g. coaching and mentoring roles) (OECD, 2019[10]). However, working in more than one school increases the demands on teachers and takes time from class preparation, building long-term relationships with colleagues outside the classroom, collaboration with other teachers and other valuable activities. In addition, teachers working in multiple schools may not do so voluntarily, but because they are in a less senior and more precarious position (OECD, 2019[10]). On average across the OECD, the proportion of teachers working in more than one school is half a percentage point larger among novice teachers with five years or less of work experience than among more experienced teachers. The proportion of novice teachers working in more than one school was 6 percentage points larger than among other teachers in Italy,[10] and 11 percentage points larger in Romania (Table II.3.25).

In the majority of TALIS countries and economies, it is relatively rare for teachers to report working in more than one school (4% or less of teachers report that they do so in 2018) (Table II.3.23). However, in a few education systems, it is more common for teachers to report working in multiple schools. In Brazil, CABA (Argentina), Lithuania and Romania, over 15% of teachers work in more than one school. This being said, this work pattern is on the rise, and the proportion of teachers working in just one school has significantly decreased in about half of the 32 TALIS countries and economies with comparable data between 2013 and 2018, while it has significantly increased only in Brazil, Chile and France (Table II.3.24).

Teachers in rural areas, in publicly managed schools and in schools with a comparatively high concentration of students from socio-economically disadvantaged homes, report working in multiple schools more often than other teachers do, on average across the OECD (Table II.3.26). However, this pattern does not hold for all education systems. For example, in schools with over 30% of socio-economically disadvantaged students (according to principals), the proportion of teachers working in multiple schools is significantly larger than in other schools in 10 countries and economies with available data, but it is significantly smaller in 5.

Teachers reporting that they work in multiple schools tend to have less job security than other teachers. On average across the OECD, the proportion of teachers reporting that they work on a fixed-term contract is 27% among teachers working in multiple schools, 10 percentage points larger than among teachers who report they work in only one school (Table II.3.27). The proportion of teachers reporting to work on a fixed-term contract is significantly larger among teachers working in multiple schools than among other teachers in around almost half of TALIS countries and economies, with a particularly large difference observed in Portugal (35 percentage points).

Box II.3.2. **Job security and flexible time arrangements, from primary to upper secondary education**

Across TALIS countries and economies, the proportion of teachers reporting that they are employed on fixed-term contracts tends to increase with the levels of education. In 7 of the 13 countries and economies with available data for ISCED 1 and 2, the share of primary teachers employed on permanent contracts is significantly larger (implying that the proportion of teachers reporting that they work on fixed-term contracts is significantly lower among primary teachers than among lower secondary teachers) (Table II.3.2). A similar pattern is observed when comparing ISCED levels 2 and 3. In 4 of the 11 education systems with available data, the share of teachers working on short, temporary contracts is significantly larger at upper secondary level than at lower secondary level (Table II.3.3). Alberta (Canada) presents the reverse situation, with a larger proportion of upper secondary teachers being permanently employed than lower secondary teachers (a difference of 10 percentage points).

Part-time employment appears to be less common at the primary level, confirming the pattern of more flexible arrangements at higher ISCED levels. In 7 of the 13 countries and economies with available data for ISCED 1 and 2, a greater proportion of primary teachers work full-time (Table II.3.8). In Denmark, England (United Kingdom) and France, a significantly lesser share of primary teachers work full-time than their lower secondary peers. In upper secondary education, the patterns are more nuanced. In 5 of the 11 countries and economies with available data, a significantly larger proportion of upper secondary teachers than lower secondary teachers work less than 50% of full-time hours (Table II.3.9).

Principals' data present large differences between ISCED 1 and 2 on working time and teaching obligations. In CABA (Argentina), the proportion of school principals working part-time without teaching obligations is 30 percentage points larger in lower secondary than in primary education, while in France and Spain the proportion of part-time principals with teaching obligations in lower secondary education is smaller (by 15 percentage points) (Table II.3.17). Lower secondary principals working full-time have more teaching obligations than their primary level counterparts in Turkey (by 33 percentage points) and England (United Kingdom) (by 24 percentage points). In France, 87% of lower secondary principals are working full-time without teaching obligations, compared to only 16% at the primary level (a difference of 71 percentage points). In contrast, there are no significant differences when comparing available data for ISCED 2 and ISCED 3 principals. The only noticeable exception is Turkey, where the proportion of part-time principals with teaching obligations is greater at the upper secondary level (Table II.3.18).

How job security and flexible time arrangements are related to teacher self-efficacy and workplace well-being

Investigating the relationship between contractual arrangements (such as part-time and temporary work) and work-related outcomes is fraught with methodological difficulties. Part-time and temporary workers may be different from other workers in terms of unobservable characteristics (for example, their work-related abilities and attitudes, or their personal and family situation) that affect their outcomes on the job and in the labour market (Bentancor and Robano, 2014[36]; Engellandt and Riphahn, 2005[37]). In addition, there could be reverse causality from outcomes to arrangements, for example, in the case of teachers motivated to reduce their working hours by a perceived high level of work-related stress.

Finally, any relationship between contractual arrangements and work-related outcomes is likely to be mediated or affected in unpredictable ways by a large number of other factors. For example, there are indications of lower involvement in some types of professional growth for teachers who report that they work on fixed-term and part-time contracts. Results from the TALIS 2013 survey show that fixed-term employment is associated with participating less in formal induction programmes and professional development activities and receiving less mentoring (OECD, 2014[38]). Similarly, results from TALIS 2018 show that part-time teachers

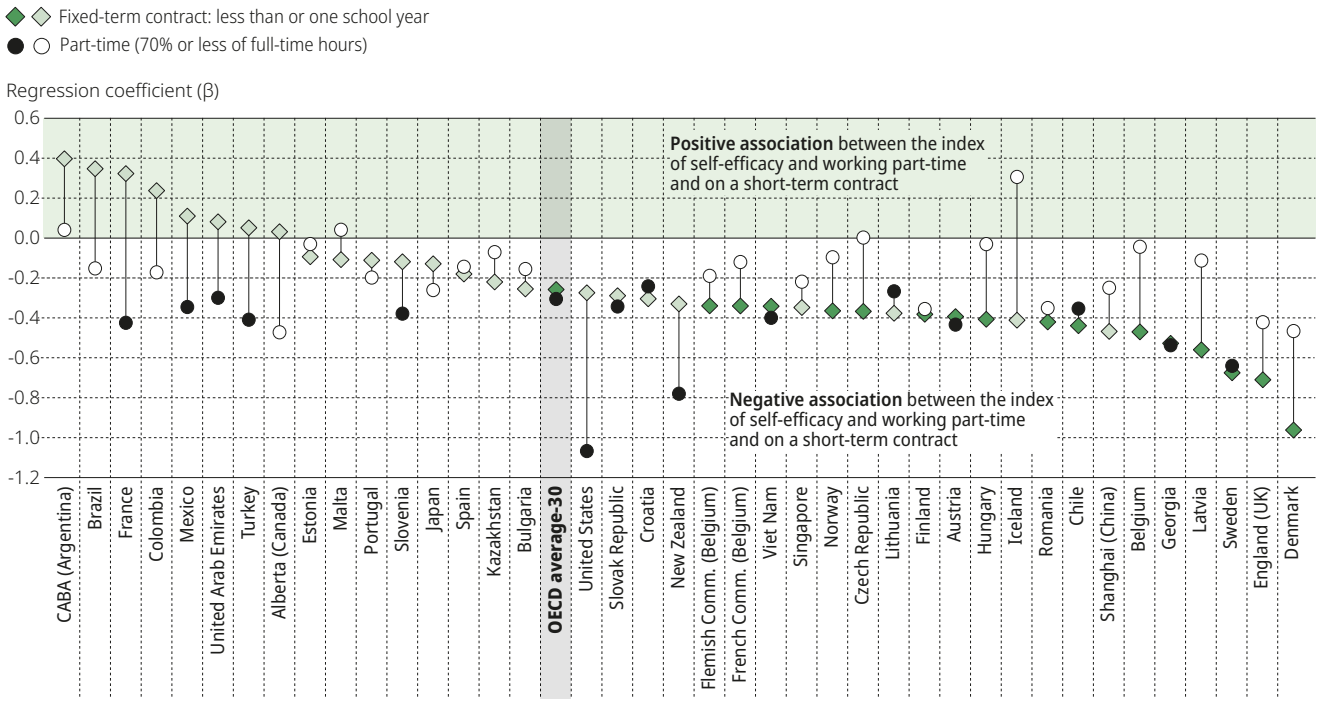
tend to be less likely to participate in professional development – see Table I.5.46 in *TALIS 2018 Results*, Volume I (OECD, 2019[33]) and score lower on the index of professional collaboration (Chapter 4, Table II.4.10). This could, potentially, translate into different levels of teacher self-efficacy or well-being. Despite all these limitations, TALIS data allow for showing, across a large number of education systems, if teachers with different job security and working time feel differently on the job than other teachers, controlling for a number of teachers and school characteristics. This helps governments identify potential problems and opportunities related to the utilisation of temporary and part-time contracts, and can stimulate further research into these topics.

Regression analyses show that teachers who report working on contracts of less than one year tend to feel less confident in their teaching ability[11] compared to those with permanent contracts, after controlling for teacher age, gender, work experience at the surveyed school and a variety of school factors (Figure II.3.5, Table II.3.28). In contrast, no significant relationship is found between working on a fixed-term contract of more than one year and teacher self-efficacy. Part-time work is also negatively related to teacher self-efficacy, on average across the OECD. Teachers working 70% or less of full-time hours and teachers working between 71% and 90% of full-time hours tend to be less confident in their teaching than teachers working full-time (the regression coefficients are of similar size and not significantly different from each other, on average across the OECD).[12]

Overall, short-term work and part-time work (jointly considered) are related with teacher self-efficacy in all education systems. Working on a fixed-term contract of less than one year, being employed for 70% or less of full-time hours and being employed for between 71% and 90% of full-time hours are each significantly and negatively associated with self-efficacy in about one-third of the education systems with available data (Figure II.3.5, Table II.3.28). In no education system is there a significant and positive association between any of these three variables and self-efficacy. In addition, in all countries and economies with available data, these three variables are, taken together, significantly associated with self-efficacy.[13]

Figure II.3.5 **Relationship between self-efficacy and working part-time or on a short-term contract**

Change in the index of self-efficacy[1] associated with reporting to work part-time or on a short-term contract[2, 3, 4]



1. The index of self-efficacy measures teacher self-efficacy in classroom management, instruction and student engagement.
2. Results of linear regression based on responses of lower secondary teachers.
3. The predictors are dummy variables: the reference categories refer to working full-time (more than 90% of full-time hours) and working in permanent employment (with an ongoing contract with no fixed end-point before the age of retirement).
4. Controlling for the following: teacher characteristics (gender, age, years of experience as a teacher at current school, working on a fixed-term contract of more than one school year, working part-time between 71% and 90% of full-time hours, working in multiple schools); classroom composition (students from socio-economically disadvantaged homes); and school characteristics (school location index, school type and school size).

Note: Statistically significant coefficients are marked in a darker tone (see Annex B).

Countries and economies are ranked in descending order of the change in the index of self-efficacy associated with working on a short-term contract.

Source: OECD, TALIS 2018 Database, Table II.3.28.

StatLink http://dx.doi.org/10.1787/888934083563

While short-term work and part-time work tend to be detrimental to teacher self-efficacy, they display more positive associations with well-being indicators. On average across the OECD, the score on the workplace well-being and stress index of teachers reporting that they are employed for 70% or less of full-time hours is significantly lower than that of full-time teachers, after controlling for teacher age, gender, work experience at the surveyed school and a variety of school factors (Table II.3.29). The workplace well-being and stress index takes into account the extent to which teachers agree with four statements on stress and well-being: "I experience stress in my work"; "my job leaves me time for my personal life"; "my job negatively impacts my mental health"; and "my job negatively impacts my physical health" (OECD, 2019[39]). The significant, negative association observed in about one-third of education systems between this index and being employed for 70% or less of full-time hours means that teachers who report being employed for a smaller amount of hours tend to feel less stressed for work-related reasons. In contrast, being employed for between 71% and 90% of full-time hours, rather than more than 90% of full-time hours, is significantly associated with feeling stressed for work-related reasons only in Brazil and Japan (both negative associations) and the United Arab Emirates (positive association).

More surprising, at first glance, is the negative association across OECD countries between working on a fixed-term contract and the workplace well-being and stress index. This implies that, on average across the OECD, teachers with contracts of less than one year and teachers with fixed-term contracts of more than a year report feeling less stressed for work-related reasons than teachers on permanent contracts (Table II.3.29). This seems to contrast with the link between job security and well-being highlighted in the literature (Cazes, Hijzen and Saint-Martin, 2015[1]; Eurofound and International Labour Organization, 2019[2]). However, while existing theoretical frameworks consistently hypothesise a negative relationship between temporary work and job satisfaction and well-being, empirical results are more mixed (De Cuyper et al., 2008[40]; Wilkin, 2012[41]). In addition, from a conceptual point of view, Cazes et al. (2015[1]) emphasise that it is labour market security, rather than job security, that most affects workers' well-being. If temporary teachers feel that it is easy to continue work or to find new employment after their contracts expire, they may not be affected negatively by the fixed-term nature of their contracts. Finally, Eurofound and the International Labour Organization (2019[2]) emphasise a large number of differences in the content of work between workers on fixed-term contracts and those on permanent contracts. These differences relate to factors that are measured in TALIS (e.g. work intensity) and others that are not (e.g. frequency of solving difficult problems at work). Many of these factors could, potentially, affect workplace well-being and stress, and they could be explored in future research as potential mediators in the relationship between teachers' job security and workplace well-being and stress.

FORMAL TEACHER APPRAISAL

Teacher appraisal refers to the formal evaluation of teachers "to make a judgement and/or provide feedback about their competencies and performance" (OECD, 2013, p. 272[8]). Teacher appraisal can take many forms, ranging from centralised national appraisal systems with strictly regulated procedures to approaches developed autonomously within schools. The actors and methods involved differ widely across education systems, as do the consequences for teachers. Typical examples across education systems include appraisal for the completion of a probationary period, registration as a qualified teacher (e.g. through national exams or peer committees), regular performance appraisal (e.g. by the school principal) and reward schemes based on the identification of high-performing teachers (OECD, 2013[8]).

Teacher appraisal serves several important functions. It can be a tool for quality assurance, when aimed at ensuring that required standards are met or recommended practices followed (summative appraisal). Teacher appraisal can also provide an opportunity for teachers to reflect on their teaching practice and on their strengths and weaknesses and to identify areas for improvement (formative appraisal). Teacher appraisal can yield important information to support schools, teachers and external authorities in their decisions on career advancement and professional development (Isoré, 2009[9]; Papay, 2012[42]).

Existing literature points to teacher appraisal as an important building block of effective education systems. For example, from Hattie's synthesis of over 800 meta-analyses relating to educational interventions and student achievement – as cited in IEA, IEA DPC, Statistics Canada, OECD (2013[43]) – constructive appraisal of classroom teaching and learning emerges as the single most effective intervention for student performance. Among countries and economies that participated in TALIS 2013, a majority of teachers who received appraisal reported that these processes led to positive changes in their teaching practices (OECD, 2014[38]).

However, many teachers also reported that feedback and appraisal had little impact on teaching and that it is not always the best teachers who receive the greatest recognition (OECD, 2014[38]). According to research findings, the success of teacher appraisal systems generally depends on certain conditions:

- Principals, other evaluators, and teachers must invest an adequate amount of time in the various phases of the appraisal procedure (preparation and presentation of the evidence, meetings, follow-up) (Isoré, 2009[9]; Jensen and Reichl, 2011[44]).
- Evaluators must possess the required expertise, in terms of both pedagogical knowledge and assessment techniques, and teachers must be prepared to react to and use the results of the assessment (Darling-Hammond, 2013[45]; OECD, 2013[8]).
- Teacher appraisal systems must be experienced as valid and reliable by both evaluators and teachers (Lillejord and Børte, 2019[46]; Radinger, 2014[47]).

Formal teacher appraisal is not the only way for teachers to get the information they need to improve their teaching competencies and practices. For example, continuous professional development [*TALIS 2018 Results (Volume I)*, Chapter 5], teacher induction [*TALIS 2018 Results (Volume I)*, Chapter 4], collaborative professional learning and peer feedback [*TALIS 2018 Results (Volume I)*, Chapter 4] can all contribute effectively to achieving this goal (OECD, 2019[33]). However, teacher appraisal is the only way to build a salary structure different from the single salary structure that is used in many education systems. In single salary structures, teachers get pay increases based on their educational attainment and teaching experience, irrespective of teaching quality. This pay system is easy to administer and rewards teachers in an equal and objective way (Protsik, 1996[48]), but it also has potentially negative effects on teacher motivation and performance (Crehan, 2016[7]; Hanushek, 2007[49]).

TALIS 2018 asks principals if each teacher in their school is formally appraised and with what frequency ("never"; "less than once every two years"; "once every two years"; "once per year" or "twice or more per year"). Principals also report the method used for appraisals: "observation of classroom teaching"; "student survey responses related to teaching"; "assessments of teachers' content knowledge"; "students' external results (e.g. national test scores)"; "school-based and classroom-based results (e.g. performance results, project results, test scores)"; or "self-assessment of teachers' work (e.g. presentation of a portfolio assessment, analysis of teaching using video)". Principals also report on who conducts the appraisal (source of appraisal): "principal"; "other member(s) of the school management team"; "assigned mentors"; "other teachers (not part of the school management team)" or "external individuals or bodies".[14]

Finally, in TALIS 2018, principals report the potential consequences of teacher appraisal: "measures to remedy any weaknesses in teaching are discussed with the teacher"; "a development/training plan is developed"; "material sanctions such as reduced annual increases in pay are imposed"; "a mentor is appointed to help the teacher improve his/her teaching"; "a change in a teacher's work responsibilities (e.g. increase or decrease in his/her teaching load, administrative/managerial responsibilities or mentor responsibilities)"; "an increase in a teacher's salary or a payment of a financial bonus"; "a change in the likelihood of a teacher's career advancement"; or "dismissal or non-renewal of contract". Principals are also asked how frequently such consequences occur in their school ("never"; "sometimes"; "most of the time"; or "always").

Frequency and sources of teacher appraisal

On average across the OECD, only a small proportion of teachers (7%) work in schools in which teachers are never appraised (Table II.3.30). However, in a few countries this proportion is substantially larger, as in Finland (41%), Italy (36%) and Spain (25%).

Appraisals are most often conducted by the school principal or other members of the school management team. On average across the OECD in 2018, 64% of teachers work in schools where school principals appraise each teacher every year, and 51% work in schools with annual appraisals by other members of the school management team (Figure II.3.6, Table II.4.30). This is not surprising, as regular appraisal as part of performance management, typically organised at the school level, is the most common form of teacher appraisal across countries participating in the OECD Reviews of Evaluation and Assessment in Education (OECD, 2013[8]).

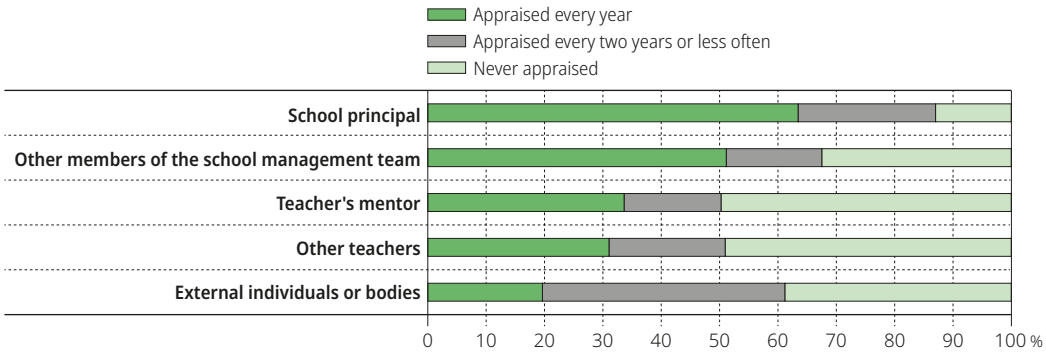
Appraisals by other sources are somewhat less common. Around 34% of teachers work in schools where annual appraisals are conducted by the teacher's mentor, and a similar proportion (31%) work in schools where annual appraisals are carried out by other teachers (Figure II.3.6). Peer appraisal can be a useful tool for formative appraisal, because experienced teachers can draw on their general and specific teaching knowledge and expertise in the advice they give to colleagues. In addition, teachers are in a good position to understand the situation of their colleagues, and can target their advice accordingly (Goldstein, 2007[50]; Isoré, 2009[9]; OECD, 2013[8]). However, appraisal by mentors presents some challenges, due to their specific role. For example, beginning teachers may be more reluctant to admit areas of weakness to their mentors if those mentors have a role in formal appraisals (OECD, 2013[8]).

Finally, only around 20% of teachers work in schools where each teacher is appraised every year by external individuals or bodies (e.g. inspectors, municipal representatives or district/jurisdiction office personnel) (Figure II.3.6, Table II.3.30). Appraisal by external sources can be perceived as more objective and less judgemental than appraisal by the school management team or other colleagues who work in the same school. However, it must be stressed that appraisal by external sources can happen in a wide variety of forms involving very different individuals or bodies. This makes it difficult to draw general implications. For example, it can involve school districts implementing statistical evaluation models (Darling-Hammond, 2015[51]) or subject specialist teachers employed in a different education institution (McIntyre and Hobson, 2016[52]).

The presence of multiple perspectives makes teacher appraisal more robust and reliable (OECD, 2013[8]). On average across OECD countries, teachers work in schools where more than three of the five sources on which TALIS collects information are used for appraisal (Table II.3.30). Only in Italy and Finland (where there are no appraisals in many schools) is the average number of sources less than two. Shanghai (China) stands out particularly as it has one of the highest number of sources used for appraisal, and it is among the education systems with the largest proportion of teachers in schools where each teacher is appraised every year by the school principal, by other members of the school management team, by the teacher's mentor and by other teachers.

Figure II.3.6 **Frequency of teacher appraisal, by source**

Percentage of lower secondary teachers whose school principals report that their teachers are formally appraised with the following frequencies (OECD average-30)



Values are ranked in descending order of the proportion of teachers in schools where teachers are formally appraised every year.

Source: OECD, TALIS 2018 Database, Table II.3.30.

StatLink http://dx.doi.org/10.1787/888934083582

Significant changes in the proportion of teachers in schools without appraisal procedures have been observed between 2013 and 2018 in all 4 countries where this proportion exceeded 20% at the beginning of this period: Finland (+15 percentage points), Spain (-12 percentage points), Iceland (-13 percentage points) and Italy (-34 percentage points). In addition, this proportion also increased significantly in Norway (+9 percentage points) and Japan (+5 percentage points) (Table II.3.33). In some education systems, there has been a trend towards more frequent use of peer appraisal. Between 2013 and 2018, the percentage of teachers in schools where teachers are formally appraised at least once per year by their mentor or other teachers has increased significantly in 8 education systems (it also decreased significantly in 3 education systems).

Teachers who are never appraised may lack an important channel for feedback, including impactful feedback. In addition, teacher self-efficacy may be harmed by the absence of feedback or of a feedback culture in the school (Chester and Beaudin, 1996[56]; Fackler and Malmberg, 2016[57]). Regression results on this variable are available for only 13 countries and economies,[15] but they show that teachers working in schools without appraisal procedures score significantly lower in self-efficacy only in Belgium (Table II.3.36). In contrast, teachers working in schools without appraisal procedures are significantly less likely to report that the feedback they received in the 12 months prior to the survey had a positive impact on their teaching practices in Alberta (Canada), Austria, Bulgaria, Japan and Mexico (the coefficient for Bulgaria is significant but with the opposite sign, implying that they are more likely to report a positive impact of feedback) (Table II.3.37).

Box II.3.3. **Teacher appraisals in Shanghai (China) and Finland**

Shanghai (China)

In TALIS 2018, Shanghai (China) ranks high on all items measuring the prevalence of teachers' appraisal in schools. On average, no other countries and economies participating in TALIS 2018 use as many sources of appraisal as Shanghai (4.8/5 sources providing appraisal in the school). It is also among the countries and economies with the highest average number of methods used for providing appraisal in schools (5.8/6) and the highest average number of outcomes of teacher appraisal in schools (6.5/7). Teacher appraisal is widely used and a backbone of Shanghai's education system.

This wide use of teacher appraisal followed the introduction in 2009 of a performance-based component in the calculation of teachers' salaries. The new system splits teachers' salaries into a basic component and a bonus component. The bonus component, which makes up about 30% of the total amount of teacher salaries, is based on factors such as workload, actual contribution and appraisal. Hence, evaluation of teacher performance has sparked renewed interest and has evolved towards an administrative and summative model.

The teacher appraisal system in Shanghai (China) is characterised by the establishment of a high-quality list of criteria for appraisal and the use of multiple sources and methods of appraisal. The aim is twofold: to evaluate teachers' performance and to collect information on the issues and challenges faced by teachers. Beyond these specific features, Shanghai's appraisal system has built its success and effectiveness on four pillars, as highlighted by Zhang and Ng (2016[53]; 2011[54]).

First, the model integrates both administrative and development components, which makes it valuable for schools and teachers. Second, individual schools are responsible for setting up their own teacher appraisal practices, preserving school autonomy and promoting school improvement. Third, rigorous technical standards and frequent evaluation activities ensure the quality of the data collected, which means that the appraisal process is judged as fair and trustworthy by the teaching workforce. However, it is important to note that robust technical requirements are not sufficient if the appraisal system does not fit the psychological and social dynamics of the education system. This non-technical aspect of appraisal programmes – the fourth pillar – is crucial to making a positive impact on teachers.

Finland

Finland does not have a system-wide standardised test for teacher appraisal or any nationally regulated framework for teacher evaluation. Teacher assessment is considered a local affair to improve teacher empowerment, rather than a system-level tool with a key role in decision making. Education providers are the only entities responsible for conducting teacher assessment, as part of the internal evaluation process. Guidelines for this evaluation framework stem from the educational objectives of each municipality. To ensure quality insurance, the Finnish education system relies on a high level of teacher education and professional accountability. The teaching profession is highly valued in Finnish society, as teachers are considered to be experts with a special mission in the community. Teachers receive high-quality training and are responsible for constantly maintaining their professional skills. These statements imply trust-based assessment, where quality assurance does not rely on control. Hence, to ensure quality, the Finnish education system gives greater consideration to the development of schools than of individual teachers. Teacher appraisal is less an individual assessment than a tool to collect information on professional development needs and a driver for school development.

Sources: Zhang, X. and H. Ng (2016[53]), "An effective model of teacher appraisal: Evidence from secondary schools in Shanghai, China", *Educational Management Administration & Leadership*, Vol. 45/2, pp. 196-218, http://dx.doi.org/10.1177/1741143215597234; Zhang, X. and H. Ng (2011[54]), "A case study of teacher appraisal in Shanghai, China: In relation to teacher professional development", *Asia Pacific Education Review*, Vol. 12/4, pp. 569-580, http://dx.doi.org/10.1007/s12564-011-9159-8; Eurydice (2019[55]), *Finland: Quality Assurance in Early Childhood and School Education*, https://eacea.ec.europa.eu/national-policies/eurydice/finland/quality-assurance-early-childhood-and-school-education_en.

Methods of teacher appraisal

The information necessary to appraise teachers can be collected through a variety of methods, depending on the purposes of the appraisal. For example, if the main function of teacher appraisal is to inform career decisions and strengthen accountability, then it needs to be based on defensible and comparable sources of evidence. In contrast, if the main goal is to inform professional development and promote learning, then teacher self-evaluation can be a valuable tool. In any case, the use of multiple sources of evidence is essential to evaluating teachers accurately and fairly on the variety of tasks that make up their jobs (OECD, 2013[8]).

Across TALIS countries and economies, observation of classroom teaching is typically part of teacher appraisal procedures. In all education systems with available data, over 90% of teachers work in schools where this method is used for appraisal, except for Finland, Iceland, Portugal and Spain (schools where no appraisal takes place are excluded from this calculation) (Table II.3.38). The prevalence of observation of classroom teaching for formal appraisal is in line with its common utilisation as a basis for feedback (see Chapter 4). Classroom observation is an important element of formative appraisal, as it helps to ensure that individual teachers' weaknesses and strengths are robustly addressed through subsequent professional development (OECD, 2013[8]). However, classroom observation ultimately relies on human judgement and can be subjective and prone to bias (to different extents, depending on how it is structured and carried out) (Papay, 2012[42]).

Students' results are also commonly used for appraisal. On average across the OECD, 94% of teachers work in schools that use school-based and classroom-based results for appraisal (e.g. performance results, project results, test scores), and 93% work in schools that use students' external results (e.g. national test scores) (again, schools without appraisal procedures are excluded from this calculation) (Table II.3.38). In Latvia, Lithuania, Mexico, Romania, the Russian Federation and Shanghai (China), all teachers work in schools using school-based and classroom-based results for appraisal. In Bulgaria, Latvia, Norway and Romania, all teachers work in schools where external results are used. As a source of information for appraisal, students' school or external results present the advantage of being measurable and explicitly oriented towards student learning outcomes (the primary goal of teaching). However, teachers' contributions to their students' learning outcomes are never directly observable,

and teachers' evaluations based on students' results depend on a number of sensitive statistical assumptions. Therefore, effective teacher appraisal systems making use of students' results should be combined with other evaluation methods (Braun, 2005[58]; OECD, 2013[8]; Papay, 2012[42]).

Finally, on average across the OECD, a smaller but still substantial proportion of teachers work in schools where, in the process of teachers' appraisal, use is made of student survey responses related to teaching (82%), assessments of teachers' content knowledge (70%), or self-assessments of teachers' work (68%) (Table II.3.38). Students' perceptions of the learning environment, as elicited through carefully designed survey instruments, are generally reliable and predictive of student learning. In addition, they provide a unique and important perspective on classroom interaction, teacher behaviour and the learner experience. However, students are not trained in rating, so their responses may be affected by factors unrelated to student learning. Therefore, they are most useful when used in combination with other evaluation tools (Kane and Staiger, 2012[59]; Wagner et al., 2013[60]; Wallace, Kelcey and Ruzek, 2016[61]).

Given the strengths and weaknesses of the various evaluation methods, schools and education systems often choose to use a variety of methods in combination. On average across the OECD, teachers work in schools using five of the six different methods on which TALIS collects information (again, schools with no appraisal procedures are excluded from this calculation) (Table II.3.38). For example, in Latvia (where 5.8 methods are used, on average), all methods except assessment of teachers' content knowledge are used in 100% of the schools that completed the survey. In contrast, Finland (where only 3.6 methods are used, on average) has the lowest proportion of teachers in schools where classroom observation is used for appraisal and also the lowest proportion of teachers in schools using assessments of teachers' content knowledge and school-based and classroom-based results.

Consequences of teacher appraisal

Teacher appraisal can be a tool to reflect on past work and develop professionally, as well as an accountability mechanism to ensure adequate teacher performance or compliance with standards (Lillejord and Børte, 2019[46]; OECD, 2013[8]; Papay, 2012[42]). To attain any of these goals, appraisal must lead to the right consequences. For example, consequences such as appointing a mentor to improve teaching or drafting a plan for professional development are well aligned with the formative function of appraisal. The goal of ensuring good performance and compliance with standards can be linked to performance incentives, such as wage increases, financial bonuses or even dismissal of a teacher (see the beginning of this section or Table II.3.42 for a full list of the consequences investigated in the TALIS survey).

If providing feedback is included in the functions of appraisal, then, by definition, a dynamic process must be involved in which the two parties exchange information to improve the accomplishment of work-related tasks (Baker et al., 2013[62]). Therefore, it is not surprising that almost all principals report that appraisal is "sometimes", "most of the time" or "always" followed by a discussion with the teacher of measures to remedy any weaknesses in teaching (again, schools without appraisal procedures are excluded from this calculation). In 2018, on average across the OECD, 98% of teachers work in schools where these post-appraisal discussions take place (Table II.3.42). However, the proportion of teachers working in schools where appraisal is "always" followed by this consequence is much lower (28%, on average across the OECD) (Table II.3.45). In France and Japan, 5% or less of teachers work in schools where appraisal is "always" followed by a discussion with the teacher of measures to remedy any weaknesses in teaching.

The elaboration of a professional development or training plan is also a very common consequence of teacher appraisal. Schools where this occurs "sometimes", "most of the time" or "always" account for 90% of all teachers, on average across the OECD (excluding schools where teacher appraisal does not take place) (Table II.3.42). This reflects the fact that teacher professional development is a stated aim of teacher appraisal in most OECD education systems (OECD, 2013[8]). Efforts across countries and schools to link appraisal and professional development are a positive sign, given the potentially positive impact of continuous professional development on teaching practices and student learning (Desimone, 2009[63]; Fischer et al., 2018[64]; Meissel, Parr and Timperley, 2016[65]; Villegas-Reimers, 2003[66]).

Mentoring is another potential consequence of teacher appraisal. In TALIS, mentoring is defined as "a support structure in schools where more experienced teachers support less experienced teachers". Principals across the OECD generally report that mentoring is very important for supporting less experienced teachers and for improving teachers' pedagogical competence and collaboration with colleagues (OECD, 2019, p. 144[33]). The impact of mentoring on teachers depends on its quality, as determined, for example, by the mentor's school-specific knowledge (Rockoff, 2008[67]; Simmie et al., 2017[68]; Spooner-Lane, 2017[69]).

On average across the OECD, 71% of teachers work in schools where appraisal results, at least sometimes, in appointment of a mentor to help them improve their teaching, and the same proportion of teachers work in schools where appraisal sometimes results in a change in work responsibilities (again, schools without appraisal procedures are excluded from this calculation)

(Table II.3.42). However, there are important differences across countries and economies. Schools where appraisal can result in a mentoring arrangement account for virtually all (99% or more) teachers in England (United Kingdom), Kazakhstan, the Netherlands, Shanghai (China) and Singapore. As could be expected, these are also among the education systems where the largest proportions of teachers are involved in mentoring programmes. Across these five education systems, between 37% (England, United Kingdom) and 67% (Shanghai, China) of teachers with up to five years of teaching experience are assigned a mentor, and between 25% (the Netherlands) and 45% (Kazakhstan) of teachers with more than five years of teaching experience mentor other teachers – see Table I.4.64, OECD (2019[33]).

Teacher appraisal less often results in changes in teachers' career prospects. Schools where teacher appraisal results, at least sometimes, in a change in the likelihood of career advancement account for 53% of teachers, on average across the OECD (again, schools without appraisal procedures are excluded from this calculation) (Table II.3.42). A similar proportion of teachers (51%) work in schools where appraisal sometimes results in dismissal or in non-renewal of a teacher's contract.

Changes in compensation are the least recurrent consequence of teacher appraisal. On average across the OECD, 41% of teachers work in schools whose principals report that teacher appraisal results in an increase in a teacher's salary or the payment of a financial bonus "sometimes", "most of the time" or "always" (again, schools without appraisal procedures are excluded from this calculation). Schools where material sanctions (such as reduced annual increases in pay) are imposed, at least sometimes, as a result of teacher appraisal account for just 15% of teachers, on average across the OECD (Table II.3.42). Nonetheless, these consequences are fairly common in some education systems. Over 90% of teachers work in schools where appraisal sometimes results in an increase in a teacher's salary or the payment of a financial bonus in the Czech Republic, the Slovak Republic, the Russian Federation and Shanghai (China). In Sweden, over 70% of teachers work in schools where material sanctions are imposed, at least sometimes, as a result of appraisal.

Given the different and often concurrent objectives of appraisal (e.g. rewarding well-performing teachers, ensuring that teaching standards are consistently applied, steering teacher careers and professional development), it can be expected that appraisal may result in different consequences. On average across TALIS countries and economies, teachers work in schools where appraisal results (at least sometimes, and excluding schools without appraisal procedures) in five of the eight different consequences on which TALIS collects information. This number ranges from 3.3 in Colombia, Portugal and Spain to 6.9 in England (United Kingdom).

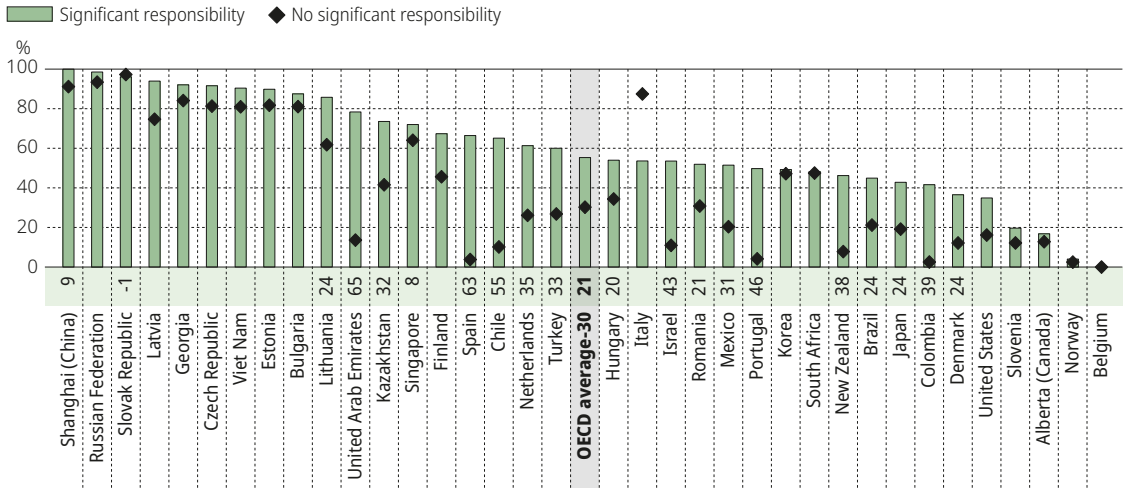
Appraisal is more likely to result in certain consequences if the school management team has "significant responsibility"[16] for those consequences (i.e. if the principal or other members of the school management team play an active role in relevant decision making). For example, as discussed in the previous paragraph, the proportion of teachers working in schools where teacher appraisal sometimes results in an increase in a teacher's salary or the payment of a financial bonus is relatively small, on average across the OECD (41%). The proportion is even smaller (30%) in schools without "significant responsibility" over the determination of teachers' salary increases, but it is larger in schools with such responsibility (55%) (Figure II.3.7, Table II.3.48). Similarly, 60% of teachers work in schools where appraisal sometimes results in dismissal or non-renewal of a teacher's contract whenever the school has "significant responsibility" for dismissing or suspending teachers from employment. However, only 28% of teachers work in schools with such consequences in the case of schools without significant responsibility over those decisions (Table II.3.49).[17] Responsibility for determining teachers' salary increases and for dismissing or suspending teachers are key components of schools' autonomy in budgeting and staffing (Chapter 5).

An increase in a teacher's salary and dismissal or non-renewal of a teacher's contract occur less often as a consequence of teacher appraisal in public schools than in private schools, on average across the OECD (Tables II.3.46 and II.3.47). This could be related to their lower level (compared to privately managed schools) of overall principals' responsibilities, on average across the OECD (Table II.5.11, Chapter 5). In contrast, there is not a significant difference in the occurrence of these consequences of appraisal between schools with over 30% of students from socio-economically disadvantaged homes (according to principals) and other schools, on average across OECD countries and economies in TALIS. Nonetheless, significant and substantial differences are observed in some education systems. For example, the proportion of teachers for which appraisal results (at least sometimes) in dismissal or non-renewal of a contract is over 15 percentage points larger in schools with a higher concentration of socio-economically disadvantaged students than in other schools in Brazil, Bulgaria, CABA (Argentina), Chile, Colombia and Spain (it is 23 percentage points smaller in Sweden).

The consequences of teacher appraisal are changing across TALIS countries and economies. Between 2013 and 2018, except for Croatia, Finland and France, in all education systems with available data, there was a significant change in the occurrence across schools of at least one of the consequences discussed in this section (Table II.3.52). The areas that have seen most changes across TALIS participating countries and economies are the tying of appraisal results to financial rewards and career advancement decisions (Figure II.3.8). Overall, changes observed across TALIS participating countries and economies suggest a growing reliance upon financial and career advancement incentives and policy levers, as well as on support to teachers through mentoring, and a declining reliance upon changes in teachers' work responsibilities or dismissals and non-renewal of contracts.

Figure II.3.7 **Consequences of appraisal on teachers' salaries, by school management responsibility**

Percentage of lower secondary teachers[1] whose school principals report that their teachers' formal appraisal results[2] in an increase in a teacher's salary or payment of a financial bonus, by school management responsibility[3] on related matters



1. Excluding teachers whose school principal reports that their teachers are never formally appraised by any of the sources on which TALIS collects information ("principal"; "other member(s) of the school management team"; "assigned mentors"; "other teachers (not part of the school management team)" or "external individuals or bodies").

2. "Sometimes", "most of the time" or "always".

3. The principal or other members of the school management team play (or do not play) an active role in decision making relevant to the determination of teachers' salary increases.

Note: Statistically significant differences between significant responsibility and no significant responsibility are shown next to the country/economy name (see Annex B).

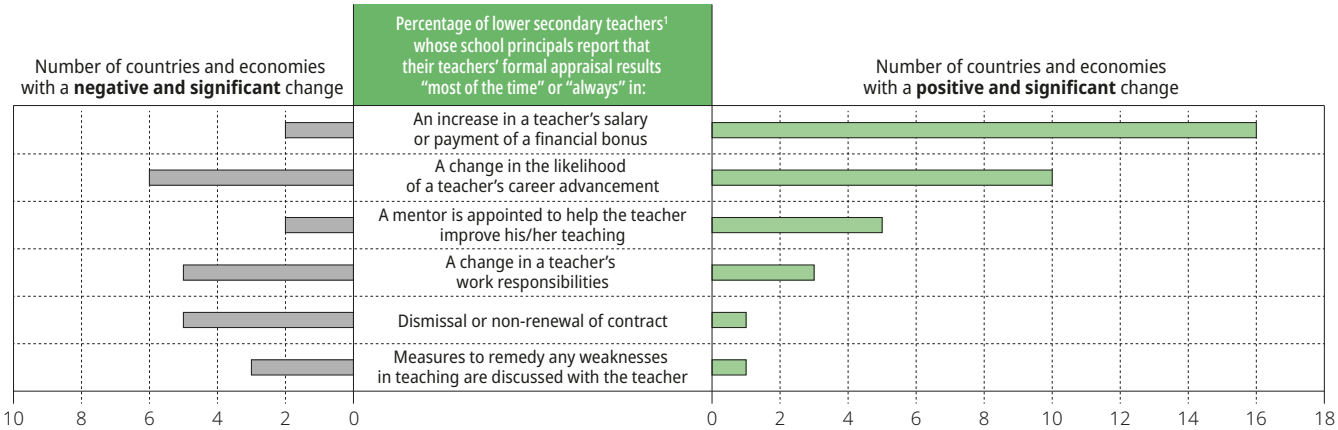
Countries and economies are ranked in descending order of the percentage of lower secondary teachers whose school principals report that their teachers' formal appraisal results in an increase in a teacher's salary or payment of a financial bonus when the school management has significant responsibility over the determination of teachers' salary increases.

Source: OECD, TALIS 2018 Database, Table II.3.48.

StatLink http://dx.doi.org/10.1787/888934083601

Figure II.3.8 **Change in the consequences of teacher appraisal from 2013 to 2018**

Number of TALIS countries and economies with a significant change between 2013 and 2018



1. Excluding teachers whose school principal reports that their teachers are never formally appraised by any of the sources on which TALIS collects information ("principal"; "other member(s) of the school management team"; "assigned mentors"; "other teachers (not part of the school management team)" or "external individuals or bodies").

Appraisal consequences are ranked in descending order of the number of countries and economies with a positive and significant change between 2013 and 2018.

Values are ranked in descending order of the number of countries and economies with a positive and significant change.

Source: OECD, TALIS 2013 and TALIS 2018 Databases, Table II.3.52.

StatLink http://dx.doi.org/10.1787/888934083620

More specifically, the proportion of teachers working in schools where appraisal "sometimes", "most of the time" or "always" results in an increase in a teacher's salary or the payment of a financial bonus increased significantly in about half of the countries and economies with comparable data. Particularly large increases were observed in Italy (62 percentage points) and Sweden (33 percentage points), while significant negative changes were observed in Singapore (-21 percentage points) and Iceland (-7 percentage points) (excluding schools where teacher appraisal does not take place). Around half of TALIS countries and economies with available data experienced a significant change in the occurrence of teachers' career advancement as a consequence of teacher appraisal, with a significant increase in 10 education systems and a decrease in 6. A significant increase in the reliance upon mentoring was observed in 5 countries and economies and the opposite pattern in 2 countries and economies with comparable data. The proportion of teachers working in schools where appraisal results, at least sometimes, in a change of teachers' work responsibilities, has risen in 3 education systems but dropped in 5 others, and consequences in terms of dismissal or non-renewal of contracts rose in only one system but decreased in 5 others.[18]

Box II.3.4. **Formal teacher appraisal, from primary to upper secondary education**

Frequency and sources of teacher appraisal

Across the 13 TALIS countries and economies with available data for ISCED 1 and the 11 countries and economies with available data for ISCED 3, only a small proportion of teachers in primary (ISCED 1) and upper secondary (ISCED 3) education work in schools in which teachers are never appraised. The only education systems where the proportion of teachers in schools in which teachers are never appraised is larger than 10% are Spain (29%) and Denmark (12%) at the ISCED 1 level, and Brazil (16%) and Alberta (Canada) (11%) at the ISCED 3 level (Tables II.3.31 and II.3.32). Of these four cases, only in Brazil is this proportion significantly larger than at the ISCED 2 level (lower secondary).

In 7 countries and economies with available data, lower secondary teachers work in schools where more sources are used to appraise them, compared to primary teachers. The average number of sources of appraisal in schools is significantly lower at the ISCED 3 than at the ISCED 2 level in Denmark, Slovenia, Sweden, Turkey and the United Arab Emirates, and it is significantly larger in Croatia.

Differences in the frequency of appraisal across ISCED levels vary by education systems. For example, the proportion of teachers in schools in which teachers are appraised every year by the school principal is significantly smaller at the ISCED 3 level than at the ISCED 2 level in four education systems, but significantly larger in three education systems. In Denmark, where schools in which teachers are appraised by the principal every year account for 61% of teachers in upper secondary education and 32% in lower secondary education (Table II.3.32). The proportion of teachers in schools in which teachers are appraised every year by external individuals or bodies is significantly larger at the lower secondary level (ISCED 2) than at the primary level (ISCED 1) in five education systems, but significantly smaller in two education systems (Table II.3.31). In CABA (Argentina), schools in which teachers are appraised every year by external individuals or bodies account for 58% of teachers in primary education but 43% in lower secondary education.

Methods of teacher appraisal

The proportion of teachers in schools in which teachers are appraised through student surveys is significantly larger for ISCED 2 than for ISCED 1 in 6 out of 13 education systems with available data (it is significantly smaller in Sweden) (Table II.3.39). For example, in Spain, schools in which student surveys are used to appraise teachers account for 84% of teachers in ISCED 2, compared to 63% in ISCED 1. The same proportion is significantly larger for ISCED 3 than for ISCED 2 in 4 out of 11 education systems with available data (it is significantly smaller in Alberta, Canada) (Table II.3.40). For example, in Denmark, 98% of teachers work in schools in which teachers are appraised through student surveys in ISCED 3, compared to 84% in ISCED 2.

In 5 education systems with available data, more methods of appraisal are used in ISCED 2 than ISCED 1 (although the difference is very small in the United Arab Emirates). The average number of methods used for providing appraisal in schools is not significantly different between ISCED 2 and ISCED 3, except in Sweden, where it is slightly larger at the ISCED 3 level (Tables II.3.39 and II.3.40).

Consequences of teacher appraisal

Among the countries and economies with available data, teacher appraisal can result in more consequences for teachers at the ISCED 2 level than at the ISCED 1 level. In Sweden, for each consequence of appraisal on which TALIS collects information, the proportion of teachers in schools where it happens "sometimes", "most of the time" or "always" is significantly larger for ISCED 2 than for ISCED 1 (Table II.3.43). The same pattern is observed in France, except for material sanctions.

• • •

For example, only 16% of primary teachers in France work in schools where teacher appraisal can result in "a change in a teacher's work responsibilities", as compared to 55% among lower secondary teachers. The proportion of teachers in schools where teacher appraisal can result in the development of a training plan is 62% for ISCED 1 and 88% for ISCED 2.

Across education systems, the difference between ISCED 2 and ISCED 1 is particularly large for the four consequences directly related to remuneration or career progression on which TALIS collects information ("a reduced increase in pay or similar sanction"; "a salary increase or financial bonus"; "implications for career advancement"; and "dismissal or non-renewal of contract"). In all but two education systems with available data, there is at least one consequence directly related to remuneration or career to the extent that the proportion of teachers in schools in which there would be such a consequence is significantly larger for ISCED 2 than for ISCED 1 (Table II.3.43).

When comparing ISCED 3 and ISCED 2, no consistent patterns emerge across countries and economies. Nonetheless, important differences between these two levels of education can be noticed within some education systems. For example, in Croatia, 72% of upper secondary teachers work in schools where a mentor can be appointed to improve teaching as a result of appraisal, compared to 49% of lower secondary teachers. In Denmark the schools in which a salary increase or financial bonus can be the result of appraisal account for a much larger proportion of teachers at the ISCED 3 level (56%) than at the ISCED 2 level (27%) (Table II.3.44).

TEACHERS' AND PRINCIPALS' SATISFACTION WITH THEIR SALARY AND OTHER TERMS OF EMPLOYMENT

The most important motivations for teachers to join the profession are related to the sense of fulfilment they derive from serving the public, for example, by influencing children's development and contributing to society. However, TALIS 2018 data show that extrinsic motivations are also important motivating factors for teachers' decisions to join the teaching profession. In particular, job security, reliability of income and the possibility to combine work with other responsibilities are reported by a large majority of teachers across the OECD as moderately or highly important factors for their decision to become a teacher – see Figure I.4.1, OECD (2019[33]). Salary and working conditions influence teacher decisions not only to join the profession, but also to stay (Bruns, Filmer and Patrinos, 2011[22]; OECD, 2019[10]).

Retaining teachers and principals is crucial to the success of an education system and its schools. Experienced teachers tend to be more effective than novice teachers (Abbiati, Argentin and Gerosa, 2017[18]; Kini and Podolsky, 2016[19]; Papay and Kraft, 2015[20]). Teaching is a complex job that involves many factors, including transmitting knowledge, attitudes and skills to students, maintaining relationships with diverse stakeholders, managing groups and complying with school procedures. Experienced teachers can be better at navigating these varied tasks, relationships and expectations (Berliner, 2001[12]; Melnick and Meister, 2008[14]) and, as a result, at improving a variety of student outcomes (Ladd and Sorensen, 2017[13]). School-specific teaching experience is especially valuable. Teachers' expertise is domain-specific and context-dependent, and not all of it can be generalised to different school settings (Berliner, 2001[12]). A mentor's school-specific experience also contributes to the effectiveness of mentoring (Rockoff, 2008[67]; Simmie et al., 2017[68]; Spooner-Lane, 2017[69]), indicating that this type of experience can benefit the school as a whole.

Schools and education systems need to offer attractive conditions to their staff, both in absolute terms and relative to other jobs requiring similar qualifications (OECD, 2019[10]). In addition, the available research finds that, in a variety of countries and economic sectors, employees' satisfaction with their salaries also depends on the compensation structure, the related incentives and the mechanisms for the remuneration of performance implicit in appraisal systems (Boswell and Boudreau, 2000[70]; Chen et al., 2006[71]; Schay and Fisher, 2013[72]; Tomaževič, Seljak and Aristovnik, 2014[73]).

This section presents information on teachers' and principals' satisfaction with their salary and the other terms of their employment as collected through the TALIS survey. It also relates this information to available data from TALIS or other sources on salaries, working conditions, compensation systems and teacher turnover.

Satisfaction with salary among teachers and principals

TALIS asks teachers and principals to report the extent to which they agree ("strongly disagree"; "disagree"; "agree"; or "strongly agree") with the statement that they are satisfied with the salary they receive for their work. On average across the OECD, 39% of teachers and 47% of principals "agree" or "strongly agree" that they are satisfied with their salary in 2018 (Tables II.3.56 and II.3.65).

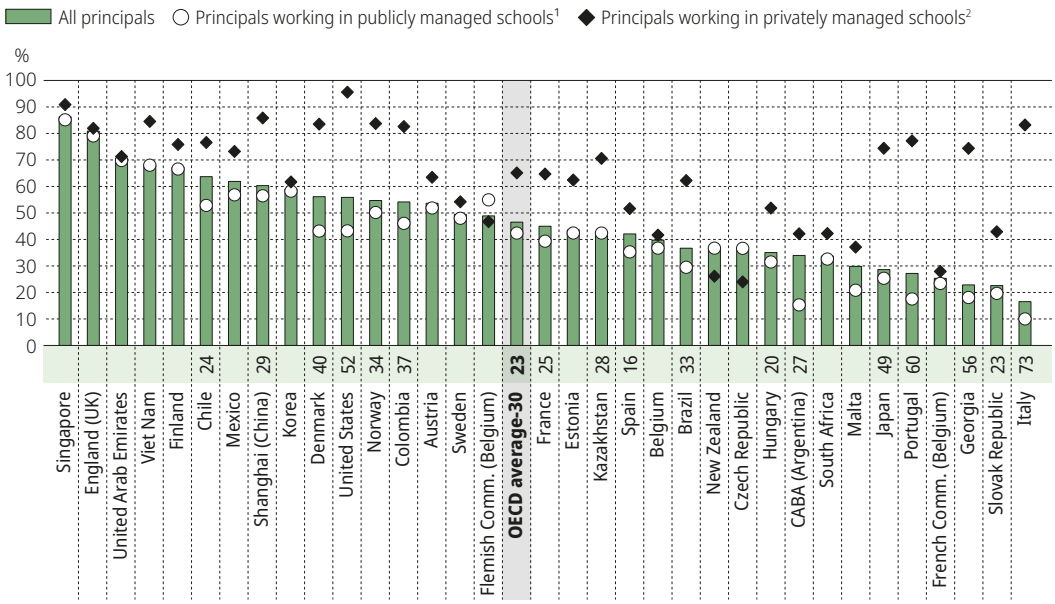
While nearly half of principals (47%) report satisfaction with their salary across countries and economies participating in TALIS, the data also show significant variation across types of schools. On average across OECD countries and economies in TALIS, the proportion of principals who are satisfied with their salaries is 23 percentage points higher in privately managed schools (65%)

than in publicly managed schools (42%) (Figure II.3.9, Table II.3.65). In Italy, 83% of principals report that they are satisfied with their salaries in privately managed schools and only 10% indicate so in publicly managed schools. The difference in principals' satisfaction with their salary between privately managed schools and publicly managed schools also exceeds 40 percentage points in Denmark, Georgia, Japan, Portugal and the United States.

On average across OECD countries and economies in TALIS, the proportion of teachers reporting that they are satisfied with their salaries is also higher in privately managed schools than in publicly managed schools (by 6 percentage points), but to a lower extent than is the case for principals. In addition, in two countries (Denmark and the United Arab Emirates) the proportion of teachers who are satisfied with their salaries is significantly higher in publicly managed schools than in privately managed schools (Table II.3.58).

Figure II.3.9 **Principals' satisfaction with salary, by school type**

Percentage of lower secondary principals who "agree" or "strongly agree" that they are satisfied with the salary they receive for their work



1. A publicly managed school is a school whose principal reported that it is managed by a public education authority, government agency, municipality, or governing board appointed by government or elected by public franchise. In the principal questionnaire, this question does not make any reference to the source of the school's funding, which is reported in the preceding question.

2. A privately managed school is a school whose principal reported that it is managed by a non-governmental organisation (e.g. a church, trade union, business or other private institution). In the principal questionnaire, this question does not make any reference to the source of the school's funding, which is reported in the preceding question. In some countries, the privately managed schools category includes schools that receive significant funding from the government (government-dependent private schools).

Note: Statistically significant differences between principals working in publicly managed schools and principals working in privately managed schools are shown next to the country/economy name (see Annex B).

Countries and economies are ranked in descending order of the percentage of lower secondary principals who "agree" or "strongly agree" that they are satisfied with the salary they receive for their work.

Source: OECD, TALIS 2018 Database, Table II.3.65.

StatLink http://dx.doi.org/10.1787/888934083639

TALIS data also provide some evidence that satisfaction with salary tends to be lower in disadvantaged schools, both among teachers and among principals. The proportion of principals who are satisfied with their salaries is 9 percentage points lower among those who estimate that over 30% of students in their school come from socio-economically disadvantaged homes than among other principals, on average across the OECD (Table II.3.65). The proportion of teachers who are satisfied with their salaries in schools with over 30% of disadvantaged students (according to principals) is not significantly different than in other schools (Table II.3.58). However, after controlling for a range of teacher and school factors, teachers reporting a larger proportion of students from disadvantaged homes in their target class are significantly less likely to be satisfied with their salaries, compared to other teachers.

TALIS data on satisfaction with salaries can be compared with data on the statutory salaries of teachers and principals, available through other OECD data collections and reported in the publication *Education at a Glance* (OECD, 2019[16]). The analysis in this chapter makes use of the statutory annual gross salary (purchase-parity adjusted and excluding bonuses and allowances) of lower secondary full-time teachers and principals in general programmes in public institutions in 2018 (Tables II.3.63 and II.3.64).[19]

These salaries are based on the most prevalent qualifications (for teachers) or on the minimum qualifications (for principals) that are necessary for the job. These amounts refer to different points of the salary scale (starting salary and salary after 15 years of experience for teachers and maximum salary for principals). The ratio between these salary indicators and the gross average earnings of full-time, full-year workers with tertiary education in the 25-64 age group (OECD, 2019[16]) (Table D3.2a) has also been used, as a measure of the relative levels of school staff salaries.

Across education systems, teachers' satisfaction with their salaries is strongly associated with the statutory salary earned by teachers in public institutions. Figure II.3.10 (Panel A – Tables II.3.57 and II.3.63) shows a strong positive correlation between the proportion of novice teachers (with 5 years or less of working experience as teachers) who are satisfied with their salaries in publicly managed schools and the statutory starting salaries for teachers in 2018 (the linear correlation coefficient is r=.62, based on 32 education systems with available data). For example, Austria, Denmark and Spain all have starting salaries exceeding USD 40 000 in purchasing power parity terms (among the highest levels observed in education systems with available data) and over 60% of novice teachers are satisfied with their salaries (among the highest proportions observed). In contrast, in Brazil, Hungary and the Slovak Republic, the annual average starting salary is well below USD 20 000, and less than 25% of novice teachers are satisfied with their salaries (among the lowest levels across TALIS countries and economies). There is also a strong positive correlation between the proportion of teachers with more than 5 years of teaching experience and the statutory salary of teachers with 15 years of experience in public institutions (Figure II.3.10, Panel B – the linear correlation coefficient is r=.67, based on 29 education systems with available data).

Figure II.3.10 also provides some evidence that education systems where the teacher salary structure is relatively flat (i.e. the ratio between statutory salaries after 15 years of experience and statutory starting salaries is relatively low) also tend to have a negative difference in teacher satisfaction between more experienced and novice teachers (the linear correlation coefficient between these two variables is r=.52, based on 32 education systems). More experienced teachers are, on average, significantly less satisfied with their salaries than novice teachers in publicly managed schools in all education systems where the ratio between statutory salaries for teachers with 15 years of experience and starting salaries is below 1.25 (except for Iceland and Denmark, where this difference is not significant). In contrast, among education systems where salaries after 15 years of experience are over 25% higher than starting salaries, the proportion of more experienced teachers who are satisfied with their salary is significantly larger than for novice teachers in Australia, Austria, England (United Kingdom), Israel and Korea and it is significantly lower only in Japan (Tables II.3.57 and II.3.63).

These results highlight the trade-offs faced by education systems in establishing salary scales for teachers. Teachers' satisfaction with salaries is correlated not only with the level of teachers' salaries across education systems, but also with the pay slopes. Flattening the salary scale could make more resources available to increase starting salaries, but that would be at the expense of salaries for more experienced teachers. Thus, doing this would help to attract new teachers, but it could also decrease motivation among more experienced teachers (OECD, 2019[10]).

However, these results should be taken with caution for two reasons. First, statutory salaries are a system-level measure that can mask substantial variation across teachers with similar levels of experience in publicly managed institutions (OECD, 2019[16]). Second, for some education systems, the information on statutory salaries reflects regulations that apply to teachers currently starting their job, but it may not apply to teachers who started many years ago – see OECD (2019[16]), Annex 3. For example, salary scales in Austria used to be considerably steeper than the OECD average (OECD, 2019[10]), with large salary differences between novice and senior teachers. A reform implemented in 2015 compressed the salary scale, increasing starting salaries and limiting them at the top end (Nusche et al., 2016[74]). This is reflected in data on statutory salaries, but not in the TALIS data, which show that teachers with more than five years of experience in publicly managed schools in Austria are among those most satisfied with their salary (Figure II.3.10).

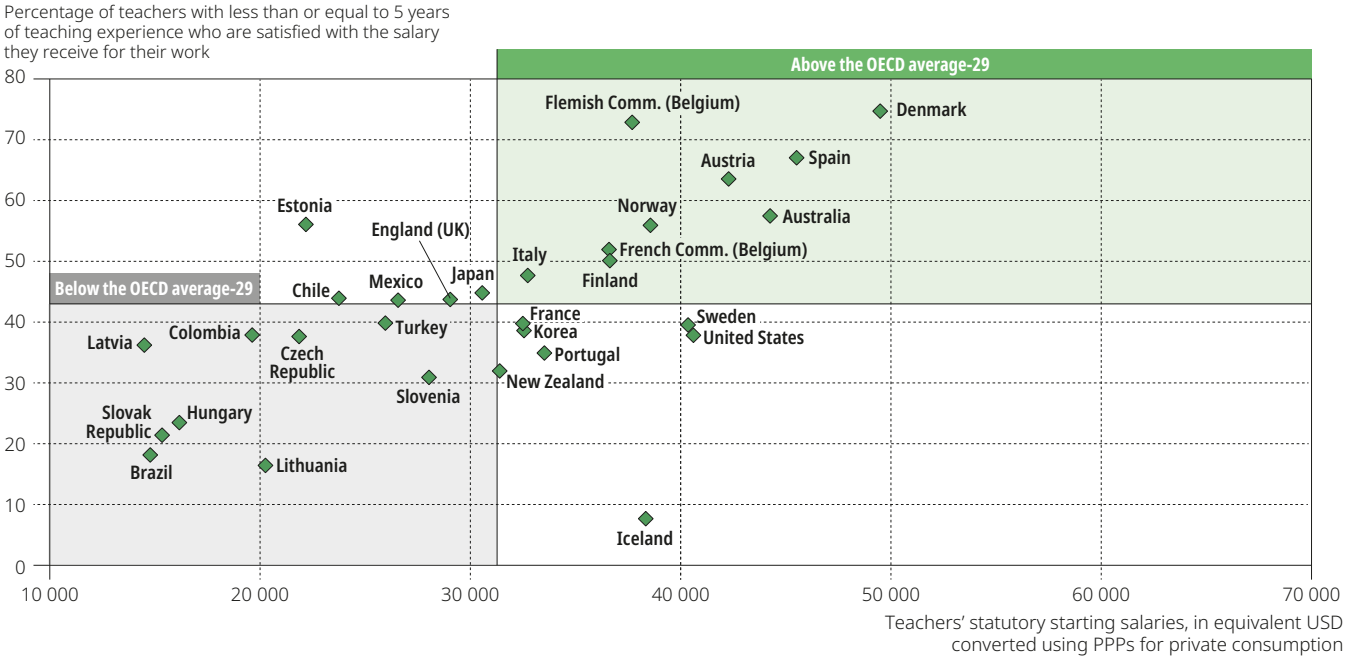
If teachers are mainly concerned with earning a salary that ensures a good standard of living, then the salary level in a country or economy can be expected to be associated with the average satisfaction with salary in that country/economy. However, people generally do not only care about absolute levels of income, but also about income relative to others (Cheung and Lucas, 2016[75]; Clark, Frijters and Shields, 2008[76]). Therefore, the average satisfaction of teachers with their salary in a country/economy could be expected to depend on the salary of a comparison group (e.g. similarly educated workers). However, there is no correlation across countries and economies between salary satisfaction for teachers with over 5 years of teaching experience and the statutory salary for teachers with 15 years of experience relative to other workers with tertiary education (the linear correlation coefficient is r=-0.00, based on 25 education systems with available data) (Tables II.3.63 and II.3.58). This indicates that, across the countries and economies with available data, there is not strong evidence that teachers' average relative salary is associated with their average satisfaction with salary.[20]

The proportion of principals in publicly managed schools who are satisfied with their salaries is correlated across education systems with the maximum statutory salary of principals in public institutions at the lower secondary level (the linear correlation coefficient is r=0.47, based on 26 education systems). The correlation between principals' satisfaction with salary and their maximum statutory salary relative to tertiary educated workers is weaker (the linear correlation coefficient is r=0.25, based on 24 education systems) (Tables II.3.64 and II.3.65).

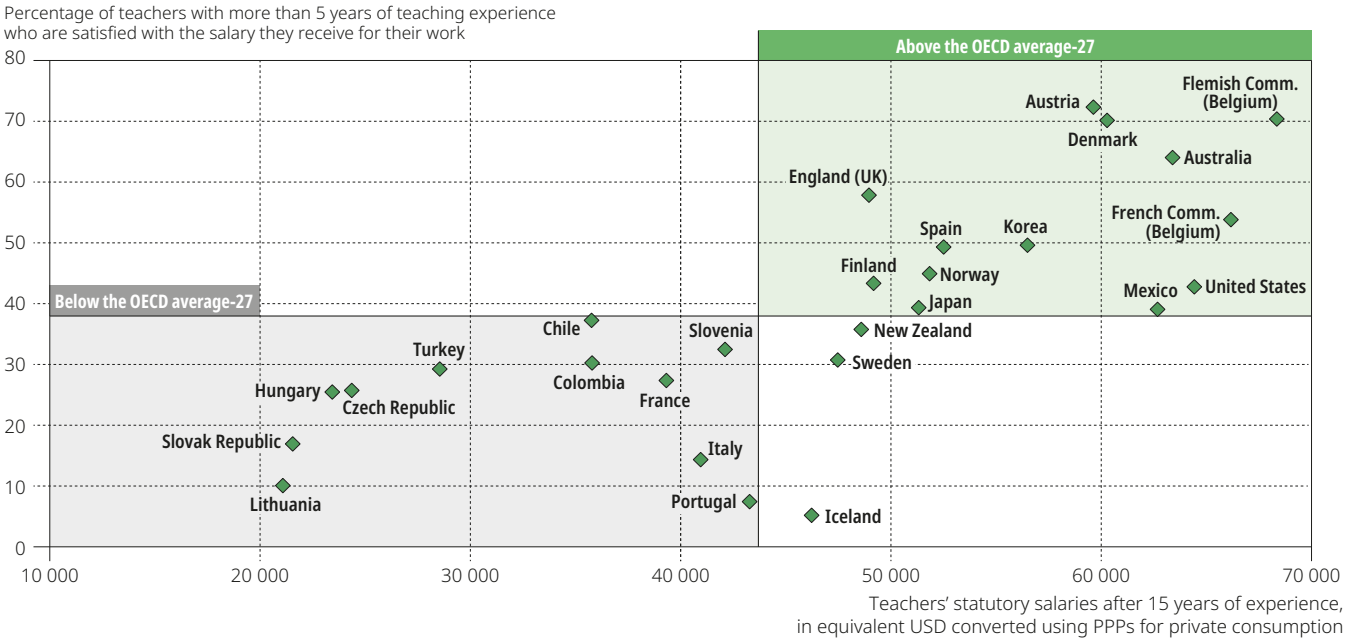
Figure II.3.10 **Teachers' statutory salary and satisfaction with salary, by teachers' teaching experience**

Based on responses of lower secondary teachers working in publicly managed schools and system level data on statutory salaries[1]

Panel A Novice teachers



Panel B Experienced teachers



1. Data for statutory salaries refer to teachers in lower secondary general programmes in public institutions.

Notes: Panel A shows only countries and economies with available data for starting teachers in lower secondary general programmes and percentage of teachers with less than or equal to 5 years of teaching experience who are satisfied with the salary they receive for their work. Panel B shows only countries and economies with available data for teachers after 15 years of experience in lower secondary general programmes and percentage of teachers with more than 5 years of teaching experience who are satisfied with the salary they receive for their work.

The OECD average-29 includes all TALIS 2018 OECD countries and economies, with the exception of Alberta (Canada), Belgium, Israel, and the Netherlands, while the OECD average-27 includes all TALIS 2018 OECD countries and economies, with the exception of Alberta (Canada), Belgium, Estonia, Israel, Latvia and the Netherlands.

Source: OECD, TALIS 2018 Database, Tables II.3.57 and II.3.63.

StatLink http://dx.doi.org/10.1787/888934083658

Satisfaction with the other terms of employment among teachers and principals

TALIS asks teachers and principals not only about their satisfaction with salary, but also about the extent to which, apart from their salaries, they are satisfied with the terms of their teaching contract or employment (e.g. benefits, work schedule). On average across the OECD, 66% of teachers "agree" or "strongly agree" that, apart from their salaries, they are satisfied with their terms of employment. This indicates that teachers tend to be much more satisfied with their general terms of employment than with their salaries (39%) (Table II.3.56). In 2018, the proportion of teachers who are satisfied with the other terms of their teaching contract or employment exceeds 80% in Alberta (Canada), Austria, Colombia, Estonia, Georgia and Latvia, and is 40% or lower in Denmark, Hungary, Japan and Portugal (Table II.3.59).

Box II.3.5. **Teachers' and principals' satisfaction with their salaries and with the other terms of their contract or employment, from primary to upper secondary education**

The proportion of teachers satisfied with their salaries is significantly lower among primary teachers than among their lower secondary peers in 5 of the 13 educational systems with available data for ISCED 1 and 2 (Table II.3.61). This is especially the case in France, where a difference of 9 percentage points is observed between the two levels of education. In 7 education systems, the proportion of teachers who are satisfied with other terms of employment is significantly larger in primary education than in lower secondary education, with the noticeable example of Korea (11 percentage points difference). Some differences can also be observed between ISCED 2 and 3, although it is usually relatively small. For example, upper secondary teachers are more satisfied with their terms of employment in 3 of the 11 education systems with available data, but the difference is significantly larger than 5 percentage points only in Denmark (22 percentage points) (Table II.3.62).

Compared to teachers, principals' reports on satisfaction with their salaries and other terms of employment are more similar across ISCED levels, in the countries and economies with available data. But there are a few exceptions. For instance, 2 of the 13 countries and economies with available data for ISCED 1 and 2 present a significantly smaller share of primary principals who are satisfied with their salaries, with the highest difference reported in England (United Kingdom) (22 percentage points) (Table II.3.67). In 2 of the 11 education systems with available data for ISCED 2 and 3, a significantly larger proportion of upper secondary principals' report that they are satisfied with the terms of their contract or employment (excluding salaries), with a particularly large difference observed in Denmark (21 percentage points) and Turkey (19 percentage points) (Table II.3.68).

Like teachers, on average across the OECD, school principals are also more satisfied with the other terms of employment (66% "agree" or "strongly agree" that they are satisfied) than with their salaries (47%) (Tables II.3.65 and II.3.66). Over 80% of principals are satisfied with their terms of employment in Colombia, England (United Kingdom), Estonia, Latvia, the Netherlands, Singapore and the United States.

Across education systems, there is not a strong relationship between the proportion of teachers who are satisfied with their salaries and those who are satisfied with the other terms of their teaching contract or employment (the linear correlation coefficient is r=.25). In Denmark, for example, 68% of teachers are satisfied with their salaries (one of the largest values across TALIS countries and economies), but only 37% are satisfied with the other terms of their teaching contract or employment (one of the lowest values). In contrast, in Lithuania only 11% of teachers are satisfied with their salaries, but 77% are satisfied with the other terms of their teaching contract or employment. The relationship between satisfaction with salary and satisfaction with other terms of employment is stronger for principals (the linear correlation coefficient is r=.55) (Tables II.3.58, II.3.60, II.3.65 and II.3.66).

Education systems with a large share of teachers who are satisfied with their terms of employment also tend to have a high share of principals satisfied with these terms (the linear correlation coefficient is r=.59). For example, in Portugal 29% of teachers and 40% principals are satisfied with their terms of employment, among the lowest proportions across TALIS countries and economies for both teachers and principals. In contrast, in Alberta (Canada), Colombia, Estonia and Latvia, at least 80% of teachers and principals are satisfied with their terms of employment, among the highest proportions across TALIS countries and economies (Tables II.3.60 and II.3.66).[21]

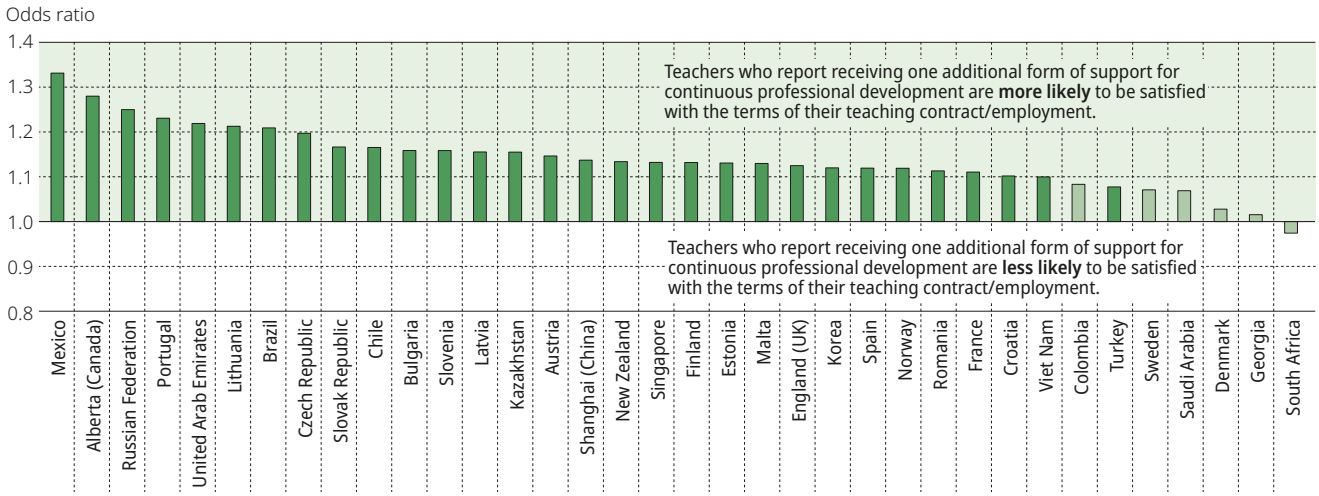
Teachers' satisfaction with the terms of their teaching contract or employment could be affected by a variety of factors. For example, it could be directly affected by part-time or fixed-term work, given that these are important terms of teachers' employment. In light of the positive and negative aspects of part-time work discussed in the previous section (OECD, 2019[29]; OECD, 2017[23]; OECD, 2010[24]) and the mixed empirical results on the association between temporary work and job satisfaction (Wilkin, 2012[41]), it is difficult to establish a firm expectation on the direction of this relationship.

Teachers' satisfaction with their terms of employment could also be related to other benefits and conditions of their job. For example, it could be affected by the support teachers receive for continuous professional development including material support, such as reimbursements, provision of materials and salary increases – see Chapter 5 of *TALIS 2018 Results (Volume I)* (OECD, 2019[33]). These forms of support could affect satisfaction with the terms of employment both because opportunities for professional development are an important part of working conditions (Viac and Fraser, 2020[6]), and also because material support for training and professional development is a part of employee benefit packages (Daley, 2008[77]; Thibault Landry, Schweyer and Whillans, 2017[78]).[22] In addition, teachers' satisfaction with their terms of employment could also be related to the opportunities teachers have to shape their work environment through participation in school governance. (See Chapters 4 and 5 for a more detailed discussion of teachers' participation in school governance.)

Logistic regression analyses were conducted to examine how teachers' propensity to report being satisfied with their terms of employment is related to working on fixed-term contracts (either less than one year or of longer duration) or working part-time (between 71% and 90% of full-time hours or less than that). In addition, among the independent variables included were: 1) the number of forms of support for continuous professional development that teachers report receiving in the 12 months prior to the survey;[23] and 2) an indicator of teacher participation in school governance.[24] Finally, the total number of reported working hours in the week prior to the survey and a set of teacher and school characteristics were included as control variables (Table II.3.69).

Figure II.3.11 **Relationship between teachers' satisfaction with the terms of their employment and support for teachers' continuous professional development**

Likelihood of being satisfied with the terms of the teaching contract/employment (apart from salary), related to available support for teachers' participation in continuous professional development[1, 2, 3, 4, 5]



1. Results of binary logistic regression based on responses of lower secondary teachers and principals. As the predictor is a continuous variable, the relationship refers to the marginal effect of one additional available form of support for teachers' participation in continuous professional development on the likelihood of being satisfied with the terms of the teaching contract/employment.

2. An odds ratio indicates the degree to which an explanatory variable is associated with a categorical outcome variable. An odds ratio below one denotes a negative association; an odds ratio above one indicates a positive association; and an odds ratio of one means that there is no association.

3. The predictor is a continuous variable: it refers to the available support for teachers' participation in continuous professional development (number of forms of support for continuous professional development that teachers report receiving in the 12 months prior to the survey). Teachers could report receiving any of eight forms of support for continuous professional development: "reimbursement or payment of costs"; "monetary supplements for activities outside of the working hours"; "increased salary"; "release from teaching duties for activities during regular working hours"; "non-monetary support for activities outside working hours"; "material needed for the activities"; "non-monetary rewards"; and "non-monetary professional benefits".

4. The administration of this question on mechanisms to support participation in continuous professional development was optional for TALIS countries and economies. Of the participating countries and economies, 43 took this option. Therefore, the OECD and TALIS averages are not displayed in the chart.

5. Controlling for the following: teacher characteristics (gender, age, years of experience as a teacher at current school, working on fixed-term or part-time contracts, working in more than one school, total working hours, teacher-student relation index); classroom composition (students from socio-economically disadvantaged homes); and school characteristics (school location index, school type, school size, staff participation in shcool governance).

Note: Statistically significant coefficients are marked in a darker tone (see Annex B).

Countries and economies are ranked in descending order of the likelihood of being satisfied with the terms of the teaching contract or employment (apart from salary).

Source: OECD, TALIS 2018 Database, Table II.3.69.

StatLink http://dx.doi.org/10.1787/888934083677

No consistent pattern is observed across education systems on the relationship between fixed-term and part-time work and teachers' satisfaction with their terms of employment. For example, working on a short-term contract of less than one year is significantly associated with teachers' satisfaction with their terms of employment in a few education systems, either negatively (Austria, Kazakhstan) or positively (Bulgaria and the Czech Republic). As another example, in three TALIS countries and economies, teachers employed for between 71% and 90% of full-time hours are significantly more satisfied with their terms of employment than teachers employed full-time, and significantly less satisfied in five (Table II.3.69).

In contrast, the support available for teachers' participation in continuous professional development is positively and significantly related to teachers' satisfaction with their terms of employment in about four-fifths of the countries and economies with available data (Figure II.3.11, Table II.3.69). In addition, participation in school governance is positively related with teachers' satisfaction with their terms of employment in all education systems with available data, except for Alberta (Canada) and South Africa. Finally, total reported working hours are significantly and negatively associated with teachers' satisfaction with their terms of employment in about two-thirds of the education systems with available data. These results indicates that teachers' satisfaction with their terms of employment is more strongly associated with the support they receive for continuous professional development and governance than with specific contractual arrangements, such as fixed-term and part-time work.

How teachers' satisfaction with salary and terms of employment are related to teacher retention

Retaining teachers is important to limiting teacher shortages but also to maintaining and improving teaching quality, as both general and school-specific teaching experience are found, in the literature, to be positively associated with student learning (Abbiati, Argentin and Gerosa, 2017[18]; Kini and Podolsky, 2016[19]; Ladd and Sorensen, 2017[13]; Papay and Kraft, 2015[20]). Improving teachers' salaries and terms of employment can be used by governments as a policy tool with the aim of retaining teachers.

On average across the OECD, teachers' satisfaction with their salaries is significantly and negatively associated with the desire to change to another school and with the intention to leave teaching within the next five years (Tables II.3.75 and II.3.76), after controlling for a variety of teacher and school characteristics. This suggests that teachers who are satisfied with their salaries are more likely than others to want to continue working as teachers, and also to do so in the same school. In addition, in the large majority of OECD countries, teachers who are satisfied with their terms of employment are less likely to express the desire to change to another school (Table II.3.75 and Figure II.3.12) and to express the intention to continue working as teachers only for the next five years (Table II.3.76).

Across OECD education systems, there are concerns that the schools that most need experienced staff (i.e. those that operate in the most difficult social contexts) are also those that have the most difficulty recruiting and retaining staff (OECD, 2018[79]). In many countries, teachers are more likely to spend their first years of teaching in schools with higher concentrations of students from socio-economically disadvantaged homes – see Figure I.4.9, OECD (2019[33]). Even if teachers working in disadvantaged schools are not more likely than other teachers to report that they intend to leave teaching within the next five years, they are more likely to state that they desire to change to another school (see Chapter 2, Tables II.2.20 and II.2.66). Teachers often start their careers in disadvantaged schools before moving to other schools when they reach a higher level of seniority (OECD, 2019[10]).

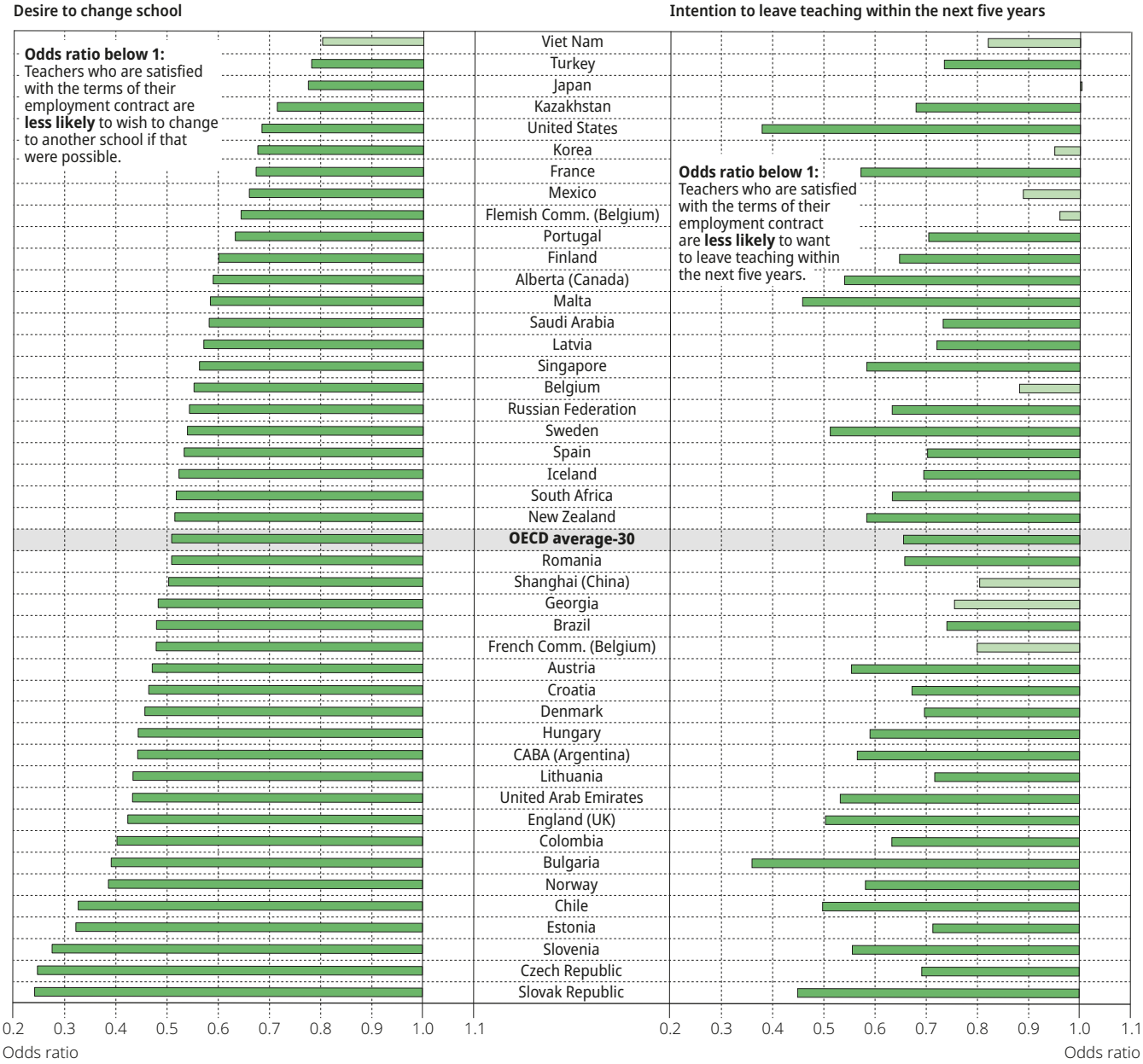
On average across the OECD, teachers in disadvantaged schools have almost one year less teaching experience in their current school than teachers in other schools. In Alberta (Canada), the Flemish Community of Belgium, France and Viet Nam, teachers in schools with many students from socio-economically disadvantaged homes have two years or less experience than other teachers (Table II.3.71). In addition, on average across the OECD, principals in schools where over 30% of students come from socio-economically disadvantaged homes have 1.2 years less experience working as principals in their current school, compared to other principals (Table II.3.72).

Some staff mobility is an important and desirable feature of school systems. Across OECD countries, it is relatively common for teachers to have changed schools at least once during their career. Teaching experience at the current school is equal to overall teaching experience for only 19% of teachers with at least ten years of teaching experience (implying that the other teachers have changed schools at least once in their career) (Table II.3.73).[25] Teacher mobility between schools can be instrumental in finding the right match between teachers and schools. Evidence from the United States shows that teachers who are less effective in raising student achievement are more likely to leave a school. It also shows that, on average, teachers' effectiveness improves after transferring to a different school (Boyd et al., 2011[80]; Hanushek and Rivkin, 2010[81]; Jackson, Rockoff and Staiger, 2014[82]). These findings suggest that teacher mobility may have a positive impact on teacher effectiveness.

However, the positive role that staff mobility can play in education systems must be combined with the need to ensure that disadvantaged schools do not lose too many of their good teachers to other schools. One policy option to limit the loss of teaching experience in schools serving disadvantaged communities due to teacher turnover is to improve the salaries and other terms of employment of their staff. Some education systems have introduced financial compensation schemes to incentivise teachers to stay in disadvantaged schools or in schools with a shortage of teachers, but such initiatives have met with different rates of success. For example, teachers responded positively to financial incentives in North Carolina (United States) and Norway, while no difference was observed in France, perhaps because the incentives were small (Clotfelter et al., 2008[83]; Falch, 2011[84]; Prost, 2013[85]) (the French policy programme has evolved considerably since then [Box II.3.6]). Higher salaries have been found to be negatively correlated with teacher turnover across schools in Sweden (Karbownik, 2014[86]).

Figure II.3.12 **Relationship between the desire to change school and intention to leave teaching within the next five years and satisfaction with the terms of the employment contract**

Likelihood of desiring to change school and intention to leave teaching within the next five years related to satisfaction with the terms of the employment contract[1, 2, 3, 4]



1. Results of binary logistic regression based on responses of lower secondary teachers and principals.

2. An odds ratio indicates the degree to which an explanatory variable is associated with a categorical outcome variable. An odds ratio below one denotes a negative association; an odds ratio above one indicates a positive association; and an odds ratio of one means that there is no association.

3. The predictor is a dummy variable: the reference category refers to teachers answering "disagree" or "strongly disagree" to the statement "Apart from my salary, I am satisfied with the terms of my teaching contract/employment (e.g. benefits, work schedule)".

4. Controlling for the following: teacher characteristics (gender, age, years of experience as a teacher at current school, satisfaction with salary; classroom composition (students from socio-economically disadvantaged homes); and school characteristics (school location index, school type and school size).

Note: Statistically significant coefficients are marked in a darker tone (see Annex B).

Countries and economies are ranked in descending order of the likelihood of desiring to change school related to satisfaction with the terms of the employment contract.

Source: OECD, TALIS 2018 Database, Tables II.3.75 and II.3.76.

StatLink http://dx.doi.org/10.1787/888934083696

Box II.3.6. **Financial incentives to attract and retain high-performing teachers in disadvantaged schools in Chile, the United States and France**

Chile

Chile's government has designed an award that provides an additional financial bonus for high-performing teachers choosing to work in disadvantaged schools. In 2002, Chile created the *Asignación de Excelencia Pedagógica* (AEP) programme to reward the most effective teachers and, hence, to increase retention in the teaching profession. The second version of the programme (2012) incorporates a monetary bonus for teachers working in disadvantaged schools, in order to compensate for other working conditions. Elacqua et al. (2019[87]) use the eligibility rules of the AEP programme to assess its impacts on the school-choice decisions of high-performing teachers. They found that the incentive was not enough to redirect high-performing teachers to disadvantaged schools but was successful in retaining effective teachers in high-needs schools. One of the main impediments to this tool lies in the different levels of openness among teachers to work in this type of school. The results suggest that it may be more effective to focus on persuading teachers already working at disadvantaged schools to stay rather than trying to attract all talented teachers to them. The *Asignación de Excelencia Pedagógica* (AEP) programme will be implemented until 2021. From 2017 onwards, the law 20.903 created the programme *Asignación de Reconocimiento por Docencia en Establecimientos de Alta Concentración de Alumnos Prioritarios,* which is currently focused on both attracting and retaining teachers to work at schools with a large proportion of students from disadvantaged backgrounds.

United States

Other school systems have developed solutions to address this issue by using selective transfer incentives to attract effective teachers to disadvantaged schools. In California (United States), the Governor's Teaching Fellowship programme and the Talent Transfer Initiative provided financial bonuses to talented novice teachers who transfer to low-performing schools. Glazerman et al. (2013[88]) and Steele et al. (2010[89]) scrutinised the impacts of these monetary transfer incentives. They found that the incentives were effective enough to attract talented teachers to disadvantaged schools and increase student educational outcomes.

France

In 1981, France established the *Zones d'Éducation Prioritaire (ZEP)*, a compensatory education policy directing additional attention and resources to disadvantaged schools. In 1992, for example, an annual bonus of EUR 600 was awarded to teachers working in ZEPs. Analysing data for the period 1987-1992, Prost (2013[85]) concluded that the size of the financial bonus and the perception of the policy programme are crucial to the aim of retaining teachers in disadvantaged schools. Since then, this policy scheme has substantially evolved. For instance, since September 2015, teachers working in schools serving disadvantaged communities are awarded an annual bonus, which may vary between EUR 1 734 and EUR 2 312 (gross amount) (République française, 2015[90]). Since September 2019, teachers working in schools in the most deprived areas (REP+) are awarded an annual gross salary bonus of EUR 4 646 (République française, 2019[91]).

Sources: Elacqua, G., et al. (2019[87]), "Can financial incentives help disadvantaged schools to attract and retain high-performing teachers?: Evidence from Chile", *IDB Working Paper Series*, No. IDB-WP-1080, http://dx.doi.org/10.18235/0001820; Glazerman, S., et al. (2013[88]), *Transfer Incentives for High-Performing Teachers: Final Results from a Multisite Randomized Experiment (NCEE 2014-4003)*, https://ies.ed.gov/ncee/pubs/20144003/pdf/20144003.pdf; Steele, J., R. Murnane and J. Willett (2010[89]), "Do financial incentives help low-performing schools attract and keep academically talented teachers? Evidence from California", *Journal of Policy Analysis and Management*, 29/3, pp. 451-478, https://www.jstor.org/stable/40802084; Prost, C. (2013[85]), "Teacher mobility: Can financial incentives help disadvantaged schools to retain their teachers?" *Annals of Economics and Statistics*, 111/112, pp. 171-191, http://dx.doi.org/10.2307/23646330; République française (2019[91]), "Arrêté du 23 juillet 2019 modifiant l'arrêté du 28 août 2015 fixant les taux annuels en application du décret n° 2015-1087 du 28 août 2015 portant régime indemnitaire spécifique en faveur des personnels exerçant dans les écoles ou établissements relevant des programmes 'Réseau d'éducation prioritaire renforcé' et 'Réseau d'éducation prioritaire'", *Journal officiel de la République française* 195, 23 août , Texte 21, https://www.legifrance.gouv.fr/jo_pdf.do?id=JORFTEXT000038947665; République française (2015[90]), "Arrêté du 28 août 2015 fixant les taux annuels en application du décret n° 2015-1087 du 28 août 2015 portant régime indemnitaire spécifique en faveur des personnels exerçant dans les écoles ou établissements relevant des programmes 'Réseau d'éducation prioritaire renforcé' et 'Réseau d'éducation prioritaire'", *Journal officiel de la République française* 200, 30 août, Texte 13, https://www.legifrance.gouv.fr/jo_pdf.do?id=JORFTEXT000031113410.

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Notes

1. Teachers' use of time is discussed in Chapter 2 of the first volume of TALIS 2018, the prestige of the profession in Chapter 2 of this volume, teachers' co-operation in Chapter 4 of this volume, and their participation in decision making in Chapter 5 of this volume.
2. The OECD average corresponds to the arithmetic mean of the estimates of the OECD countries and economies that participate in TALIS, with adjudicated data.
3. Within selected in-scope schools, substitute, emergency or occasional teachers were excluded from the sample. Therefore, the proportion of teachers on fixed-term contracts may be underestimated for some education systems.
4. For both 2008-2018 and 2013-2018, except for Korea and Mexico, the ratio between the change in the share of teachers with a fixed-term contract of less than one year and the change in the share of permanently employed teachers is equal to -0.67 or less.
5. Across TALIS countries and economies, there is only mild evidence that part-time work is related to teacher shortages. Across TALIS countries and economies, there is a positive relationship between the share of part-time teachers (Table II.3.11) and the percentage of principals reporting that a shortage of qualified teachers hinders the school's capacity to provide quality instruction "quite a bit" or "a lot" – Table I.3.63 in *TALIS 2018 Results, Volume I* (OECD, 2019[33]) (the linear correlation coefficient is r=.27, based on 47 education systems with available data). In addition, some qualitative evidence from the Netherlands suggests that the relatively large share of part-time teachers in this country may already be making it difficult to provide enough teachers to meet the demand (OECD, 2019[29]).
6. On average across the OECD, 19% of schools are privately managed. The estimated proportion of privately managed schools is smaller than 5% in Bulgaria, Croatia, the Czech Republic, Iceland, Kazakhstan, Lithuania, New Zealand, Romania, Russian Federation, Saudi Arabia, Slovenia and Viet Nam (see Annex B).
7. Teachers are asked to report the hours they work for a particular week, and not an average across the year. Therefore, if the workload changes over the weeks, a certain proportion of teachers in any given week can be found working an unusually large number of hours.
8. The sum of hours spent on different tasks may not be equal to the number of total working hours, because teachers were asked about these elements separately. Therefore, the share of total working time teachers spend on each of the reported activities should be interpreted with great care.
9. Another possible factor leading some school principals to take on teaching duties could be a shortage of teachers. However, across TALIS countries and economies, there is no relationship between the share of principals with teaching obligations (Table II.3.20) and the percentage of principals reporting that a shortage of qualified teachers hinders the school's capacity to provide quality instruction "quite a bit" or "a lot" – see Table I.3.63, OECD (2019[33]). The linear correlation coefficient between the two variables is r=-.06 (based on 47 education systems with available data).
10. In France and Italy, the basis for accessing the teaching profession is through a national exam that grants teachers the status of civil servant. Once they become civil servants, teachers are allowed to request transfers. Senior teachers have a higher chance of having their requests accepted. Therefore, junior teachers tend to start in schools that do not match their preferences (for geographic or professional reasons) and must wait to be transferred to schools that do (for geographic or professional reasons) (Barbieri, Rossetti and Sestito, 2011[92]; Prost, 2013[85]). Another interesting example of teacher allocation is Uruguay (a country participating in the OECD School Resources Review), where teachers are allocated to schools through a centralised system based on their preferences and on their rank in a public competition and registry. As a result, teachers with a low ranking are more likely to have their teaching hours split between different schools (Santiago et al., 2016[93]).
11. In TALIS 2018, teacher self-efficacy is measured through an index that takes into account teachers' self-reports of what they can do in their teaching (e.g. "calm a student who is disruptive or noisy"; "vary instructional strategies in my classroom"; and "motivate students who show low interest in school work") (OECD, 2019[39]).
12. Based on a *t* test of the difference between the two coefficients.
13. Based on an *F* test for joint significance of the three coefficients.
14. Information on formal teacher appraisal is collected only through the TALIS principal questionnaire. The TALIS teacher questionnaire collected information on feedback in general (including informal feedback), which is reported in Chapter 4. Questions on formal appraisal (in the principal questionnaire) and feedback (in the teacher questionnaire) follow a similar structure, in particular concerning the breakdowns between different sources of and methods for feedback/appraisal. However, there are some important differences in the ways questions are asked that motivate some of the differences in the reporting of information across Chapters 3 and 4. First, principals report on appraisal procedures at the school level, so the information on appraisals cannot be linked directly to the teachers (for example, observation of classroom teaching may be used for appraisal in a school, but that does not mean that every teacher is observed). Second, there are some differences in wording of the available breakdowns. For example, information on feedback is collected for the principal and other members of the school management team combined. In contrast, information on appraisals is available separately for the principal and for other members of the school management team. Also, the teacher questionnaire makes explicit reference to the students taught by the responding teachers in the description of some feedback methods (e.g. "external results of students I teach"), but not in others (e.g. "school and classroom-based results").
15. The estimate of this variable's coefficient is not reliable for most countries and economies because of the small number of teachers in the sample whose school principals report that their teachers are never formally appraised by any source of appraisal. This is related to the relatively small proportion of teachers in this category (which is 2% or less in the majority of TALIS countries and economies – Table II.3.30).

16. The use of the word "significant" does not refer to the statistical properties of the results, but to the wording used in the questionnaire to phrase the question to principals.

17. The analysis has also been performed on the restricted sample of publicly managed schools. The results go in the same direction, on average across TALIS countries and economies. However, data are available for a much smaller number of education systems when privately managed schools are excluded (Tables II.3.50 and II.3.51).

18. The trend data in Figure II.3.8 exclude teachers in schools without appraisal procedures. For the purpose of comparison, Table II.3.53 includes these teachers. The overall pattern of the results across countries and economies remains unchanged. However, some noticeable differences in some of the trend indicators are observed in those education systems where the proportion of teachers in schools without appraisal procedures increased substantially (for example Finland, Iceland, Italy and Spain).

19. Consistent results are obtained when using the average actual salaries of teachers – Tables D3.2a and D3.4 in OECD (2019[16]) – instead of the statutory salaries, with the difference that it is not possible to carry out the analysis by work experience when using the average actual salaries.

20. Workers with tertiary education could still have a different level of education attainment from that of teachers (for example, if the majority of tertiary educated workers have a bachelor's degree or equivalent as their highest degree, while most teachers have a master's or equivalent). The analysis can also be run using teachers' salaries relative to an adjusted average of workers' salaries that takes this problem into account (Table II.3.64), although with a substantial loss of observations. This variable is also weakly correlated with teachers' satisfaction with salary (the linear correlation coefficient is r=.19, based on 15 countries and economies with available data).

21. There is also a strong association across countries between the proportion of teachers and principals satisfied with their salary (the linear correlation coefficient is r=.72 – Tables II.3.66 and II.3.60).

22. Teachers expressed their agreement to the statement "Apart from my salary, I am satisfied with the terms of my teaching contract/employment (e.g. benefits, work schedule)". Factors influencing this satisfaction could include those that teachers perceive as "benefits" or "work schedule" but also any other factor that, beyond these examples offered in the questions, teachers perceive as part of their "terms" of employment. While some forms of support for continuous professional development listed in the TALIS survey are clearly related to the benefit package (e.g. "Monetary supplements for activities outside working hours"), it is less clear if teachers would perceive others as such (e.g. "Release from teaching duties for activities during regular working hours").

23. Teachers could report receiving any of eight forms of support for continuous professional development: "reimbursement or payment of costs"; "monetary supplements for activities outside of the working hours"; "increased salary"; "release from teaching duties for activities during regular working hours"; "non-monetary support for activities outside working hours"; "material needed for the activities"; "non-monetary rewards"; and "non-monetary professional benefits".

24. The latter indicator is a binary categorical variable equal to 1 if teachers "agree" or "strongly agree" with at least one of two statements on participation in school governance ("this school provides staff with opportunities to actively participate in school decisions" and "this school encourages staff to lead new initiatives").

25. Teachers are not asked directly whether they have changed schools at least once during their teaching career. Instead, the proportion of teachers who changed schools is assumed to be at least equal to the proportion of teachers reporting that the number of years they have worked as a teacher in their current school is strictly smaller than the total number of years they have worked as teachers. A small fraction (2.3%) of the observations in the TALIS sample have been excluded from this calculation because they reported that the number of years they have worked as a teacher in their current school is strictly larger than the total number of years they have worked as teachers.

4

Fostering collaboration to improve professionalism

This chapter describes the different ways in which teachers collaborate in classrooms, schools and professional development avenues. It explores how often teachers engage in collaborative activities and how that shapes the wider dimensions of the teaching profession, such as expertise and job satisfaction. It further examines teachers' collegiality, i.e. the quality of interpersonal relationships between colleagues in schools, which provide the basis for a collaborative working environment. The second part of the chapter discusses feedback received by teachers, a unique form of collaboration, and examines how specific types of feedback can help teachers to improve their practices.

Highlights

- Teachers collaborate with their colleagues in a number of ways. On average across OECD countries and economies participating in the Teaching and Learning International Survey (TALIS), the two most commonly reported types of collaboration are "discussing the learning development of specific students" (61% of teachers) and "exchanging teaching materials with colleagues" (47%).
- Professional collaboration that involves more interdependence between teachers, such as observing other teachers and providing feedback, participating in collaborative professional learning and team teaching is less frequent. For example, only 9% of teachers in OECD countries and economies in TALIS report providing observation-based feedback to colleagues at least once a month.
- Teachers who take part in the more interdependent forms of collaboration also tend to report using cognitive activation practices more frequently for teaching. They also report higher levels of job satisfaction and self-efficacy.
- Positive views on collegiality (i.e. having good interpersonal relationships with colleagues) are widespread across OECD countries and economies in TALIS. An average of 81% of teachers report that they work in a collaborative school culture characterised by mutual support, and 87% of teachers agree that teachers in their school can rely on each other. Teachers who report that their school involves staff in school decision making also tend to engage in professional collaboration more frequently in most countries and economies participating in TALIS.
- Teachers across the OECD receive feedback in a number of different ways; about half of teachers (52%) report having received feedback through at least four different methods. The most cited forms of feedback are based on classroom observations and students' school-based and classroom-based results. However, 9% of teachers report that they have never received feedback in their school.
- On average across OECD countries and economies in TALIS, 71% of teachers who have received feedback found it useful for their teaching practice. Compared to older and more experienced teachers, a significantly higher share (9 percentage points) of novice teachers and younger teachers report that the feedback they received had a positive impact on their teaching practice.
- Of the teachers who say that they received feedback, an average of 55% across OECD countries and economies in TALIS report that such feedback was particularly useful for improving their pedagogical competencies in teaching their subject.
- In all countries and economies participating in TALIS, teachers who report receiving multiple different forms of feedback are more likely to find that the feedback they received had a positive impact on their teaching practice.

INTRODUCTION

TALIS identifies teaching as a multifaceted profession. Therefore, in addition to examining the instructional role of teachers, TALIS encourages enquiry into the professional practices of teachers, aiming to capture their work in a more holistic manner (Ainley and Carstens, 2018[1]). One main focus of teachers' professional practices in TALIS is collaboration. TALIS also examines the role of collaboration in teachers' professional development and in their experimentation with innovative pedagogies (Ainley and Carstens, 2018[1]).

The idea of teacher collaboration stems from the concept of two or more individuals interacting or working together to accomplish a specific goal. TALIS identifies collaboration as a distinctive aspect of the professionalism of teachers (Ainley and Carstens, 2018[1]; Goddard et al., 2015[2]). Research points to the value of collaboration enabling teacher learning, stemming from the exchange of ideas and interactions (Goddard, Goddard and Tschannen-Moran, 2007[3]). Therefore, collaboration allows for organisational communication between teachers and helps them to learn from each others' practices and experiences, which could help improve their own practices (Reeves, Pun and Chung, 2017[4]). It can also be viewed as a support mechanism for teachers working in difficult environments, by offering interdependence and help among colleagues (Johnson, Kraft and Papay, 2012[5]). Collaboration among teachers can also facilitate the implementation of certain teaching practices, such as group work among students (Shachar and Shmuelevitz, 1997[6]).

One perspective on teacher collaboration has been studied under the research literature on professional learning communities (PLCs). PLCs can be defined as a routine of teacher collaboration for knowledge sharing, structured and purposeful interactions, and collective improvement (Antinluoma et al., 2018[7]; Lomos, Hofman and Bosker, 2011[8]; Spillane, Shirrell and Hopkins, 2016[9]).

These kinds of collaborative activities among teachers are even more relevant in today's educational context, as education systems move towards co-operative learning and focus on building collaborative skills among students (OECD, 2012[10]).

The goal of this chapter is to explore collaboration as a prominent and essential pillar of teacher professionalism. In line with this objective, the first section offers insights on how teachers collaborate with their colleagues, as well as the quality of their interpersonal relationships. It further examines how indicators of teacher collaboration relate to teaching practices, innovation and teachers' job satisfaction. Next, the chapter focuses on a specific form of collaboration, feedback received by teachers from different sources and through different methods. Last, it provides unique information on how teachers perceive the value of the feedback they receive for improving their teaching practices.

HOW DO TEACHERS COLLABORATE?

Collaborative activities can be viewed on a continuum ranging from one-off interactions to strong and regular co-operative actions between teachers (Vangrieken et al., 2015[11]). Professional collaboration for teachers can also be defined as collective goal-oriented activities aiming to achieve specific improvements in the teaching and learning processes for a single student, class or entire school, based on available research on PLCs – for example, Lomos, Hofman and Bosker (2011[8]).

TALIS explores a broad conception of collaborative activities among teachers. It includes the different opportunities where teachers interact with each other and where teachers take actions about instructional decision making and their own practice. There is not yet a consistent understanding of which collaborative activities are most beneficial to learning for teachers and students, especially because of the different ways collaboration can be structured (Reeves, Pun and Chung, 2017[4]). However, when collaborative activities focus on instructional changes, they can produce shared learning among teachers (Levine and Marcus, 2010[12]). For example, when teachers engage in professional communities to discuss evidence of student learning, or receive feedback based on teachers' actions after classroom observations, teachers have an opportunity to reflect on their instruction and consider specific changes. Therefore, such collaboration can help teachers to collectively learn from each other. Levine and Marcus (2010[12]) also found that the benefits of collaboration for teachers depend on the time spent on collaborative activities and the objective of a certain collaborative meeting.

This section describes the different opportunities for collaboration among teachers, how often these opportunities are leveraged and how these collaborative activities shape the wider dimensions of teachers' work. It then analyses a specific form of collaboration, which involves international mobility, by describing teachers' activities when they stay abroad for professional purposes. It goes on to explore teachers' collegiality, based on teachers' views of their school culture and their relationships with colleagues, as well as the role of school leaders in fostering collaboration.

Teachers' collaborative activities

Teachers have many opportunities to interact and work with their colleagues. Some can be formal, arising from job requirements for teachers in certain systems. But they can also be informal and voluntary interactions between colleagues that can be triggered by situations or challenges teachers collectively feel the need to address (Ainley and Carstens, 2018[1]),

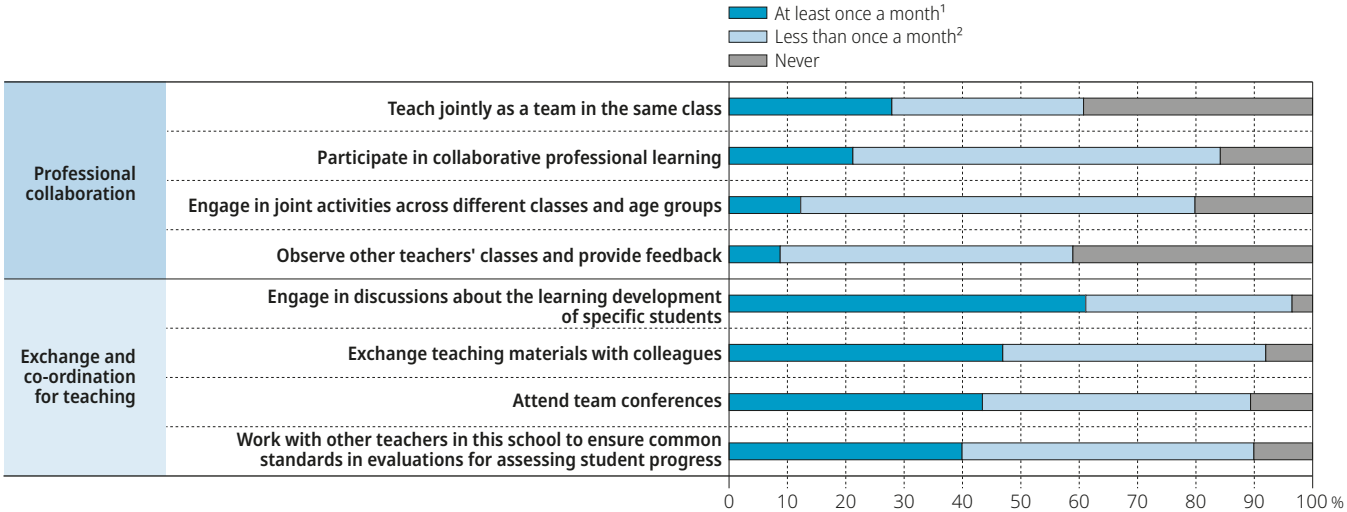
TALIS provides a unique opportunity to identify the different ways in which teachers work with their colleagues for instructional purposes and how often they engage in these activities. The frequency with which teachers report engaging in collaborative activities also signals how they use their time for professional purposes outside classroom teaching. TALIS asks teachers how often ("never"; "once a year or less"; "2-4 times a year"; "5-10 times a year"; "1-3 times a month" or "once a week or more") they do the following: "teach jointly as a team in the same class"; "observe other teachers' classes and provide feedback"; "engage in joint activities across different classes and age groups"; "take part in collaborative professional learning"; "exchange teaching materials with colleagues"; "engage in discussions about the learning development of specific students"; "work with other teachers in the school to ensure common standards in evaluations for assessing student progress" and "attend team conferences".

These collaborative activities can be categorised into two groups (as shown in Figure II.4.1), based on the nature of interaction among teachers. Some collaborative activities imply a deeper level of co-operation among teachers and a high degree of interdependence among participants (Little, 1990[13]). These are identified under TALIS as professional collaboration. Other forms of interaction include simple exchanges or co-ordination between teachers (OECD, 2014[14]; OECD, 2009[15]).

In line with the findings of previous TALIS cycles, TALIS 2018 shows that deeper forms of collaboration, grouped under the term "professional collaboration" (team teaching, providing feedback based on classroom observations, engaging in joint activities across different classes and participating in collaborative professional learning) are less prevalent than simple exchanges and co-ordination between teachers (exchanging teaching materials, discussing the learning development of specific students, working with other teachers to ensure common standards in evaluations and attending team conferences) (Figure II.4.1).

Figure II.4.1 **Teachers' collaboration with colleagues**

Percentage of lower secondary teachers who report engaging in the following collaborative activities in their school with the following frequency (OECD average-31)



1. "At least once a month" covers the following response options: "1-3 times a month", "Once a week or more".
2. "Less than once a month" covers the following response options: "Once a year or less", "2-4 times a year", "5-10 times a year".

Values are grouped by type of collaborative activity and, within each group, ranked in descending order of the collaborative activities in which lower secondary teachers report to engage at least once month.

Source: OECD, TALIS 2018 Database, Table II.4.1.

StatLink http://dx.doi.org/10.1787/888934083715

Exchange and co-ordination for teaching

On average, across the OECD,[1] the most common form of collaboration among teachers is discussing the learning development of specific students: 61% of teachers, report doing so at least once a month, and only 4% of teachers report never doing so (Figure II.4.1, Table II.4.1). This is not surprising, as this type of discussion is generally part of teachers' everyday workplace interactions. In fact, discussions about specific students are crucial for student-centred instruction. They also provide opportunities for teachers to learn from each others' experiences and adapt their instructional approaches for specific students. At least 75% of teachers in Alberta (Canada), Australia, France, New Zealand, Norway and Sweden report engaging in this type of discussion at least once a month (Figure II.1.2). At the other end of the spectrum, 30% of teachers or less report engaging in such discussions at least once a month in the Flemish Community of Belgium and Viet Nam.

Exchanging teaching materials with colleagues is an opportunity for teachers to work together with the aim of sharing knowledge by brainstorming instructional plans. It also helps them to support one another in delivering lessons that might be challenging to teach, thereby gaining efficiency in lesson preparation. However, on average across the OECD, only 47% of teachers report that they frequently ("at least once a month") engage in this form of collaboration (Figure II.4.1, Table II.4.1). In Australia, Austria and England (United Kingdom), at least 70% of teachers report that they exchange teaching materials with colleagues at least once a month. In Korea and Saudi Arabia, less than 25% of teachers report doing so (Figure II.4.2).

Other simple forms of collaboration among teachers are less directly related to teachers' instruction in the classroom, but still provide opportunities for teachers to interact and share their knowledge and expertise. On average across the OECD, 43% of teachers report attending team conferences at least once a month and 40% of teachers report working with other teachers in their school at least once a month to ensure common standards in the evaluation of students' progress (Figure II.4.1, Table II.4.1). Attendance at team conferences at least once a month is particularly prevalent in Sweden (93%), Norway (92%), Spain (76%), Denmark (75%) and Iceland (71%) (Figure II.4.2). The eventual benefits of engaging in such collaboration, however, depend on the concrete exchanges that took place during these collaborative activities (Reeves, Pun and Chung, 2017[4]).

Professional collaboration

Frequent and regular engagement in deeper forms of collaboration among teachers may be desirable for education systems in order to reap the benefits of collaboration. These activities are key opportunities for teachers to collaborate directly to improve instructional processes in the classroom and should, therefore, be leveraged by educators (Ronfeldt et al., 2015[16]). However, on average across the OECD, teachers' engagement in these activities at least once a month is less prevalent: "teach jointly as a team in the same class" (28%); "participate in collaborative professional learning" (21%); "engage in joint activities across different classes and age

groups" (12%); and "observe other teachers' classes and provide feedback" (9%). (Figure II.4.1, Table II.4.1). In fact, large proportions of teachers report that they never engage in these forms of collaboration: 39% of teachers report never teaching jointly, 16% of teachers report never participating in collaborative professional learning, 20% of teachers report never engaging in joint activities across different classes and age groups, and 41% of teachers report never observing other teachers' classes and providing feedback.

Teaching jointly in teams is one of the deeper forms of collaboration between teachers, given that teachers have a high degree of interdependence in this kind of joint work (Johnston and Tsai, 2018[17]; Little, 1990[13]). The value of team teaching in support structures for teachers is especially promising as TALIS 2018 results show team teaching with experienced collegues as an induction provision is associated with higher levels of self-efficacy and job-satisfaction, see Tables I.4.53 and I.4.54 in *TALIS 2018 Results (Volume I)* (OECD, 2019[18]). Therefore, it merits further examination. Teachers' self-reports of teaching jointly in teams in the same class can take different forms in different countries. In some contexts, team teaching could be a characteristic feature when two or more classrooms are combined but, in other contexts, it could take place in single classrooms. However, the bottom line for team teaching is the high degree of interdependence and shared responsibility for the class (Krammer et al., 2018[19]; Villa et al., 2008[20]).

Teaching jointly as a team at least once a month is reported by more than 50% of teachers in Austria, Italy, Japan and Mexico, but by less than 10% of teachers in Bulgaria, Croatia, the Czech Republic, Lithuania, Malta and the Russian Federation (Figure II.4.2). In nearly a third of participating countries and economies, team teaching is particularly rare, with more than 50% of teachers reporting that they never teach jointly as a team in the same class. This is true for Belgium, Bulgaria, Croatia, the Czech Republic, England (United Kingdom), the Flemish Community of Belgium, France, Iceland, Israel, Malta, the Netherlands, South Africa, Spain, the United States and Viet Nam (Table II.4.1).

There are differences by gender with respect to engaging in team teaching in some countries and economies that participate in TALIS. In Austria, Brazil, Hungary, Korea, Portugal and the Slovak Republic, a significantly higher share (5 percentage points or more) of female teachers than male teachers report engaging in team teaching at least once a month (Table II.4.6). By contrast, the opposite pattern is observed in Bulgaria, Kazakhstan, Malta, the Russian Federation, Singapore, Slovenia, and the United Arab Emirates, where a significantly higher share (5 percentage points or more) of male teachers engage in team teaching at least once a month, compared to their female peers.

Another form of professional collaboration with direct links to classroom insruction is providing observation-based feedback to teachers (Vangrieken et al., 2013[21]). Teachers' engagement in "observing other teachers' classes and providing feedback" at least once a month is reported by a large proportion of teachers in Viet Nam (78%), Kazakhstan (61%) and Shanghai (China) (40%) (Figure II.4.2). In some countries and economies, the majority of the teaching workforce has never provided feedback on the observation of other teachers' classes in their school. This includes at least 75% of teachers in the French Community of Belgium and Spain, between 60% and 74% of teachers in Belgium (and the Flemish Community), Brazil, Ciudad Autónoma de Buenos Aires (hereafter CABA [Argentina]), Chile, Croatia, Finland, Iceland, Malta and Portugal, and between 50% and 59% of teachers in Alberta (Canada), Austria, Colombia, Denmark, Israel, Italy, Mexico and Turkey (Table II.4.1).

While professional collaboration is less prevalent compared to collaboration that entails simple exchange and co-ordination, it also varies across school characteristics in certain education systems. On average across the OECD, the share of teachers who report engaging in team teaching at least once a month is 6 percentage points higher among those working in publicly managed schools than among those in privately managed schools (Figure II.4.3, Table II.4.7). There are 16 countries and economies with significant positive differences, and those with the largest significant differences are Italy (42 percentage points), Austria (33 percentage points), Japan (29 percentage points), Singapore (24 percentage points), Chile (23 percentage points) and CABA (Argentina) (21 percentage points). Similarly, there are 14 countries and economies where the share of teachers who engage in providing observation-based feedback is significantly higher among those working in publicly managed schools than the share of their peers in privately managed schools (Table II.4.9).

Evidence from literature suggests teacher collaboration could be impeded in high-poverty schools, with limited capacity to support teacher professional learning (Johnston and Tsai, 2018[17]; Stosich, 2016[22]). However, TALIS findings suggest the opposite pattern in several countries and economies: teachers working in more challenging environments are more likely to report engaging in team teaching and observation-based feedback. In about one-third of the countries and economies with available data, the share of teachers who report that they engage in team teaching at least once a month is significantly higher for those who teach in schools with more than 30% of students from socio-economically disadvantaged homes (Figure II.4.3, Table II.4.7). Similarly, in a quarter of countries and economies with available data, observing other teachers' classes and providing feedback at least once a month is more common among teachers working in schools with more than 30% of students from socio-economically disadvantaged homes (Table II.4.9). Education systems may extend special support to schools in socio-economically disadvantaged contexts that entail specific forms of teacher collaboration that could explain this pattern (for example, the Empowered Management Program in Shanghai [China] [Box II.4.1] and the Educational Priority Networks in France [Box II.4.5]).

Figure II.4.2 **Professional collaboration and exchange and co-ordination for teaching**

Percentage of lower secondary teachers who report engaging in the following collaborative activities in their school at least once a month

Countries and economies are ranked in descending order of the percentage of lower secondary teachers who report teaching jointly as a team in the same class at least once a month.

Source: OECD, TALIS 2018 Database, Table II.4.1.

StatLink http://dx.doi.org/10.1787/888934083734

Figure II.4.3 **Teaching as a team, by school characteristics**

Results based on responses of lower secondary teachers and principals

+ Positive difference
– Negative difference
Difference is not significant
Missing values

	Difference by school characteristics				
	City – rural area	Private – public schools	High – low concentration of disadvantaged students[1]	High – low concentration of immigrant students[2]	High – low concentration of students with special needs[3]
Austria	-	-	+	+	+
Italy		-	+		+
Japan		-			
Mexico					
Sweden				+	+
Singapore		-		-	
Norway	-				+
Denmark		-			+
Finland		-		+	
Slovak Republic		+			
Iceland					
Chile	-	-	+		+
OECD average-31	-	-	+	+	+
Colombia			+		
United Arab Emirates		-			
Hungary					
French Comm. (Belgium)		+			+
Georgia					
Australia*				+	+
New Zealand	-	-			
Portugal		-	+		
Turkey		+			
CABA (Argentina)		-		+	
Alberta (Canada)	+			+	
Israel			+		
Estonia	+		-		
United States	+				
Spain					
Belgium			+		
Brazil	-	-	+		
Slovenia					
Korea		-			
Flemish Comm. (Belgium)		-	+		
Latvia					
Kazakhstan	-	-			
Netherlands					+
France		-	+	+	
Saudi Arabia	-				
England (UK)					
Romania					
Viet Nam					
South Africa					
Shanghai (China)					
Malta					
Bulgaria	+		-		
Czech Republic		+			
Russian Federation				+	
Lithuania	+				
Croatia					
Education systems with a positive difference	**5**	**4**	**10**	**8**	**9**
Education systems with no difference	**25**	**16**	**24**	**19**	**30**
Education systems with negative difference	**7**	**16**	**2**	**1**	**0**

* For this country, estimates for sub-groups and estimated differences between sub-groups need to be interpreted with great care. See Annex A for more information.

1. High concentration of disadvantaged students refers to schools with more than 30% of students from socio-economically disadvantaged homes.

2. High concentration of immigrant students refers to schools with more than 10% of immigrant students.

3. High concentration of students with special needs refers to schools with more than 10% of students with special needs.

Countries and economies are ranked in descending order of the percentage of lower secondary teachers who report teaching jointly as a team in the same class at least once a month.

Source: OECD, TALIS 2018 Database, Table II.4.7.

StatLink http://dx.doi.org/10.1787/888934083753

Austria stands out with respect to team teaching (Box II.4.2), while England (United Kingdom) stands out with respect to feedback based on observations of other teachers' classes. In both systems, there are large significant differences (13 percentage points or more in Austria and 7 percentage points or more in England [United Kingdom]) in favour of teachers who work in schools with higher concentrations of students from socio-economically disadvantaged homes, immigrant students and students with special needs (Tables II.4.7 and II.4.9).

Box II.4.1. **Inter-school professional collaboration in Shanghai (China)**

In Shanghai, the school structure allows for teachers to collaborate on a daily basis as a part of their continuous professional learning. The system allows for this to happen by limiting the teaching time to 12 hours per week to leave room for collaborative time. During this time, teachers are involved in observing other teachers' lessons or taking up mentorship duties for new or struggling teachers. A key part of Shanghai's collaborative professional development is the sharing of best practices among teachers.

The Empowered Management Program in Shanghai allows for further inter-school collaboration aimed at supporting and improving low-performing schools. Under the programme, partnerships between high-performing and low-performing schools are set up for a period of two years. Teachers and school leaders from both the schools work together closely, including visits across schools, discussing effective practices, observing classrooms and providing constructive feedback. The support given from partner schools also focusses on building research skills among teachers to help schools develop as learning organisations

Source: Jensen, B. and J. Farmer (2013[23]) *School Turnaround in Shanghai: The Empowered-Management Program Approach to Improving School Performance*, https://www.americanprogress.org/issues/education-k-12/reports/2013/05/14/63144/school-turnaround-in-shanghai.

Teachers can also collaborate through the professional development opportunities they participate in (Darling-Hammond, 2017[24]). Collaboration as a "contextual factor" in professional development opportunities can be particularly useful for enhancing teacher learning, compared to professional development undertaken individually (Bakkenes, Vermunt and Wubbels, 2010[25]; Little, 2002[26]; Warwick et al., 2016[27]). TALIS 2018 results show that 74% of teachers who report that their professional development had a positive impact on their teaching practice cite "opportunities for collaborative learning" as a key characteristic of their professional development – see Table I.5.15 in *TALIS 2018 Results (Volume I)* (OECD, 2019[18]). Moreover, professional development can offer a structured forum in which teachers can collaborate that, in turn, can induce broader collaboration among teachers in their everyday practice. Regression analysis indicates that teachers who had more opportunities to participate in collaborative forms of professional development (such as a network of teachers, peer observation and coaching) also report higher and more frequent engagement in deeper forms of collaboration in their everyday practice, after controlling for teacher characteristics (gender, age, work experience as a teacher at current school and working full-time) (Table II.4.10).

However, participation in collaborative professional learning is not a common practice across the countries and economies participating in TALIS. On average across the OECD, only 21% of teachers report participating in collaborative professional learning at least once a month (Figure II.4.2, Table II.4.1). Shanghai (China) and the United Arab Emirates are the only systems where more than 50% of teachers report taking part in collaborative professional learning at least once a month. By contrast, more than 30% of teachers report never participating in this kind of collaborative activity in the Slovak Republic (57%), the Flemish Community of Belgium (49%), Belgium (39%) and Finland (31%).

Similar to other forms of professional collaboration, such as team teaching and observation-based feedback, in certain education systems it is more common to participate in collaborative professional learning on a regular basis among teachers who work in more challenging environments. In almost a fifth of the countries and economies with available data, the share of teachers who report that they participate in collaborative professional learning at least once a month is significantly higher for those who teach in schools with more than 30% of students from socio-economically disadvantaged homes (Table II.4.11). The two economies with the largest differences (15 percentage points) are CABA (Argentina) and England (United Kingdom).

Overall, the examination of teachers' collaborative practices highlights that the extent of teacher collaboration varies greatly between countries, depending on the types of collaborative activities (Figure II.4.2, Table II.4.1). This could be explained by cultural and country-specific contextual factors, such as the structural opportunities that might be available to teachers to collaborate and what forms of interaction teachers might find valuable for their practice in different national contexts

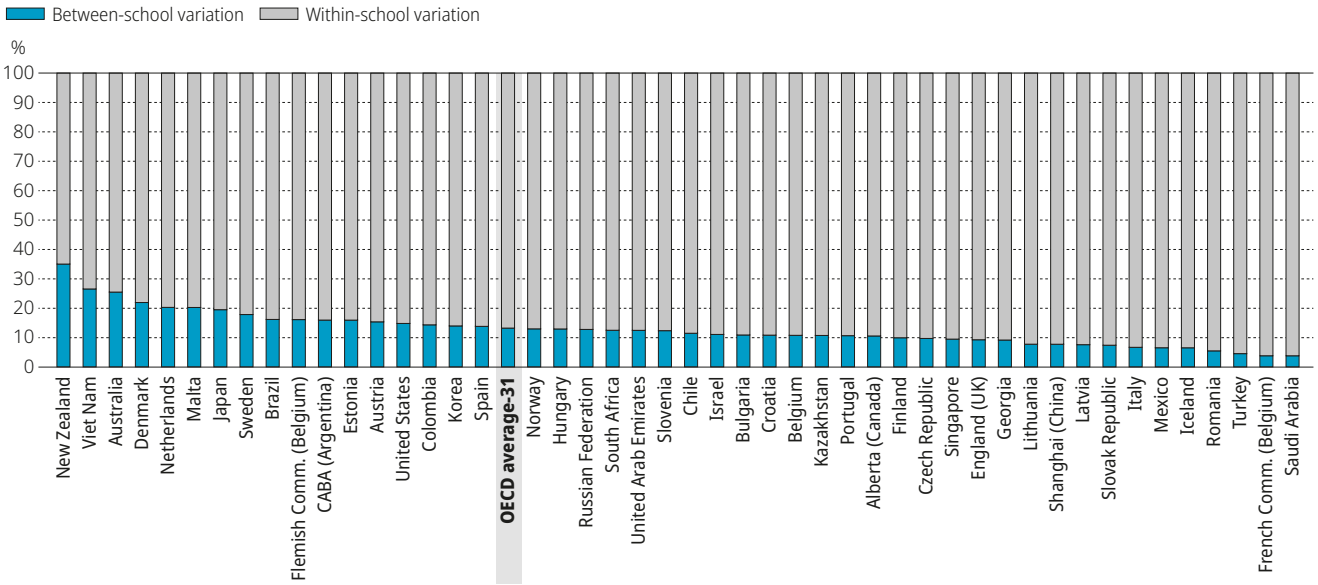
(IBF International Consulting, 2013[28]; Lortie, 1975[29]; Ostovar-Nameghi and Sheikhahmadi, 2016[30]). Indeed, TALIS 2013 found that some of the variation in teacher collaboration is explained at the country level, signalling that cultural and contextual factors could shape in what ways and how often teachers collaborate in different countries (OECD, 2014[15]).

It is still useful to analyse the share of variance in teacher collaboration that lies at the school and teacher levels to understand, from a policy perspective, whether collaboration is a school-driven phenomenon within education systems. Whether levels of collaboration differ a lot between schools or if teachers' responses vary considerably within schools, policies need to be designed and targeted accordingly (OECD, 2014[15]).

Results indicate that, while most of the variance is at the individual (teacher) level, the share of variation lying at the school level is not negligible. On average across the OECD, 87% of the variation in teachers' responses regarding their engagement in deeper forms of collaborative activities lies across teachers, within schools, while the rest (13%) is accounted for by differences in the average level of collaboration between schools (Figure II.4.4, Table II.4.12). These results suggest that, when a teacher collaborates within a school, that teacher does not collaborate with all teachers of the school but only with a few, while other colleagues from the same school do not collaborate at all, hence the high within-school variation. In certain countries and economies, including Australia, Denmark, Malta, the Netherlands, New Zealand and Viet Nam, 20% or more of the variation in teacher collaboration lies at the school level. This suggests that teacher collaboration is more prevalent in some schools than others in these countries.

Figure II.4.4 **Variation in professional collaboration**

Distribution of variance in lower secondary teachers' professional collaboration[1] between and within schools



1. The index of professional collaboration measures teachers' engagement in deeper forms of collaboration, including teaching jointly as a team in the same class, providing feedback based on classroom observations, engaging in joint activities across different classes and age groups and participating in collaborative professional learning.

Countries and economies are ranked in descending order of the share of the total variance in the index of professional collaboration that lies between schools.

Source: OECD, TALIS 2018 Database, Table II.4.12.

StatLink http://dx.doi.org/10.1787/888934083772

Change in collaborative activities over time

TALIS results show that patterns of teacher collaboration have shifted across most education systems in the last decade. Among the most visible increases in teacher collaboration, Austria and Turkey stand out with large, significant increases in the share of teachers reporting to engage in collaborative activities since 2008 across all the different forms of collaboration examined by TALIS (Table II.4.4). In Austria, the highest increases observed are for: "work with other teachers in the school to ensure common standards in evaluation for assessing student progress" (+33 percentage points) and "teach jointly as a team in the same class" (+24 percentage points). In Turkey, the largest increases are for: "work with other teachers in the school to ensure common standards in evaluation for assessing student progress" (+26 percentage points) and "take part in collaborative professional learning (+24 percentage points).

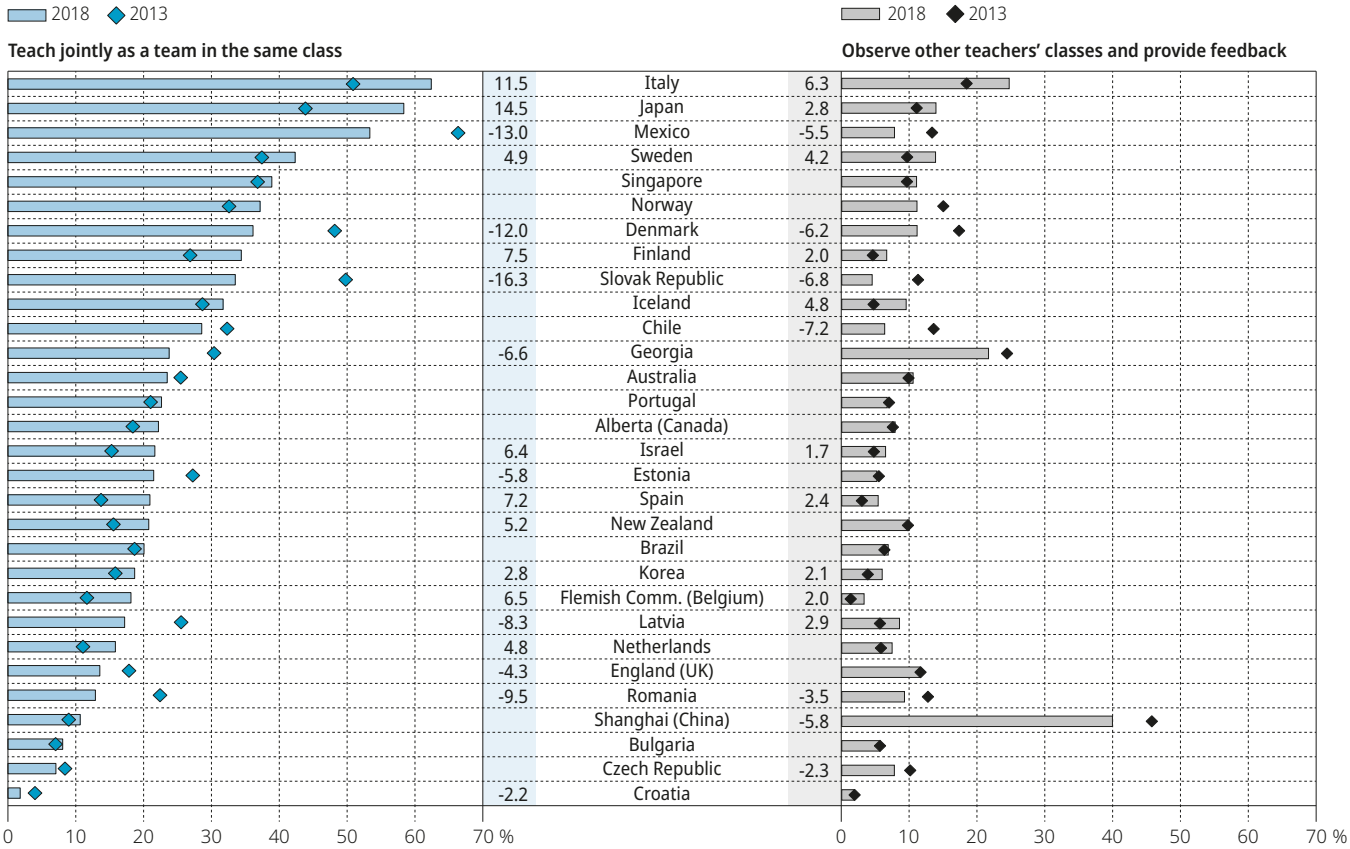
Box II.4.2. **Structured team teaching in New Secondary Schools in Austria**

Austria has introduced several opportunities for its teachers to collaborate as a part of the New Secondary School Reform (*Neue Mittelschule*, NMS). Several structures in the NMS allow for teachers to lead and work with their colleagues, through the creation of new roles, such as learning designers, subject co-ordinators and school development teams. The NMS also includes additional teaching resources for teachers to work jointly as teams in a single classroom. The team teaching approach was first piloted in the Austrian context in only a few subjects and later expanded to all the subjects of the lower secondary curriculum. This approach had implications on increasing the number of staff for each subject area in Austrian schools, while keeping the overall number of teaching hours the same. It allowed teachers to learn from each other by working in the same class and also to provide more student-centred instruction, especially additional support for low-achieving students. Some of this team teaching also allows teachers from different schools and varying education levels to come together and share best practices. The foundation of these structures was laid in 2008 with the introduction of the NMS Reform, but it applies to all teachers from the academic year 2019-20 onwards.

Source: Nusche, D. et al. (2016[31]), *OECD Reviews of School Resources: Austria 2016*, OECD Reviews of School Resources, https://doi.org/10.1787/9789264256729-en.

Figure II.4.5 **Change in teacher collaboration from 2013 to 2018**

Percentage of lower secondary teachers who report engaging in the following collaborative activities in their school at least once a month



Notes: Only countries and economies with available data for 2013 and 2018 are shown.

Statistically significant changes between 2013 and 2018 (TALIS 2018 – TALIS 2013) are found next to the category and the country/economy name (see Annex B).

Countries and economies are ranked in descending order of the percentage of lower secondary teachers who report teaching jointly as a team in the same class at least once a month in 2018.

Source: OECD, TALIS 2018 Database, Table II.4.4.

StatLink http://dx.doi.org/10.1787/888934083791

The pattern of change in collaborative activities between 2013 and 2018 varies both by education systems and by the different forms of collaboration. Since 2013, in 10 of the 32 countries and economies with available data, there has been a significant increase in the share of teachers engaging at least once a month in team teaching and in providing feedback based on observation of other teachers' classes, while there has been a significant decrease for team teaching in 9 countries and economies and for providing feedback in 7 countries and economies (Figure II.4.5, Table II.4.4). Finland, the Flemish Community of Belgium, Israel, Italy, Japan, Korea, Spain and Sweden have experienced a significant increase in these two activities since 2013, while Denmark, Mexico, Romania and the Slovak Republic have experienced a significant decrease.

Over the past five years, there has been a rise in participation in collaborative professional learning at least once a month in 12 out of the 32 countries and economies with available data (Table II.4.4). The largest significant increases between 2013 and 2018 are in Shanghai (China) (+37 percentage points), Norway (+29 percentage points), Sweden (+28 percentage points) and Iceland (+17 percentage points). However, there have been significant decreases over the same period in New Zealand (-14 percentage points), Israel (-12 percentage points), Georgia (-6 percentage points), Portugal (-5 percentage points) and Romania (-4 percentage points).

Interestingly, TALIS data show small changes within education systems in the amount of time teachers report spending on collaborative activities. Over the past five years, in less than half of the countries and economies with available data, there has been a significant but minor change[2] in the average number of hours teachers report spending on teamwork and dialogue with colleagues within the school (Table II.4.5). Therefore, the changes in teachers' engagement in different collaborative activities do not mirror an overall increase or decrease in the time spent on collaboration. This indicates that teachers' time for collaboration, which is a part of their non-teaching time, stays largely unchanged and, instead, teachers redistribute their time between different collaborative activities. In other words, in identifying which collaborative activities may best suit their professional needs, they could choose to engage in some forms of collaboration at the cost of ending their engagement in another form of collaboration.

Box II.4.3. **Teacher collaboration from primary to upper secondary education**

TALIS data show that the different ways in which teachers collaborate with their colleagues on a regular basis vary by the level of education they teach. Overall, teacher collaboration is more prevalent and frequent among primary teachers than among lower secondary teachers in the 13 countries and economies with available data for ISCED 1 and 2. For example, teaching jointly in teams in the same class at least once a month is reported by a significantly larger share of primary teachers in 11 countries and economies. The largest differences (more than 25 percentage points) are seen in the Flemish Community of Belgium and Spain (Table II.4.2). Similarly, monthly engagement in joint activities across different classes and age groups, discussing the learning development of specific students, working with other teachers in the school to ensure common standards in evaluations of student progress and participating in collaborative professional learning are also reported by a larger share of primary teachers in at least 11 out of 13 countries and economies with available data.

Teachers in upper secondary education appear to work less collaboratively and more in isolation than their lower secondary counterparts in most of the 11 countries and economies with available data for ISCED 2 and 3. The largest differences are observed in Denmark, where the share of upper secondary teachers reporting their engagement at least once a month in each of the eight collaborative activities is significantly lower than that of their lower secondary counterparts (Table II.4.3). However, the opposite pattern is seen in Croatia, where collaboration through team teaching and providing observation-based feedback is more prevalent among upper secondary teachers (a small but significant difference of 2 percentage points).

How teacher collaboration relates to other dimensions of teacher professionalism

Teachers' collegial contact and engagement through different collaborative activities can define their everyday working conditions, which, in turn, determine satisfaction with their jobs, especially their current working environments (IBF International Consulting, 2013[28]). In addition, teachers could also view collaboration as an opportunity to consult with colleagues and a form of professional support (IBF International Consulting, 2013[28]).

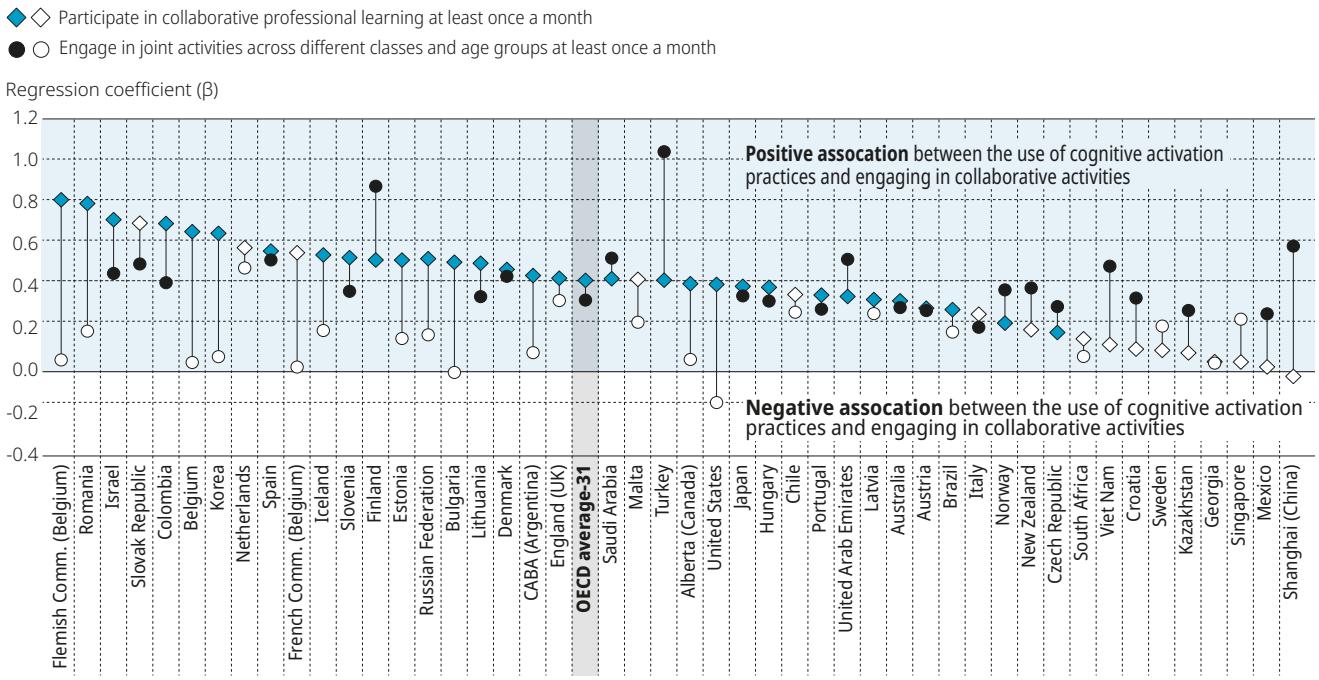
Based on regression analyses, in all countries and economies participating in TALIS with available data, except Malta, teachers who report engaging in professional collaboration with their peers more often tend to report higher levels of job satisfaction, after controlling for teacher characteristics (gender, age, work experience as a teacher at current school and working full-time) (Table II.4.13). Similarly, in all countries and economies participating in TALIS with available data, teachers who report engaging in professional collaboration on a regular basis also tend to report higher levels of self-efficacy, after controlling for teacher characteristics (Table II.4.15).

TALIS also finds a significant positive association between teacher collaboration and the use of cognitive activation practices in the classroom,[3] practices that allow students to evaluate, integrate and apply knowledge within the context of problem solving (Lipowsky et al., 2009[32]). Therefore, the use of cognitive activation practices is one of the key indicators of instructional quality in the classroom. In all countries and economies participating in TALIS with available data, regression analysis shows that, irrespective of teacher characteristics (such as gender, age, work experience as a teacher at current school and working full-time), teachers who report engaging more often in deeper forms of collaboration also tend to report using cognitive activation practices more frequently (Table II.4.17) implying better instructional quality and innovativation in the practices of these teachers.

The use of cognitive activation practices by teachers is not only a sign of instructional quality but also indicates teachers' predisposition towards innovation in their work, as these practices deviate from the traditional lecture model and are focused on creating cross-curricular skills among students (OECD, 2019[33]). Yet, TALIS 2018 results show that these practices are underutilised across the education systems participating in TALIS (OECD, 2019[18]).

Figure II.4.6 **Relationship between the use of cognitive activation practices and engagement in collaborative activities**

Change in the index of cognitive activation practices[1] associated with engaging in the following collaborative activities at least once a month[2, 3, 4, 5]



1. The index of cognitive activation practices measures the frequency with which a teacher uses cognitive activation practices in the classroom, including giving tasks that require students to think critically, having students work in small groups to come up with a joint solution to a problem or task, asking students to decide on their own procedures for solving complex tasks and presenting tasks for which there is no obvious solution. These data are reported by teachers and refer to a randomly chosen class they currently teach from their weekly timetable.

2. Results of linear regression based on responses of lower secondary teachers.

3. The analysis is restricted to teachers reporting that their teaching in the target class is not directed entirely or mainly at special need students.

4. The predictors are dummy variables: the reference category refers to teachers engaging in the respective collaborative activity less than once a month or never.

5. Controlling for the following teacher characteristics: gender, age, years of experience as a teacher at current school, working full-time; for collegiality as measured by collaborative school culture characterised by mutual support and teachers' mutual reliance; and for engaging at least once a month in other forms of collaboration: team teaching, providing feedback based on classroom observations, exchanging teaching materials with colleagues, working with other teachers in the school to ensure common standards in evaluations for assessing student progress and attending team conferences.

Note: Statistically significant coefficients are marked in a darker tone (see Annex B).

Countries and economies are ranked in descending order of the change in the index of cognitive activation practices associated with engaging in participating in collaborative professional learning at least once a month.

Source: OECD, TALIS 2018 Database, Table II.4.19.

StatLink http://dx.doi.org/10.1787/888934083810

Therefore, it becomes imperative to further dissect the relationship between collaboration and use of cognitive activation practices by examining which specific collaborative activities are more strongly associated with the use of cognitive activation practices. The collaborative activities that particularly stand out from the eight activities covered in TALIS are teachers' engagement in collaborative professional learning and in joint activities across different classes and age groups (both these activities are a part of professional collaboration). Regression results show that, in 33 countries and economies participating in TALIS, after controlling for teacher characteristics, teachers' interpersonal relationships and other forms of collaboration, teachers who participate in collaborative professional learning at least once a month tend to use cognitive activation practices in their classroom more often (Figure II.4.6, Table II.4.19). Moreover, in around half of the countries and economies participating in TALIS with available data, there is a significant positive association between teachers' use of cognitive activation practices and their engagement in collaborative activities, such as joint activities across different classes and age groups and working with other teachers in the school to ensure common standards in evaluations, at least once a month.

These findings indicate the importance of collaborative professional learning for instructional improvements and innovation in teaching. Implementing innovative practices requires teachers to continuously reflect on their existing teaching methods and consider changing their knowledge and beliefs (Bakkenes, Vermunt and Wubbels, 2010[25]). Collaborative professional development can allow for these kind of interactions between teachers.

Teachers' international mobility

Teachers' international mobility not only fosters collaboration beyond national borders, but it can also enhance teachers' general interpersonal skills, which, in turn, can positively affect teachers' collaborative endeavours. Teachers can benefit from professional experience in a foreign country in multiple ways. International academic mobility can have an impact on teachers' beliefs and practices, including collaboration. By examining a study abroad programme designed for in-service teachers, He, Lundgren and Pynes (2017[34]) found that teacher participants benefitted from direct interactions and collaborations, both within the group of participants and with teachers in the host countries, through school visits or teaching opportunities. Moreover, a stay abroad for professional purposes can also improve the intercultural competences required to excel when teaching in a multicultural setting – see Chapter 4 of *TALIS 2018 Results (Volume I)* (OECD, 2019[18]), as well as Rundstrom Williams (2005[35]).

The definition of international academic mobility used in TALIS 2018 is a period of study, teaching or research in a country other than the teacher's country of residence that is of limited duration and assumes that the teacher will return to his or her country at the end of the designated period (Ainley and Carstens, 2018[1]). To examine international academic mobility, TALIS asks teachers whether they have been abroad for professional purposes in their career, either as a teacher or as a student, as part of their teacher education or training.[4] Overall, the percentage of teachers who have been abroad for professional purposes in their career as a teacher or during teacher education or training ranges from 2% in Viet Nam to 82% in Iceland (Table II.4.20). The eleven countries and economies with the highest shares of teachers with professional experience abroad (over 45% of teachers) are a part of the European Union/European Economic Area,[5] hence eligibile for EU mobility schemes.

TALIS also asks teachers about the specific objectives of their stays abroad for professional purposes.[6] These objectives include studying as part of education, language learning, learning in other subjects, accompanying visiting students, establishing contact with schools abroad and teaching. In particular, one of the objectives for participating in professional visits in other countries, as reported by teachers, is establishing contact with schools abroad, which is a special form of collaboration. The percentage of teachers who report that establishing contact with local schools was one of the professional purposes of their visit abroad ranges from 12% in Georgia to 63% in Romania (Table II.4.21). The countries where more than 50% of teachers report establishing contact with local schools as one of the professional purposes of their visit abroad include Estonia, Finland, Hungary, Latvia, Romania and Slovenia.

TALIS data allow the relationship between teachers' international mobility and their engagement in professional collaboration, as well as teachers' perceived self efficacy, to be examined. Regression analysis shows that, in more than half of the countries and economies with available data, teachers who have been abroad for professional purposes in their career as a teacher or during teacher education or training, tend to engage in professional collaboration more often after controlling for teacher characteristics, such as gender, age, work experience as a teacher at current school and working full-time (Table II.4.22). The only country that participates in TALIS where a significant negative association is observed between international mobility and engagement in professional collaboration is the United Arab Emirates. Similarly, in about half of the countries and economies with available data, teachers with international professional experience tend to report higher levels of self-efficacy after controlling for teacher characteristics such as gender, age, work experience as a teacher at the current school and working full-time (Table II.4.23). However, these results need to be interpreted with caution, as the explanatory power of the models are limited (the coefficients of determination R^2 are low).

Teachers' collegial relationships

Collegiality can be understood as positive interpersonal relationships among teachers and a sign of an environment conducive to collaboration (Jarzabkowski, 2002[36]). Interpersonal relationships, including mutual support, trust and solidarity, are essential building blocks of a collaborative school culture that is, in turn, integral to effective collaboration (Hargreaves and Fullan, 2012[37]; Hargreaves and O'Connor, 2018[38]). However, the relationship between collegiality and collaboration works in both directions. Through increased interactions and interdependence, frequent collaborative actions among colleagues also reinforce positive relationships, strengthen trust, and support and enhance the overall school climate (Rutter, 2000[39]; Rutter and Maughan, 2002[40]).

TALIS allows in-depth exploration across participating countries and economies of the quality of interpersonal and working relationships among staff members in a school, which can be grouped under collegiality (Hargreaves, 1992[41]; Kelchtermans, 2006[42]). This kind of inquiry is imperative, as TALIS acknowledges that collegiality and collaboration are closely related (Ainley and Carstens, 2018[1]).

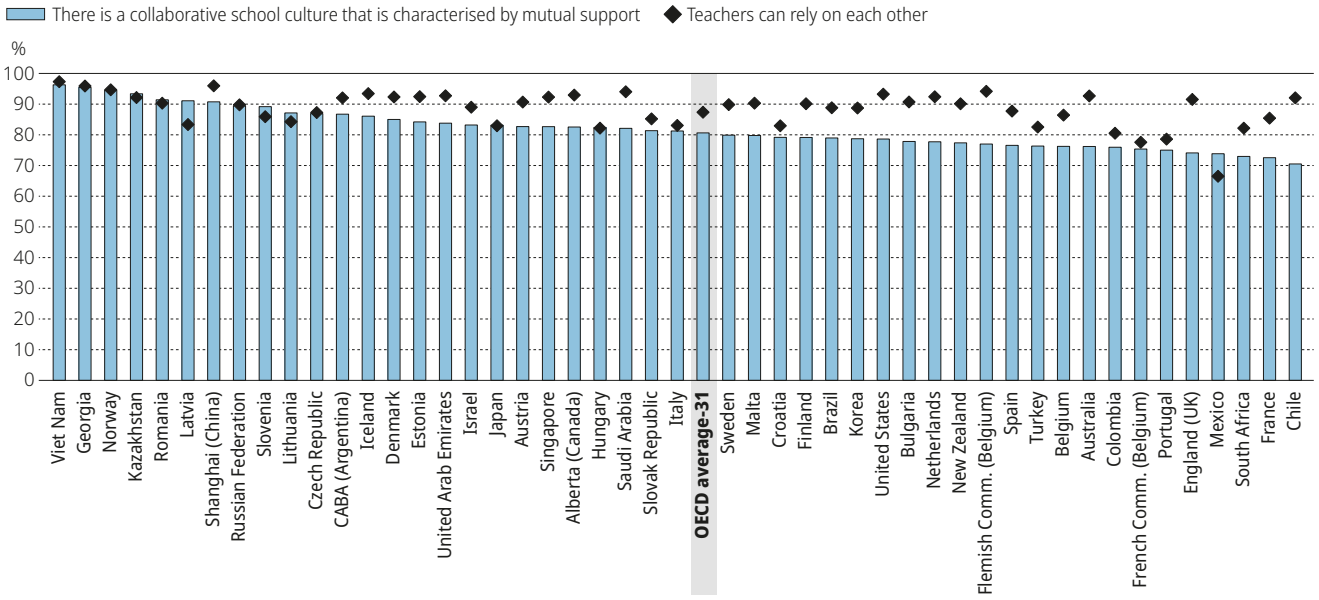
In order to capture collegiality, TALIS asks teachers and principals about their views ("strongly disagree"; "disagree"; "agree"; or "strongly agree") on a series of indicative statements: "the school has a culture of shared responsibility for school issues"; "there is a collaborative school culture characterised by mutual support"; "the school staff share a common set of beliefs about teaching and learning"; "the school encourages staff to lead new initiatives"; and "teachers can rely on each other".

On average across the OECD, 87% of teachers "agree" or "strongly agree" that "teachers can rely on each other" in the schools they work in (Figure II.4.7, Table II.4.24). However, in some countries and economies, a relatively low share of teachers report that "teachers can rely on each other", especially in Mexico (66%), the French Community of Belgium (78%) and Portugal (79%). On the other hand, in Georgia, Shanghai (China) and Viet Nam, more than 95% of teachers report that "teachers can rely on each other" in their current schools.

Teachers' agreement that their school has "a collaborative school culture which is characterised by mutual support" is widespread in most countries and economies participating in TALIS with, on average across the OECD, 81% of teachers who "agree" or "strongly agree" with the statement (Figure II.4.7, Table II.4.24). The three countries with the highest proportion of teachers reporting a collaborative culture in their school are Viet Nam (96%), Georgia (95%) and Norway (95%). However, in some countries and economies, this opinion is less prevalent. In Chile, England (United Kingdom), France, Mexico and South Africa, less than 75% of teachers "agree" or "strongly agree" that there is a collaborative culture in their school characterised by mutual support.

Figure II.4.7 **Teacher collegiality**

Percentage of lower secondary teachers who "agree" or "strongly agree" with the following statements



Countries and economies are ranked in descending order of the percentage of lower secondary teachers who "agree" or "strongly agree" that there is a collaborative school culture that is characterised by mutual support.

Source: OECD, TALIS 2018 Database, Table II.4.24.

StatLink http://dx.doi.org/10.1787/888934083829

On average across the OECD, the proportion of teachers reporting that the school has a culture of shared responsibility for school issues and the proportion of teachers agreeing that the school staff share a common set of beliefs about teaching and learning are both 76% (Table II.4.24). In Belgium and in its French Community, Chile, England (United Kingdom), France, and the Slovak Republic, less than 70% of teachers "agree" or "strongly agree" that their "school has a culture of shared responsibility for school issues". Only in Georgia, Lithuania and Viet Nam is this view shared by 90% or more of the teachers. The variation across countries and economies is even higher in terms of the share of teachers reporting that school staff share a common set of beliefs about teaching and learning. In Georgia, Kazakhstan, Lithuania, the Russian Federation, Saudi Arabia, Shanghai (China) and Viet Nam, 90% of teachers or more agree that "the school staff share a common set of beliefs about teaching and learning", while in Austria, Croatia, the French Community of Belgium and the Slovak Republic, less than 65% of teachers share that view.

On a positive note, over the past five years, views on collegiality have been on the rise in around one-third of the TALIS countries and economies with comparable data. Teachers' agreement with the presence of "a collaborative school culture characterised by mutual support" has increased significantly in 11 of the 32 countries and economies with comparable data between 2013 and 2018 (Table II.4.27). Similarly, the proportion of teachers reporting that "the school has a culture of shared responsibility for school issues" has increased in 8 of the 32 countries and economies with comparable data between 2013 and 2018. England (United Kingdom), Mexico and Sweden have experienced a significant increase of 5 percentage points or more in the share of teachers reporting a collaborative school culture and also in the share of teachers who agree that "the school has a culture of shared responsibility for school issues". Chile is the only country where collegiality, as reported by teachers in these two indicators, has decreased over the past five years.

TALIS data also make it possible to explore the level of mutual support among teachers from the viewpoint of innovation. On average across the OECD, 78% of teachers report that "most teachers in [their] school provide practical support to each other for the application of new ideas." This view of collegiality seems to be more pronounced in Georgia, Kazakhstan, Shanghai (China) and Viet Nam (where more than 90% of teachers so reported) and less prominent in Belgium and Portugal (where less than 70% of teachers so reported) – see Table I.2.35 in *TALIS 2018 Results (Volume I)* (OECD, 2019[18]). Similarly, about 81% of teachers, on average across the OECD, report that their school encourages staff to lead new initiatives (Table II.2.24).

Literature suggests that teacher collegiality may be driven by the social contexts of schools within education systems; for example, collegiality may be stronger in more remote schools, given the interdependence of teachers facing an often more challenging setting (Avalos-Bevan and Bascopé, 2017[43]; Jarzabkowski, 2003[44]). However, TALIS data find this true only in a few countries and economies, and it is not possible to draw conclusions from an international perspective. The countries where the share of teachers who work in rural schools report to "agree" or "strongly agree" that there is a collaborative school culture characterised by mutual support is significantly higher than among their colleagues working in cities include Alberta (Canada), Bulgaria, Chile, Hungary, New Zealand, Portugal, the Russian Federation, Saudi Arabia, Spain, Turkey and the United Arab Emirates (Table II.4.28). One feature of rural schools that could explain this pattern could be their smaller size compared to urban schools (Avalos-Bevan and Bascopé, 2017[43]).

The type of school (publicly managed versus privately managed) seems to matter for collegiality. In 15 countries and economies participating in TALIS, the share of teachers reporting the presence of a "collaborative school culture characterised by mutual support" is significantly higher among teachers working in privately managed schools than among those working in publicly managed schools (Table II.4.28). There are only three countries, Chile, Japan and the United Arab Emirates where teachers in publicly managed schools are more in agreement than their peers in privately managed schools with the statement that "there is a collaborative school culture characterised by mutual support". There is a similar overall pattern when looking at teachers' views on mutual reliance. In 14 countries and economies, the share of teachers who report that "teachers can rely on each other" is higher among private school teachers than among public school teachers (Table II.4.29). Only in Japan, Korea and the United Arab Emirates is the share higher among public school teachers than among private school teachers.

TALIS data make it possible to test the relationship between the frequency with which teachers engage in deeper forms of collaborative activities and teacher collegiality. Teachers' engagement in professional collaboration is regressed on teachers' perceptions of collaborative school culture characterised by mutual support and the possibility of teachers relying on each other. As expected, in all countries and economies participating in TALIS, teachers who agree that "there is a collaborative school culture characterised by mutual support" also tend to engage more often in professional collaboration (Table II.4.30). Moreover, in around two-thirds of the countries and economies participating in TALIS, there is a significant positive relationship between teachers' reliance on each other and teachers' engagement in professional collaboration after controlling for collaborative school culture characterised by mutual support. These results hold even after controlling for teacher characteristics (gender, age, work experience as a teacher at current school and working full-time) (Table II.4.31).

Looking at the association between teacher characteristics and teachers' engagement in collaborative activities reveals that, in more than one-fourth of the countries and economies participating in TALIS, male teachers tend to engage more often in deeper forms of collaboration (Table II.4.31). Moreover, while there is a significant negative association between age and engagement

in professional collaboration in around one-fourth of the countries and economies participating in TALIS, once age is accounted for, the relationship between experience at the current school and collaborating with peers is positive in more than one-third of the participating countries and economies. This implies that teachers with more years of experience tend to collaborate more frequently than teachers of the same age with fewer years of experience. Teachers who work full-time also tend to engage in professional collaboration more often, after controlling for other teacher characteristics and teachers' interpersonal relationships, in more than one-third of the countries and economies participating in TALIS.

Regression analyses were conducted to further examine the assumption that teachers' interpersonal relationships matter for collaboration. As already discussed above, in all countries and economies participating in TALIS with available data (except Malta, in the case of the association between collaboration and job satisfaction) teachers who report engaging in professional collaboration on a regular basis tend to report higher levels of job satisfaction and self-efficacy (Tables II.4.13 and II.4.15). In a second step, the two indicators of collegiality (teachers' views on collaborative school culture characterised by mutual support and on teachers' reliance on each other) are introduced in the two separate regression models examining the relationship of professional collaboration with job satisfaction and self-efficacy (Tables II.4.14 and II.4.16). Results of this second regression show that the relation between teachers' engagement in deeper forms of collaboration and job satisfaction is still significantly positive in all countries and economies participating in TALIS with available data, except Malta and the Netherlands, but that the strength of the relationship diminishes in all countries and economies (the size of the regression coefficient is lower) (Table II.4.14). The same pattern arises after introducing indicators of collegiality into the regression model examining the relationship between collaboration and self-efficacy (Table II.4.16). This suggests that parts of the positive relationships between professional collaboration and job satisfaction and professional collaboration and self-efficacy are attributable to teachers' interpersonal relationships.[7]

Positive views on interpersonal relationships among teachers in their working environments can enable teachers to feel more resilient against the demanding and challenging aspects of their work (Desrumaux et al., 2015[45]) TALIS results show that, even after controlling for teacher characteristics, such as gender, age, work experience as a teacher at current school and working full-time, teachers who report that, in their school, there is a collaborative school culture characterised by mutual support and that teachers can rely on each other tend to report having better well-being and less stress at work (Table II.4.32).

Box II.4.4. **Teacher collegiality from primary to upper secondary education**

TALIS findings show that teachers' agreement with the presence of collegiality within their school decreases as the level of education they teach increases. In 9 of the 13 countries and economies with available data for ISCED 1 and 2, teacher collegiality is more prevalent among primary teachers than among lower secondary teachers, as measured by the presence of a school culture of shared responsibilities for school issues, by mutual support and by school staff sharing a common set of beliefs about teaching and learning (Table II.4.25). Large significant differences for these indicators (10 percentage points or more depending on the indicator) are observed in England (United Kingdom), the Flemish Community of Belgium and France. CABA (Argentina) and Denmark are the only countries and economies with available data where there is no significant difference found in the views on collegiality of primary and lower secondary teachers.

The difference between primary and lower secondary teachers' views on collegiality decreases when looking at whether teachers in the school can rely on each other. In 6 of the 13 countries and economies with available data for ISCED 1 and 2, a significantly larger share of primary teachers than their peers in lower secondary education report teachers' mutual reliance: Japan (difference of 6 percentage points), Korea (6 percentage points), France (5 percentage points), Sweden (4 percentage points), England (United Kingdom) (3 percentage points) and the Flemish Community of Belgium (2 percentage points) (Table II.4.25).

Overall, teacher collegiality is more prevalent among lower secondary teachers than among upper secondary teachers in most countries and economies with available data for ISCED 2 and 3. Collegiality is measured by the presence of a school culture of shared responsibility for school issues and by mutual support and school staff sharing a common set of beliefs about teaching and learning, as well as by teachers' mutual reliance on each other. In Croatia, Slovenia and Turkey, the share of teachers reporting the presence of collegiality in their school is significantly larger among lower secondary teachers than among upper secondary teachers (difference of 3 percentage points or more, depending on the indicator) (Table II.4.26). On the other hand, in the United Arab Emirates, collegiality is more prevalent among upper secondary teachers than among their colleagues at lower secondary level, while in Alberta (Canada), there is no significant difference between lower and upper secondary levels. Although other countries and economies with available data for ISCED 2 and 3 display mixed patterns, depending on the indicator being considered, the overall tendency is towards higher levels of collegiality in lower secondary education compared to upper secondary level.

The role of school leaders in fostering collaboration

School leadership can shape the degree of collaboration as well as the culture of collaboration in the school. Collaboration that is mandated by school leaders (contrived collegiality) may lead to reduced collaboration among teachers (Hargreaves, 1994[46]; Hargreaves and Dawe, 1990[47]), but school leaders have other means of facilitating collaboration, such as building relationships within the school community and promoting distributed leadership characterised by collaborative and collective decision making (Ainley and Carstens, 2018[1]). Research based on a transformational leadership perspective shows that leadership actions of school leaders are strong predictors of collaborative actions between teachers (Leithwood, Leonard and Sharratt, 1998[48]; Marks and Printy, 2003[49]; O'Donnell and White, 2005[50]).

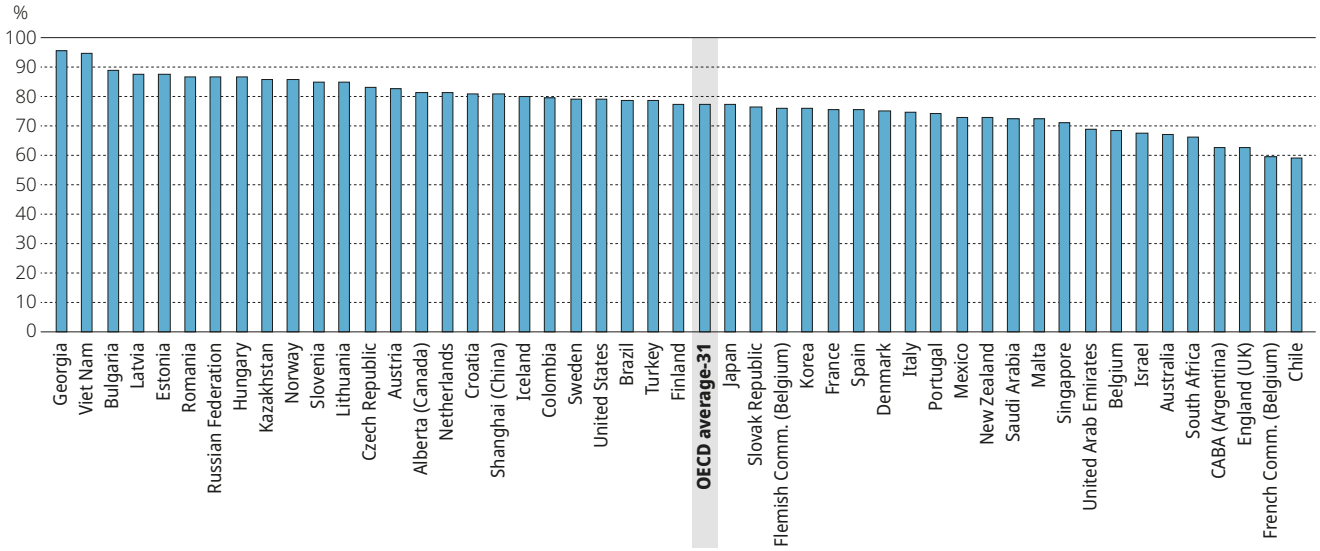
Principals who promote distributed decision making among a wide range of stakeholders in the school, including teachers, parents and students, may also foster teacher collaboration within the school. Based on the findings of TALIS 2013, there is a positive relationship between the opportunities for stakeholders (such as staff, parents and students) to participate in school decisions and teacher collaboration (OECD, 2014[15]). Regression analysis further supports these findings, as it shows that teachers who report that their school provides staff with opportunities to participate in school decisions also tend to engage in deeper forms of collaborative activities more frequently in most countries and economies participating in TALIS, after controlling for teacher characteristics, such as gender, age, work experience as a teacher at current school and working full-time (Table II.4.33). Providing opportunities for parents and students also matters for professional collaboration, albeit to a lesser extent. In around two-thirds of the countries and economies participating in TALIS, there is a significant positive association between offering students the chance to participate in school decision making and the frequency with which teachers collaborate, after accounting for other factors, such as the involvement of staff and parents in school decisions, as well as other teacher characteristics.

TALIS provides information on the prevalence of distributed school decision making by asking both teachers and principals the extent to which they agree ("strongly disagree" "disagree"; "agree"; or "strongly agree") that the school provides staff, students and parents with "opportunities to actively participate in school decisions".

The opportunity for staff, parents and students to participate in school decisions varies by countries and economies. On average across the OECD, 77% of teachers report that they "agree" or "strongly agree" that their school provides staff and parents with "opportunities to "actively participate in school decisions", while 71% of teachers report that students can participate in decision making (Table II.4.24). However, in Australia, Belgium and its French Community, CABA (Argentina), Chile, England (United Kingdom), Israel, South Africa and the United Arab Emirates, less than 70% of teachers agree that the school provides staff with "opportunities to actively participate in school decisions" (Figure II.4.8).

Figure II.4.8 **Opportunities for staff to participate in school decisions**

Percentage of lower secondary teachers who "agree" or "strongly agree" that their school provides staff with opportunities to actively participate in school decisions



Countries and economies are ranked in descending order of the percentage of lower secondary teachers who "agree" or "strongly agree" that their school provides staff with opportunities to actively participate in school decisions.

Source: OECD, TALIS 2018 Database, Table II.4.24.

StatLink http://dx.doi.org/10.1787/888934083848

Opportunities for staff and parents to actively participate in school decisions have increased significantly (by 2-13 percentage points) in 13 countries for staff, in 13 countries for parents, and (for both staff and parents) in 9 of the 32 countries and economies with comparable data between 2013 and 2018 (Table II.4.27). There are only two countries, Chile and Singapore, where the proportion of teachers reporting opportunities for staff and parents to participate in school decisions has decreased significantly over the past five years. Students' prospects of actively taking part in decisions related to their schools have increased by 5 percentage points or more in 18 of the 32 countries and economies with comparable data between 2013 and 2018. Singapore is the only country where the proportion of teachers who report that the school provides students with opportunities to actively participate in school decisions has declined significantly over the past five years.

In many countries and economies participating in TALIS, school decision making is more distributed in rural schools than in city schools. On average across the OECD, 83% of teachers in rural schools report that the school provides staff with opportunities to participate in decision making, while 76% of teachers working in cities share the same view (Table II.4.34). Similarly, a significantly higher proportion of teachers in rural schools (75%) than teachers working in cities (70%), tend to consider that students have an opportunity to be involved in school decisions (Table II.4.35).

Moreover, TALIS data also show that school decision making tends to be more distributed in publicly managed schools than in privately managed schools. On average across OECD countries and economies in TALIS with available data, the share of public school teachers who report staff and students have opportunities to actively participate in school decisions is 3 percentage points higher than the share of their peers working in private schools who report this (Table II.4.34; Table II.4.35). Large significant differences (over 15 percentage points) are observed in CABA (Argentina), Chile, Japan and Spain.

Box II.4.5. **School-based structures for teacher collaboration in Kazakhstan and France**

In Kazakhstan, all schools have at least one methodological association in which teachers meet regularly to discuss instructional methods – especially for specific topics – plan and prepare instructional materials together, and provide peer feedback based on classroom visits and observations. Groups of teachers who teach the same subject also come together to discuss the challenges of individual students and identify group-based resolutions of such problems. School leaders play a key role in fostering this form of collaboration among teachers, which is also evident in their instructional leadership activities (see Chapter 5). Therefore, one of the key competencies in the professional development framework for school leaders is developing skills to foster collaboration with teachers and other stakeholders. For Kazakh teachers, this school-based approach to professional development creates ample opportunities for collaboration within their school, and that is reflected in the high prevalence of frequent collaboration in Kazakhstan.

The French government has identified the need to reduce the impact of social and economic inequalities that affect student achievement and attainment. Therefore, in 2015, they introduced reforms to the "Educational Priority" policy for challenging schools, those that have the greatest number of students from disadvantaged backgrounds. Key measures introduced in these reforms focus on having trained, stable and well supported teaching teams in schools that are a part of the Educational Priority Networks. In these schools, teachers' schedules are differently organised to give them more non-teaching time, and allow for greater teamwork with colleagues, continuous professional development, devising innovative lessons and monitoring students, and collaborating with parents. They also receive the support of specially trained teacher trainers. The programme also has implications on additional teacher recruitment to create the possibility of team teaching in classrooms.

Source: Ministère de l'Éducation nationale, de l'Enseignement supérieur et de la Recherche (2015[51]), *Educational priority – A government programme to cut the impact of social inequalities*, https://cache.media.eduscol.education.fr/file/dossiers/39/1/EDUCATIONAL_PRIORITY_527796_759391.pdf; OECD/The World Bank, (2015[52]), *OECD Reviews of School Resources: Kazakhstan 2015*, OECD Reviews of School Resources, https://doi.org/10.1787/9789264245891-en.

The large majority of school leaders agree that their school is generally characterised by the presence of distributed decision making and collegiality. On average across the OECD, almost all principals (98%) report that they "agree" or "strongly agree" that "the school provides staff with opportunities to actively participate in school decisions" (Table II.5.9 in Chapter 5). Similarly, on average across the OECD, 95% of principals agree that "there is a collaborative school culture which is characterised by mutual support" and that "teachers can rely on each other".

TALIS provides an opportunity to compare teachers' and school leaders' perceptions of the presence of distributed leadership and collaborative school climate in their schools. TALIS data reveal that the majority of teachers across the OECD have the same opinion as their principals[8] regarding opportunities for staff, parents and students to participate in school decisions, as well as collegiality. On average across OECD countries and economies in TALIS, 77% of teachers report agreeing with their principals

regarding opportunities for staff to actively participate in school decisions (Table II.4.36). Moreover, 79% of teachers have the same view as their principals concerning the presence of a collaborative school culture characterised by mutual support, and 85% of teachers agree with their principals regarding teachers' reliance on each other. It is noteworthy that education systems in which a lesser proportion of teachers share the same views on distributed leadership with their principals are also those in which distributed leadership is least prevalent, based on teachers' reports.

HOW DO TEACHERS MAKE USE OF FEEDBACK?

Teacher feedback is an important lever to improve teaching quality, since it aims to improve teachers' understanding of their methods and practices. Feedback can improve teachers' effectiveness by both recognising teachers' strengths and addressing weaknesses in their pedagogical practices (OECD, 2014[15]; OECD, 2013[53]). Ultimately, teachers' improved instructional capacity translates into better student outcomes. Indeed, there is ample research evidence asserting a strong association between teaching quality and student learning outcomes (Darling-Hammond, 2000[54]; Hanushek, 2010[55]; Hanushek and Rivkin, 2010[56]; Hattie, 2009[57]; Rivkin, Hanushek and Kain, 2005[58]; Rockoff, 2004[59]; Rowe, 2003[60]). Research also shows that providing teachers with constructive feedback based on teaching and learning in their classrooms has the largest impact on student performance of any school intervention (Hattie, 2009[57]).

Peer feedback from other teachers is a particularly important and unique form of collaboration between educators as it involves close contact and interaction between colleagues, driven by the purpose of learning from colleagues' expertise and suggestions. It can be conducive to further collaborative activities among teachers by having a positive impact on the overall collaborative culture, through teachers' exchanges and interactions (Jensen and Reichl, 2011[61]; OECD, 2014[15]).

Besides being a collaborative activity, feedback to teachers can affect teaching quality through channels of evaluation and appraisal. While the goal of appraisal systems is to measure teachers' performance, a feedback component can add further value to the process by making it more improvement-driven for teachers (Ainley and Carstens, 2018[1]; Feeney, 2007[62]; OECD, 2014[15]). Teacher feedback can be also considered a key feature of effective professional development (Ingvarson, Meiers and Beavis, 2005[63]) and of continuous learning, through the process of seeking, receiving, and responding to feedback (Jensen and Reichl, 2011[61]).

In TALIS, feedback is defined as any communication teachers receive about their teaching, based on some form of interaction with their work (e.g. observing teachers while teaching students, discussing the curriculum taught by teachers or students' results). Feedback can be provided through informal discussions with teachers or as part of a more formal and structured arrangement. Following this definition of feedback, TALIS asks teachers whether they have received feedback in their school and, if so, through which methods and from whom they received it.

This section first describes the degree to which teachers receive feedback and the sources and methods through which teachers receive feedback. It then discusses how teachers view the value of feedback for improving their practice. Finally, the section concludes with a discussion of the conditions under which the impact of feedback is maximised for teachers.

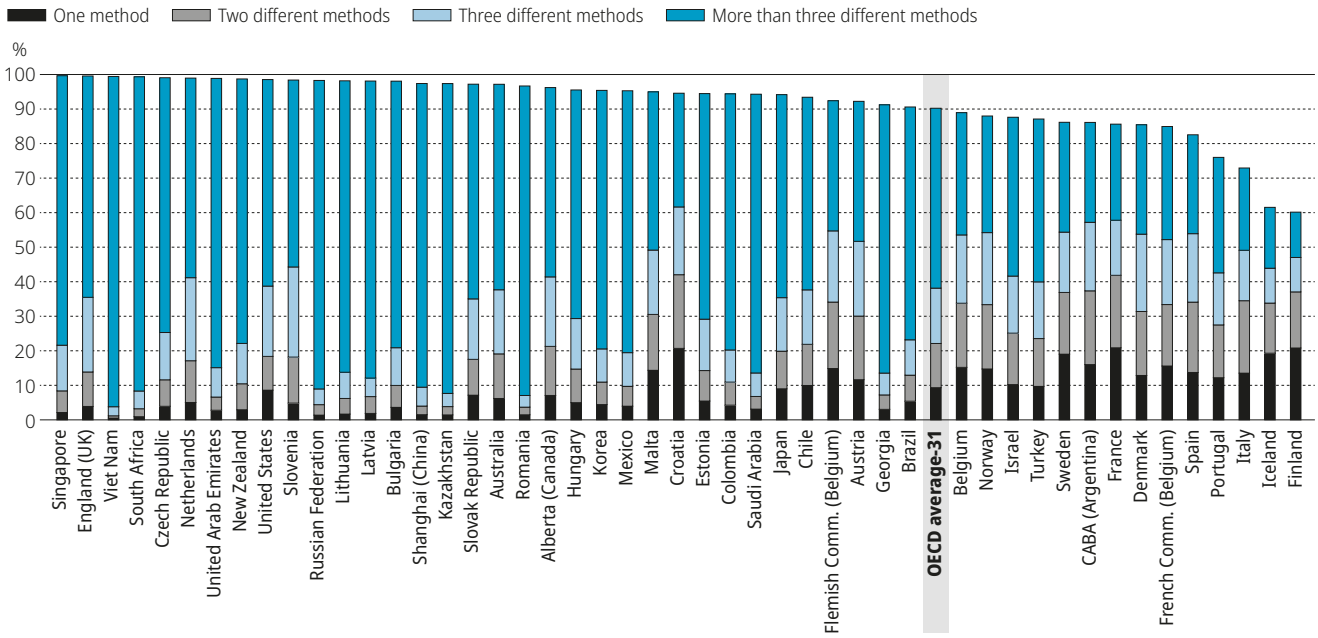
Prevalence of feedback

With respect to the prevalence of feedback in schools, most teachers have received feedback at some point in the countries and economies participating in TALIS. On average across the OECD, 90% of teachers report having received feedback from at least one of the individuals or bodies considered ("external individual or bodies"; "school principal or member(s) of the school management team"; and "other colleagues within the school") and through at least one of the six methods (observation of teachers' classroom teaching; student survey responses related to teachers' teaching; assessment of teachers' content knowledge; external results of teachers' students; students' school-based and classroom-based results and self-assessment of teachers' work) included in the TALIS questionnaire (Figure II.4.9). In the Czech Republic, England (United Kingdom), Singapore, South Africa and Viet Nam, feedback is almost universal, with more than 99% of teachers who report having received feedback in their school. However, feedback is still rare in certain countries and economies, where a considerable share of teachers report never receiving any feedback in their school, as in Finland (40%), Iceland (38%), Italy (27%) and Portugal (24%) (Table II.4.37).

In certain education systems, the prevalence of feedback received varies according to teachers' years of teaching experience. In a third of the countries and economies participating in TALIS, the share of teachers who report receiving feedback in their school is significantly higher for experienced teachers (more than five years of experience) than for novice teachers (less than or equal to five years of experience) (Table II.4.37). The difference could be explained by the simple fact that experienced teachers have been in the profession for a longer time and typically have more years of experience at their current school – Table I.3.9 in *TALIS 2018 Results (Volume I)* (OECD, 2019[18]) – hence they have had more opportunities to receive feedback at some point at the school.[9] In the French Community of Belgium, CABA (Argentina), Estonia, Finland, France, Iceland, Italy and Sweden, the proportion of teachers who report receiving feedback is more than 6 percentage points higher among more experienced teachers than among novice teachers.

Figure II.4.9 **Feedback received by teachers, by number of methods**

Percentage of lower secondary teachers who have received feedback based on the following number of different methods[1]



1. Different methods of feedback include: observation of the teacher's classroom teaching, student survey responses related to the teacher's teaching, assessment of the teacher's content knowledge, external results of students the teacher teaches (e.g. national test scores), school-based and classroom-based results (e.g. performance results, project results, test scores) and self-assessment of the teacher's work (e.g. presentation of a portfolio assessment, analysis of my teaching using video).

Countries and economies are ranked in descending order of the overall percentage of lower secondary teachers who have received feedback in their school.

Source: OECD, TALIS 2018 Database, Table II.4.47.

StatLink http://dx.doi.org/10.1787/888934083867

Only in Alberta (Canada), the Flemish Community of Belgium and Shanghai (China) is there a significantly higher share of novice teachers than their experienced peers who report having received feedback at their school. It is noteworthy that, in these three countries, more than 80% of teachers report that supervision by the school principal and/or experienced teachers was included in their induction at their current school, which could be an important channel for feedback to novice teachers – Table I.4.42 in *TALIS 2018 Results (Volume I)* (OECD, 2019[18]).

Sources of feedback

It is possible to identify the different sources from whom teachers have received feedback, both at the school level and externally from individuals or bodies. School-level sources of feedback include the school principal, members of the school management team or other colleagues within the school. Information provided by TALIS on the different sources of feedback makes it possible to analyse how feedback is organised within different education systems in terms of distribution of responsibilities and school autonomy, as well as school-level actions aimed at improving teaching and learning processes (OECD, 2014[15]). Education systems where external individuals or bodies are the most common source of feedback tend to reflect a more centralised and accountability-driven system of teacher feedback. The prevalence of feedback from the school principal, members of the school management team or other colleagues within the school signals a more decentralised approach, with schools having more responsibility and autonomy in designing and executing their own feedback system. The prevalence of different sources of feedback may also reflect the general state of collaboration between different stakeholders within an education system.

TALIS results show that teachers receive feedback from multiple sources. On average across the OECD, 21% of teachers report receiving feedback from the three sources listed in the questionnaire (external individuals or bodies, the school principal or member of the school management team and other colleagues within the school who are not part of the school management team), 39% of teachers report two different sources of feedback out of the three, while 30% report only a single source (Table II.4.43). However, there is great variation across countries and economies in terms of the number of different sources of feedback for teachers. In CABA (Argentina), Korea and Turkey, feedback tends to be confined to certain stakeholders, with at least 50% of teachers who report receiving feedback from a single source, whereas, more than 30% of teachers report getting

feedback from the three different sources considered in TALIS in 11 countries and economies (Bulgaria, the Czech Republic, England [United Kingdom], Hungary, Latvia, Lithuania, Romania, the Russian Federation, Slovenia, the United Arab Emirates and Viet Nam). Central and Eastern Europe stands out as the region where having multiple sources of feedback seems to be the norm for most education systems.

School-level feedback (received from the school principal, members of the school management team and other colleagues in the school) is the most prominent source of feedback for teachers, as reported by 87% of teachers, on average across the OECD (Table II.4.40).[10] TALIS results also show that feedback from external individuals and bodies is less prevalent, as 38% of teachers report receiving feedback from these entities, on average across the OECD. The only exception to this pattern is France, where feedback from external individuals or bodies (70%) is more common than school-level feedback (63%). In addition to France, at least 60% of teachers report receiving feedback from external sources in Romania (64%), Bulgaria (61%) and Viet Nam (60%).

Methods of feedback

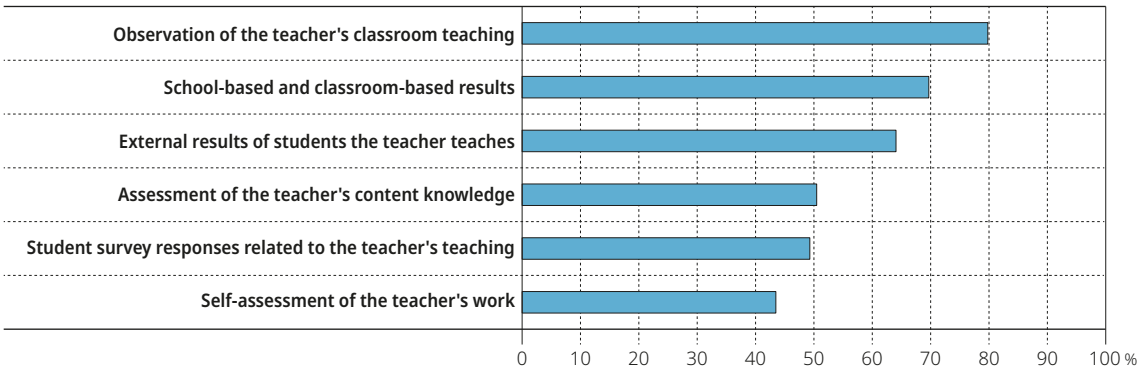
It is worth analysing the types of information based on which teachers receive feedback, as each has its own characteristics and advantages. TALIS reveals that teachers receive feedback based on different types of information (referred to as methods based on which teachers report to receive feedback), but it is difficult to evaluate the effectiveness of specific methods. Research suggests that more frequent and specific feedback based on evidence from classroom practice may lead to improvements in teacher performance and student achievement (Steinberg and Sartain, 2015[64]; Taylor and Tyler, 2012[65]). Teachers' self-assessment and parent surveys are more loosely associated with student achievement because they can offer less standalone evidence on classroom teaching compared to other methods of feedback (such as peer observations, student performance and teacher assessments) (Jensen and Reichl, 2011[61]). Feedback based on assessments and student performance is important, as it provides evidence on the outcomes of teachers' classroom instruction[11] but, to provide teachers with more holistic information on their teaching practice, it should not be a stand-alone method of providing feedback (Jensen and Reichl, 2011[61]). Thus, the different methods of offering feedback can provide valuable complementary information to teachers about their teaching processes and outcomes.

TALIS covers a range of different methods through which teachers receive feedback: observation of classroom teaching; student survey responses related to teaching; assessment of teachers' content knowledge; external results of students taught by the teacher (e.g. national test scores); school-based and classroom-based results (e.g. performance results, project results, test scores); and self-assessment of teachers' work (e.g. presentation of a portfolio assessment, analysis of teaching using video).

Classroom observation and students' results, whether school-based, classroom-based or external, are common types of evidence based on which teachers receive feedback. Out of all the teachers who responded to the survey, on average across the OECD, the majority of teachers report having received feedback at some point in time in their school,[12] through classroom observations (80%), students' school-based and classroom-based results (70%) and external results of students the teacher teaches (64%) (Figure II.4.10, Table II.4.44). On the other hand, on average across OECD countries and economies in TALIS, 50% or less of the teachers report receiving feedback based on teachers' self-assessment of their work (43%), student survey responses related to teaching (49%) or assessment of the teachers' content knowledge (50%).

Figure II.4.10 **Methods of feedback received by teachers**

Percentage of lower secondary teachers reporting they have received feedback based on the following methods (OECD average-31)



Values are ranked in descending order of the prevalence of methods of feedback received by lower secondary teachers.

Source: OECD, TALIS 2018 Database, Table II.4.44.

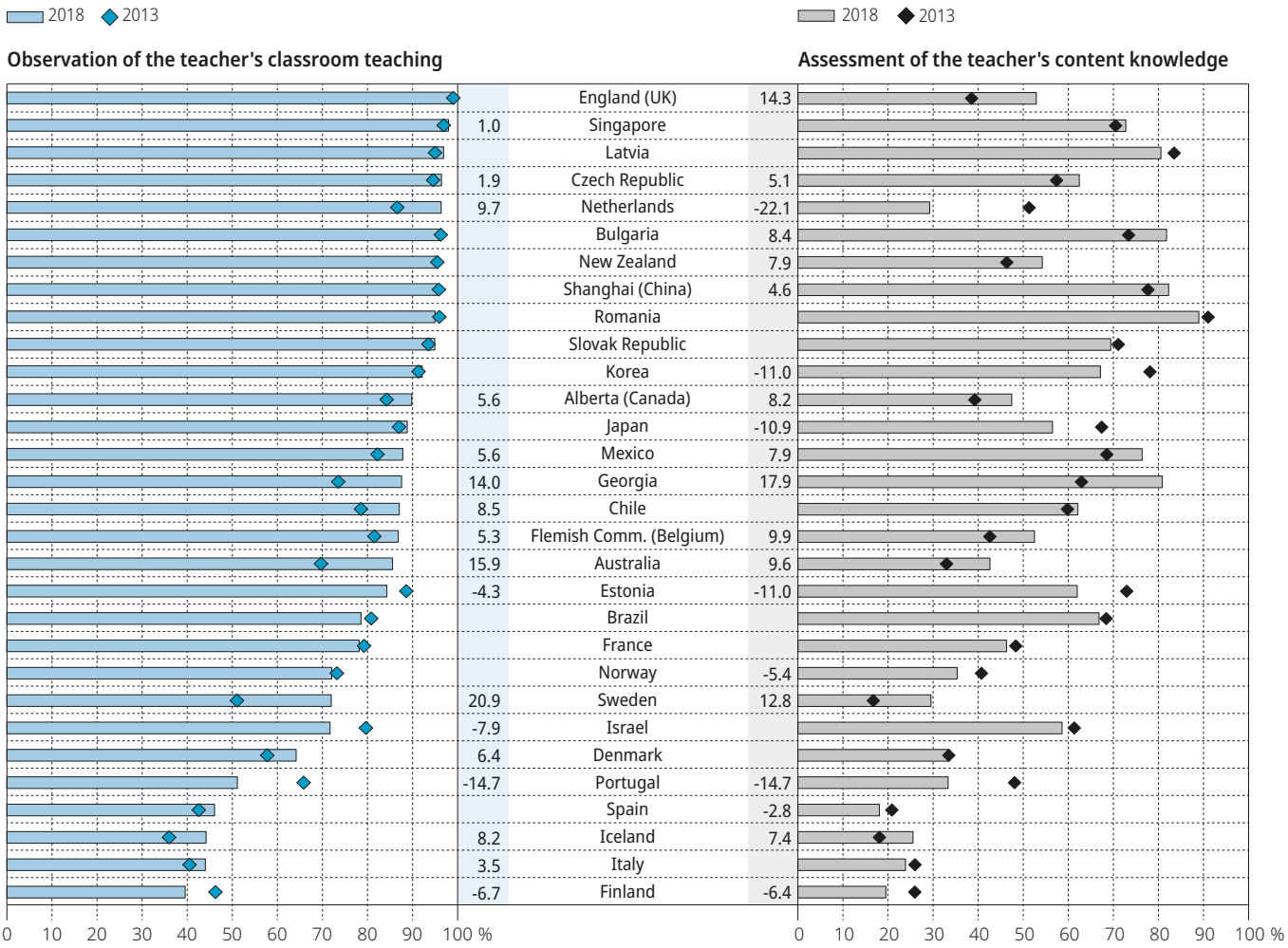
StatLink http://dx.doi.org/10.1787/888934083886

The prevalence of using classroom observation to provide feedback is desirable, since it is evidence-based and directly provides information on practitioners' teaching processes. Although some may find it intimidating, teachers say that this method improves teaching and learning as well as collegiality (Kumrow and Dahlen, 2002[66]). However, it is not common practice in all of the countries and economies participating in TALIS. At least 25% of teachers report never having received feedback at their school via classroom observation in CABA (Argentina), Colombia, Denmark, Finland, Iceland, Israel, Italy, Norway, Portugal, Spain and Sweden (Table II.4.44). It is apparent that classroom observation is underutilised in all Nordic countries, where teachers are generally less likely to receive feedback using this method.

Moreover, comparing these teachers' reports on feedback received with teachers' reports on providing feedback to other teachers based on observations (discussed in the first section of this chapter) underlines that this practice is still far from being mainstreamed and part of teachers' routine activities. Indeed, observing other teachers' classes and providing feedback to peers is not a regular practice for teachers in most countries and economies participating in TALIS. On average across the OECD, only 15% of teachers report providing feedback based on observation of other teachers' classes more than four times a year (Table II.4.8). The majority of teachers engage in observing the classes of their peers and providing feedback at least five times a year in Viet Nam (90%), Kazakhstan (79%) and Shanghai (China) (70%).

Figure II.4.11 **Change in feedback received by teachers from 2013 to 2018**

Percentage of lower secondary teachers who have received feedback based on the following methods



Notes: Only countries and economies with available data for 2013 and 2018 are shown.

Statistically significant changes between 2013 and 2018 (TALIS 2018 – TALIS 2013) are found next to the category and the country/economy name (see Annex B).

Countries and economies are ranked in descending order of the percentage of lower secondary teachers who have received feedback based on observation of the teacher's classroom teaching in 2018.

Source: OECD, TALIS 2018 Database, Table II.4.39.

StatLink http://dx.doi.org/10.1787/888934083905

In the past five years, observation of teachers' classroom teaching has increased as a method based on which teachers receive feedback in most countries and economies with available data. The countries with the largest significant increases include Sweden (+21 percentage points), Australia (+16 percentage points) and Georgia (+14 percentage points) (Figure II.4.11, Table II.4.39). However, in Estonia, Finland, Israel and Portugal, the share of teachers who report receiving feedback based on classroom observation decreased between 2013 and 2018. In Portugal, this trend was particularly marked as the share of teachers who report receiving feedback based on classroom observation dropped from 66% in 2013 to 51% in 2018.

Using students' school-based and classroom-based results is the most direct feedback method indicative of student learning. The prevalence of this method varies considerably across countries. TALIS data shows that there are nine countries and economies where at least 90% of teachers report receiving feedback based on students' results: Kazakhstan, Latvia, Romania, the Russian Federation, Shanghai (China), Singapore, South Africa, the United Arab Emirates and Viet Nam (Table II.4.44). Feedback using students' school-based and classroom-based results is less prevalent in countries and economies such as Finland (29%), Iceland (32%), France (43%) and Sweden (47%), where the prevalence of feedback in general is also comparatively lower.

It can be valuable for teachers to receive feedback based on assessment of their content knowledge as it is a potential opportunity for teachers to enhance their role as "learning specialists" working in a knowledge-rich profession (OECD, 2014[67]). More than 90% of teachers report that they receive feedback based on assessment of their content knowledge in Kazakhstan, the Russian Federation, and Viet Nam, and more than 80% teachers report so in certain Eastern European (Bulgaria and Romania) and Baltic countries (Latvia and Lithuania), as well as in Georgia, Saudi Arabia, Shanghai (China), South Africa and the United Arab Emirates (Table II.4.44). This method of feedback seems least prevalent in Finland, Iceland, Italy, the Netherlands, Spain and Sweden, where less than 30% of the teachers report receiving feedback based on assessment of their content knowledge.

The pattern of change in feedback received via assessment of the teacher's content knowledge varies by countries. Feedback based on this method has risen significantly in 13 countries and economies between 2013 and 2018, while the reverse pattern is observed in 8 countries and economies (Figure II.4.11, Table II.4.39). England (United Kingdom) and Georgia experienced significant increases of more than 14 percentage points, while in Estonia, Japan, Korea, the Netherlands and Portugal, the proportion of teachers who report receiving feedback based on assessment of the teacher's content knowledge has decreased by more than 10 percentage points.

Students can provide unique information on both the quality of their teachers and their own learning achievements and needs. However, in some education systems, students' inputs are rarely considered for feedback received by teachers. In about one-third of countries and economies that participate in TALIS, less than 40% of teachers report receiving feedback based on students' survey responses related to their teaching (Table II.4.44). Nevertheless, over 80% of teachers report receiving feedback on their teaching via student survey responses in the Czech Republic, Kazakhstan, Korea, Romania, the Russian Federation, Saudi Arabia, Shanghai (China) and Viet Nam.

The pattern in feedback received via student survey responses related to teachers' teaching varies by countries and does not reveal an overall tendency among countries and economies. Feedback based on students' inputs has risen significantly in 13 countries and economies between 2013 and 2018, while the reverse pattern is observed in 12 countries and economies (Table II.4.39). Australia, the Czech Republic, Georgia and Sweden experienced significant increases of 15 percentage points or more. The proportion of teachers who report receiving feedback based on student survey responses has decreased between 11 and 13 percentage points in Chile, Croatia and Israel, while it has dropped by 20 percentage points in Norway and 29 percentage points in the Slovak Republic.

Box II.4.6. **Feedback from primary to upper secondary education**

TALIS findings show that the prevalence of teachers receiving feedback is similar across education levels. In 4 of the 13 countries and economies with available data for ISCED 1 and 2 (CABA [Argentina], Denmark, the Flemish Community of Belgium and Korea), a significantly larger share of lower secondary teachers than their colleagues at primary level report never having received feedback in their current school (Table II.4.41). The opposite pattern is observed in Spain.

Moreover, significant differences between lower and upper secondary teachers' reports on receiving feedback are observed in only 2 of the 11 countries and economies with available data for ISCED 2 and 3. In Denmark, feedback is more prevalent among lower secondary teachers (difference of 7 percentage points), while the opposite pattern is observed in Slovenia (2 percentage points) (Table II.4.42).

Sources of feedback

Based on TALIS results, external sources of feedback (from individuals or bodies) are more prevalent among primary teachers than among lower secondary teachers in England (United Kingdom) (difference of 11 percentage points), France (9 percentage points), CABA (Argentina) (8 percentage points) and Spain (6 percentage points) (Table II.4.41). In France, school-based sources of feedback (from school principals, members of the school management team or other colleagues within the school) are reported by a significantly higher share of lower secondary teachers (21 percentage points) compared to their counterparts at primary level.[13]

There is little variation on sources of feedback between lower and upper secondary teachers. External sources of feedback are more common among upper secondary teachers in Croatia (difference of 4 percentage points) and the United Arab Emirates (3 percentage points), while the opposite pattern is observed in Viet Nam (15 percentage points), Slovenia (12 percentage points) and Sweden (4 percentage points).

Methods of feedback

TALIS findings suggest that the methods based on which teachers receive feedback vary by levels of education. Some methods tend to be more prevalent among primary teachers compared to their colleagues in lower secondary education. This is the case for observation of teachers' classroom teaching in 8 of the 13 countries and economies with available data for ISCED 1 and 2 (Table II.4.45). Similarly, self-assessment of teachers' work is more common at primary level than at lower secondary level in 5 of the 13 countries and economies with available data for ISCED 1 and 2.

In contrast, the opposite pattern is observed in relation to feedback based on student survey responses related to teachers' teaching, which tends to be more prevalent among lower secondary teachers than among their colleagues in primary education in 6 of the 13 countries and economies with available data (Table II.4.45). The only countries and economies with available data where student survey responses related to teachers' teaching are more commonly used as a method of feedback among primary teachers than among teachers at lower secondary level are Sweden (difference of 10 percentage points) and Viet Nam (2 percentage points).

Receiving feedback based on student survey responses related to teachers' teaching is even more prevalent among upper secondary teachers than among their peers at lower secondary level in 7 of the 11 countries and economies with available data for ISCED 2 and 3, especially in Denmark (difference of 28 percentage points), Slovenia (26 percentage points) and Sweden (20 percentage points) (Table II.4.46).

The diversity of methods based on which teachers receive feedback can be indicative of education systems that make the most of teacher feedback, even though TALIS does not directly provide information on the quality and frequency of feedback received by teachers. For instance, according to Jensen and Reichl (2011[61]), schools should apply at least four different methods for providing feedback. On average across the OECD, about half of the teachers (52%) report that they receive feedback through at least four different methods (Figure II.4.9, Table II.4.47). About 9% of teachers report that they receive feedback through only one method, while 13% of teachers report that they receive feedback through two different methods.

In Finland, France, Croatia, Iceland and Sweden, at least 19% of teachers report receiving feedback through only one method (Figure II.4.9, Table II.4.47). Hence, these countries, especially Finland and Iceland, are characterised not only by the relatively low prevalence of teacher feedback in general, but also by the fact that the feedback received by teachers tends to be based on a single method. At the other end of the spectrum, the large majority of teachers report receiving feedback based on more than three different methods in Viet Nam (96%), South Africa (91%) and Kazakhstan (90%), suggesting that feedback in its multiple forms is more ingrained in the school culture of these countries.

Teachers' perceptions on the impact of feedback

Feedback plays a vital role in improving instructional practices – the primary work of teachers – and it can help teachers develop a more purposeful knowledge base (Erickson et al., 2005[68]). It is, therefore, worth examining whether teachers themselves find the feedback received useful for improving their work. TALIS asks teachers whether the feedback they received in the 12 months prior to the survey had a positive impact on their teaching practice.[14] The information gathered offers an indication of the quality and nature of the feedback that teachers receive. Moreover, by capturing how welcoming teachers are to feedback, TALIS also offers an indication of their growth mindset towards improving their practice. Whether teachers receive positive or negative feedback on their practices and how they process it with respect to their self-efficacy beliefs and respond to it in their teaching practices can shape teachers' reports on whether the feedback they received had a positive impact on their teaching practice (Nease, Mudgett and Quiñones, 1999[69]).

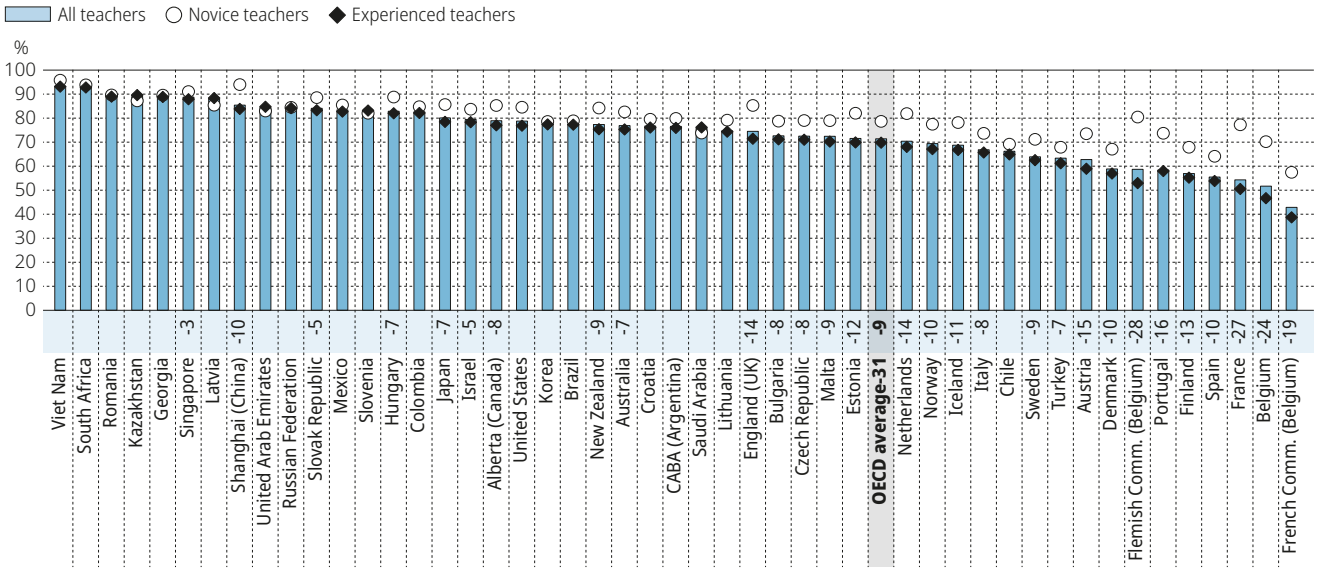
On average across the OECD, 71% of teachers who received feedback in the 12 months prior to the survey report that it had a positive impact on their teaching practice (Figure II.4.12, Table II.4.48). In Georgia, Kazakhstan, Latvia, Romania, Shanghai (China), Singapore, South Africa and Viet Nam, at least 85% of teachers who received feedback find it impactful. However, less than 60% of teachers share that view in Belgium and its Flemish and French Communities, Denmark, Finland, France, Portugal and Spain. It is interesting to note that the education systems where feedback is not so prevalent are also the systems where teachers do not find it useful.[15] There may, therefore, be an interplay in some education systems between the culture and openness to feedback and how teachers make sense of the feedback they receive in these environments, eventually manifesting in limited utility value of feedback for teachers.

In many of the countries and economies that participate in TALIS, teachers' perceptions of the impact of feedback seem to be associated with age and teaching experience. On average across the OECD, 79% of younger teachers (under age 30) who received feedback in the 12 months prior to the survey report that it had a positive impact, compared to 70% of teachers age 50 and above (Figure II.4.12, Table II.4.48). Similarly, novice teachers (less than or equal to five years of experience) are also more likely to find feedback useful than experienced teachers (more than five years of experience). The perceived impact can also be explained by the extent to which novice teachers have access to more structured forms of feedback than the overall teaching population, through mentoring and induction programmes – Tables I.4.39 and I.4.64 in *TALIS 2018 Results (Volume I)* (OECD, 2019[18]). Interestingly, the three countries and economies with the largest significant differences (above 20 percentage points by both age and experience) are Belgium and its Flemish Community and France. In fact, differences in the perception of the impact of feedback are high in general in Western European countries. Novice teachers clearly have much to gain from feedback at the early stages of their career, it is, thus, somewhat worrisome that the perceived impact of feedback is low for novice teachers in some education systems, with less than 70% of novice teachers in the French Community of Belgium, Chile, Denmark, Finland, Spain and Turkey reporting that feedback received has had a positive impact on their teaching.

On average across the OECD, female teachers tend to have a relatively more positive view than their male colleagues of the feedback they received. Based on TALIS results, a significantly higher share of female teachers than male teachers report that the feedback they received in the 12 months prior to the survey had a positive impact on their teaching practice in around one-third of the countries and economies participating in TALIS. The largest differences (7-10 percentage points) are observed in Brazil, Colombia, Georgia, Latvia, the Russian Federation and Saudi Arabia (Table II.4.48). The only countries where male teachers have a more positive view on feedback are Bulgaria, Korea and Turkey.

Figure II.4.12 **Impact of feedback on teaching, by teachers' teaching experience**

Percentage of lower secondary teachers who report that the feedback they received in the 12 months prior to the survey had a positive impact on their teaching practice[1]



1. The analysis is restricted to the subset of teachers who report having received feedback at their current school.

Note: Statistically significant differences between experienced teachers (with more than 5 years of experience) and novice teachers (with less than or equal to 5 years of experience) are shown next to the country/economy name (see Annex B).

Countries and economies are ranked in descending order of the percentage of lower secondary teachers who report that the feedback they received in the 12 months prior to the survey had a positive impact on their teaching practice.

Source: OECD, TALIS 2018 Database, Table II.4.48.

StatLink http://dx.doi.org/10.1787/888934083924

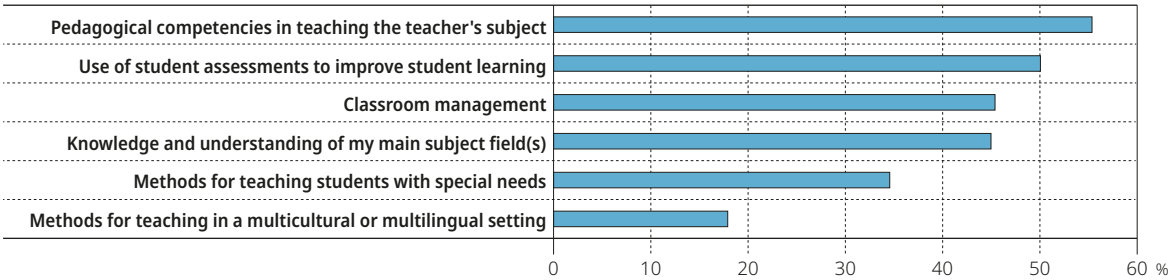
Beyond the question of whether feedback received in the 12 months prior to the survey had a positive impact on teachers' teaching practice, TALIS also asks teachers who report having received useful feedback about the different aspects of their teaching practice that improved. More specifically, teachers are asked if the feedback they received led to a positive change in any of the following aspects of their teaching: knowledge and understanding of main subject field(s); pedagogical competencies in teaching a subject; use of student assessments to improve student learning; classroom management; methods for teaching students with special needs; and methods for teaching in multicultural or multilingual settings. This can provide key information for policy makers, because it reveals the utility value of feedback as a potentially useful intervention in educations systems or schools where teachers face challenges related to their classroom instruction.

As outcomes of impactful feedback, teachers most commonly report improvements in pedagogical competencies in teaching and the use of student assessments to improve student learning. On average across the OECD, 55% of teachers who report receiving feedback report that it led to a positive change in their pedagogical competencies to teach their subject, and 50% report that it led to a positive change in their use of student assessments to improve student learning (Figure II.4.13, Table II.4.50). Forty-five percent of teachers who report receiving feedback report that it led to a positive change in their classroom management and knowledge and understanding of their main subject(s).

Based on TALIS results, feedback seems to have less impact on methods for teaching in specific settings. On average across the OECD, about 35% of teachers who received feedback report that their feedback led to a positive change in teaching students with special needs (Figure II.4.13, Table II.4.50), and only 18% of teachers who received feedback considered that it led to a positive change in methods for teaching in multicultural and multilingual settings. Although working with diverse student populations is no longer exceptional (depending on which aspect of diversity is considered, 17% to 31% of teachers on average across the OECD work in schools with a diverse student composition, as reported by school principals), not all teachers work in multicultural settings or with special needs students – Table I.3.25 in *TALIS 2018 Results (Volume I)* (OECD, 2019[18]). Therefore, it is not surprising that feedback is reported to be less impactful for these specific methods related to diverse classes compared to general aspects of teaching. Thus, the impact of feedback on these specific aspects of teaching that do not apply to all teachers need to be interpreted cautiously and should not be compared directly to general aspects of teaching.

Figure II.4.13 **Impact of feedback on different aspects of teaching**

Percentage of lower secondary teachers who report that the feedback they received in the 12 months prior to the survey led to a positive change in the following aspects of teaching[1] (OECD average-31)



1. The analysis is restricted to the subset of teachers who report having received feedback at their current school.

Values are ranked in descending order of the aspects of teaching that were impacted positively by feedback received in the 12 months prior to the survey, as reported by lower secondary teachers.

Source: OECD, TALIS 2018 Database, Table II.4.50.

StatLink http://dx.doi.org/10.1787/888934083943

In the participating countries and economies, TALIS results show a significant positive association between teachers who find the feedback they received impactful and their feelings of satisfaction with their job for all participating countries and economies, after controlling for teacher characteristics, such as gender, age, work experience as a teacher at current school and working full-time (Table II.4.53). This relationship remains positive after controlling for teachers' collegiality (quality of interpersonal relationships with their colleagues) in all of the countries and economies except the Netherlands (Table II.4.54).

Forms of impactful feedback for teachers

It is possible to model the possible conditions under which the impact of feedback for teachers is maximised, based on TALIS data. This can be done by jointly analysing teachers' responses on the methods by which they receive feedback and on how they perceive the impact of feedback on their teaching practice. This final section presents two regression models to examine the likelihood of teachers finding feedback impactful, as associated with the number of and specific methods of feedback.

Box II.4.7. **Impact of feedback from primary to upper secondary education**

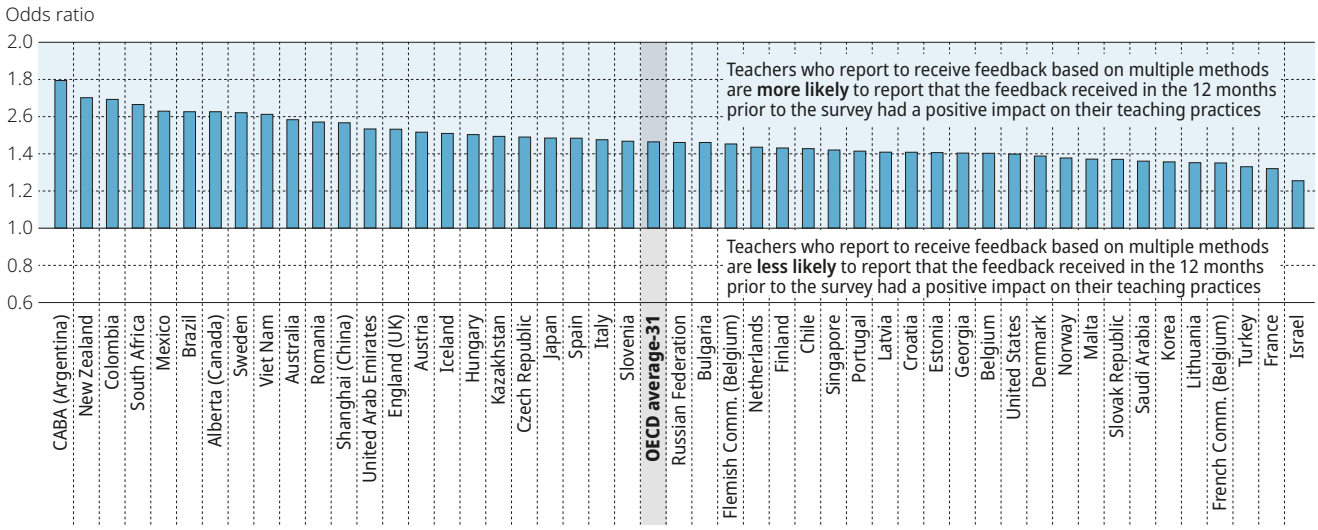
Primary teachers tend to perceive the feedback they received in the 12 months prior to the survey more impactful for the teaching practices examined by TALIS. In CABA (Argentina), the Flemish Community of Belgium, Japan, Spain and Sweden, among those who received feedback, a significantly higher share of primary teachers than lower secondary teachers report a positive change in different aspects of teaching following the feedback (Table II.4.51). In the 13 countries and economies with available data for ISCED 1 and 2, the impact of feedback on methods for teaching students with special needs stands out, with a significantly higher share of primary teachers than lower secondary teachers reporting positive change in this aspect of teaching following feedback. The largest differences are observed in Japan (22 percentage points), the Flemish Community of Belgium (19 percentage points) and CABA (Argentina) (13 percentage points).

There is little variation in the perceived impact of feedback between lower and upper secondary teachers. For instance, there are no countries and economies with available data for ISCED 2 and 3, with significant differences between lower and upper secondary teachers' views on the impact of feedback on pedagogical competencies in teaching. The only aspect of teaching where teachers' perceptions vary by education levels is the impact of feedback on methods for teaching students with special needs. In 9 of the 11 countries and economies with available data for ISCED 2 and 3, a significantly larger share of lower secondary teachers than of upper secondary teachers find that the feedback led to a positive change in terms of methods for teaching students with special needs (Table II.4.52). The largest differences (13 percentage points) are observed in Denmark and Slovenia.

Logistic regression analysis shows that teachers are more likely to find feedback useful for their teaching practice, when it is based on multiple evidence and, therefore, less likely to find feedback useful when it is based on only one source of information. This holds true even after controlling for teacher characteristics, such as gender, age, work experience as a teacher at current school and working full-time (Figure II.4.14, Table II.4.55).

Figure II.4.14 **Relationship between impactful feedback and number of feedback methods**

Likelihood of reporting feedback to have a positive impact related to the number of different methods based on which teachers received feedback[1, 2, 3, 4, 5]



1. Results of binary logistic regression based on responses of lower secondary teachers.
2. An odds ratio indicates the degree to which an explanatory variable is associated with a categorical outcome variable. An odds ratio below one denotes a negative association; an odds ratio above one indicates a positive association; and an odds ratio of one means that there is no association.
3. The analysis is restricted to the subset of teachers who report to have received feedback at their current school.
4. The predictor refers to the number of feedback methods ranging from 1 to 6 (continuous).
5. Controlling for the following teacher characteristics: gender, age, years of experience as a teacher at current school, working full-time.

Note: Statistically significant coefficients are marked in a darker tone (see Annex B).

Countries and economies are ranked in descending order of the likelihood of receiving impactful feedback related to the number of different methods based on which teachers received feedback.

Source: OECD, TALIS 2018 Database, Table II.4.55.

StatLink http://dx.doi.org/10.1787/888934083962

Further analysis indicates that, on average across the OECD, teachers who report receiving feedback based on classroom observations or assessment of the teachers' content knowledge are twice as likely to find the feedback received impactful, irrespective of having received feedback from other methods and irrespective of the teachers' characteristics (Table II.4.56). Notably, the likelihood of teachers finding feedback impactful is significantly associated with observation-based feedback in 34 countries and economies participating in TALIS, and with assessment of the teachers' content knowledge in 37 countries and economies. Feedback based on external results of students is rarely associated with teachers' finding feedback impactful (only in Shanghai [China] and Sweden), while in Singapore, teachers are less likely to find feedback impactful when it is based on the external results of students after controlling for other methods of feedback and for teacher characteristics such as gender, age, work experience as a teacher at current school and working full-time.

Whether teachers find feedback impactful or not is also significantly associated with their perceptions of the quality of their interpersonal relationships with other colleagues in their school. Teachers are more likely to report that the feedback they received had a positive impact on their teaching practice when they hold positive views on collegiality in all the countries and economies participating in TALIS (in every education system, the coefficient for at least one of the two indicators of collegiality is significant, except in Norway), after controlling for teacher characteristics, such as gender, age, work experience as a teacher at current school and working full-time (Table II.4.57). This suggests that teachers may hold a more positive attitude towards feedback when they have more positive views about their relationships with other colleagues.

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Notes

1. The OECD average corresponds to the arithmetic mean of the estimates of the OECD countries and economies that participate in TALIS, with adjudicated data.
2. Regarding the average number of hours teachers report spending on teamwork and dialogue with colleagues within the school, in 10 countries and economies with available data, there has been a significant but minor decrease, while in 6 countries and economies with available data, there has been a significant but minor increase over the past five years (Table II.4.5).
3. Cognitive activation practices covered in TALIS include giving tasks that require students to think critically, having students work in small groups to come up with a joint solution to a problem or task, asking students to decide on their own procedures for solving complex tasks and presenting tasks for which there is no obvious solution (OECD, 2019[18]).
4. Thirty-eight countries and economies participating in TALIS administered this optional question.
5. As a result of opportunities such as Erasmus+, offered by the European Commission to enable students to study abroad and teachers to teach abroad, the countries and economies belonging to the European Union/European Economic Area present the highest shares of teachers with professional experience abroad (OECD, 2019[18]).
6. Thirty-four countries and economies participating in TALIS administered this optional question.
7. Collegiality seems to matter less as a mediator when it comes to the association between deeper forms of teacher collaboration and the frequency of use of cognitive activation practices. Introducing indicators of collegiality into the model examining the relationship between the frequency of engaging in professional collaboration and the use of cognitive activation practices does not result in a clear pattern of change in the coefficients of the index of professional collaboration (Tables II.4.17 and II.4.18).
8. Teachers are considered to be in agreement with their principals if both the teacher and the principal "agree" or "strongly agree" with a given statement, or if both "disagree" or "strongly disagree".
9. The difference between the shares of novice and experienced teachers receiving feedback can also be explained by the specific methods through which a larger share of experienced teachers report receiving feedback. These methods are: external results of students the teacher teaches (a difference of 14 percentage points); school-based and classroom-based results (7 percentage points); and student survey responses related to the teachers' teaching (7 percentage points) (Table II.4.44).
10. For further distinctions between different sources of feedback, see Table II.4.40.
11. It should be noted that student outcomes cannot be solely attributed to teachers' classroom instruction. Other factors, such as student's socio-economic background, level of effort and prior knowledge also affect student outcomes.
12. It should be noted these estimates do not provide information on whether teachers receive feedback as a regular practice or not, due to the wording of the questionnaire.
13. At the primary level in France, there is no hierarchical relationship between school principals and teachers.
14. The analysis of teachers' opinions on the usefulness of the feedback they received in the 12 months prior to the survey is restricted to the subset of teachers who report having received feedback at their current school.
15. Belgium, the French Community of Belgium, Denmark, Finland, France, Iceland, Italy, Norway, Portugal, Spain, Sweden, Turkey are below the OECD average in terms of both the percentage of teachers who received feedback and the percentage of teachers who found that the feedback they received in the 12 months prior to the survey had a positive impact on their teaching practice (Tables II.4.37 and II.4.48).

5

Empowering teachers and school leaders

School leadership has a powerful impact on student learning. In particular, the leadership and actions of school leaders and teachers can shape effective learning environments. But, to carry out these actions, teachers and school leaders must have the autonomy necessary to make decisions pertinent to their jobs. This chapter describes the levels of autonomy and leadership in schools. It first identifies the tasks where schools have a larger role than out-of-school authorities and then compares the responsibilities of teachers and school leaders for the different tasks. The chapter concludes by describing the prevalence of different forms of leadership for teachers and school leaders.

Highlights

- According to principals' reports, at least 70% of schools in the OECD countries surveyed have control over teacher hiring practices, budget allocation within the school, student disciplinary and admission policies and the selection of learning materials.
- On average across OECD countries and economies participating in the Teaching and Learning International Survey (TALIS), 63% of principals have significant responsibility for the majority of the tasks in their schools. The percentage increases to 79% if looking only at privately managed schools.
- Only 42% of principals report that teachers have significant involvement in deciding school policies, curriculum and instruction. However, more than half of principals report that teachers do have a significant level of responsibility in choosing learning materials and determining course content.
- Alongside more traditional administrative tasks, around half of principals say that acting as an instructional leader is something that they do often in school. Principals who report acting as an instructional leader also say that they spend time on curriculum development and instruction, involving stakeholders in school decision making and building a supportive and collaborative school culture.
- More than 90% of teachers report that they have a high level of autonomy in selecting teaching methods, assessing students' learning, disciplining students and determining the amount of homework to assign in their class. Eighty-four percent report the same high level of autonomy for determining course content. Greater autonomy is linked with teachers' propensity to collaborate professionally and innovate their practice, as well as with their self-efficacy, job satisfaction and stress levels.
- More than 90% of principals say their teachers take responsibility over the school's academic climate and improving their students' academic outcomes.
- On average across OECD countries, only 14% of teachers that that policy makers in their country/region value their view, and only 24% of teachers believe that they can influence education policy.

INTRODUCTION

School leadership, as enacted by school leaders and teachers, is one of the most important school-level factors influencing students' development and achievement (Chapman et al., 2016[1]; Hallinger, 2018[2]; Marzano, Waters and McNulty, 2005[3]). Together with autonomy and governance, it has been identified as a key lever of professionalism (Guerriero, 2017[4]). As stated in the conclusions of the Council of the European Union of 26 November 2009, "Effective school leadership is a major factor in shaping the overall teaching and learning environment, raising aspirations and providing support for pupils, parents and staff, and, thus, in fostering higher achievement levels." (European Union, 2009[5]).

Leadership practices can create supportive learning environments in which teachers are able to develop their practices and engage effectively with students' learning (Hallinger, 2011[6]; Muijs, 2011[7]). Identifying the core dimension of school leadership, as well as the main actors responsible for steering these actions, has become a crucial endeavour in educational systems across the world (Ainley and Carstens, 2018[8]; OECD, 2016[9]).

The understanding of the main components of school leadership has evolved over the years. It has encompassed a series of elements, such as establishing goals, providing pertinent professional development and taking action for development of curriculum and improvement of instruction, while not losing sight of the managerial aspects of the school (Ainley and Carstens, 2018[8]; OECD, 2016[9]; Urick and Bowers, 2014[10]). However, research has shown that, rather than a fragmented vision of particular elements of leadership, an holistic approach simply titled "leadership for learning", incorporating the elements mentioned above, seems to be the most effective form of leadership (Hallinger, 2011[6]; Hallinger and Heck, 2010[11]; OECD, 2016[9]).

To effectively engage in leadership roles, schools must have the autonomy necessary to make decisions on those aspects that concern their day-to-day operations (OECD, 2017[12]). Indeed, a crucial component of principals' and teachers' professionalism refers to their capacity to make discretionary judgements (Hargreaves and Fullan, 2012[13]). The reasoning behind enhancing school autonomy is that schools have professionals with the training, knowledge and experience to make the most pertinent decisions regarding staffing, assessment and curriculum (OECD, 2018[14]). Although autonomy in decision making is not enough to guarantee effective leadership, it is a necessary step.

School leaders are understandably those expected to take on a leadership role, given the commanding and strategic roles they play in schools (Ainley and Carstens, 2018[8]). Principals are being required to go beyond their traditional role as administrators and assume leadership positions where they will be able to engage, support and commit teachers to their instruction (Grissom and Loeb, 2011[15]; OECD, 2016[9]). Understanding principals as school leaders is acknowledging their capacity to convey a vision for school improvement capable of engaging teachers for the benefit of all students (Hallinger and Heck, 2010[16]).

The capacity of principals to engage teachers also implies the concrete opportunities teachers can have to enact teacher leadership (Harris and Muijs, 2004[17]). Teacher leadership refers to the opportunities and capacities for teachers to be leaders, not just within their classroom, but also beyond the classroom, by collaborating with their colleagues for the overall improvement of their school. However, a crucial prerequisite for teachers to effectively make their voices heard and have their decisions implemented is having the autonomy necessary for their work (Johnson and Donaldson, 2007[18]). Autonomy is understood as the capacity of teachers to make decisions in areas concretely related to their work (Hargreaves and Fullan, 2012[13]). Acknowledging and promoting teachers' autonomy is a fundamental step in building a school that engages all school members with the same purpose and direction (Scribner et al., 2007[19]).

This chapter analyses the leadership and autonomy of both principals and teachers. Doing so within the same chapter is a way of acknowledging their connectedness and exploring how closely they are related. To explore these issues, the chapter begins by comparing autonomy at the school level with the involvement of out-of-school authorities. It also describes decision making by principals and teachers within the school. The chapter then addresses issues of principals' leadership, with special focus on the characteristics of system leadership and how principals perceive their relations with policy makers. It concludes with a description of teachers' leadership, focusing particularly on their academic and curricular leadership, along with an exploration of how they perceive their relations with the media and policy makers.

ENHANCING SCHOOL DECISION MAKING

School-level decision making is crucial for delivering quality and context-pertinent education. The debate on how much autonomy schools should have and in which areas has increased in recent decades, and it only seems to become more prominent (OECD, 2017[12]). An OECD review of evaluation and assessment policy states that; "There has been a general international trend towards devolution of responsibilities for budget management, staffing, educational provision, teaching content and processes, and the organisation of learning to the local level including schools" (OECD, 2013, p. 45[20]). The argument for promoting school autonomy is that school staff are better positioned to adapt their organisation to the requirements and needs of students and the local community (Hanushek, Link and Woessmann, 2013[21]). Schools have qualified professionals who are knowledgeable about the needs of their learning environments and of their students and may be able to enact pertinent decisions concerning their schools. Decision making by authorities outside the school (such as national, local or regional authorities) may be perceived as an imposition, and being out-of-touch with the needs of schools (Caldwell and Spinks, 2013[22]). Furthermore, schools may vary in the real capacity, time, expertise and resources they have to tackle additional responsibilities in an effective manner (OECD, 2019[23]).

However, this increased autonomy has usually been accompanied by the strengthening of monitoring by local or educational authorities (OECD, 2013[20]). Indeed, decision making at the school level without the necessary support and monitoring can lead to low performance and inequality of educational outcomes (OECD, 2016[24]). The responsibility of local or national authorities in staffing, budgeting, implementing assessment and establishing curricular policies is important to assuring a standard of quality education and equal allocation to all students. Moreover, having schools tackle issues that may better be addressed by local or national authorities could lead to additional workload. International reviews have shown that, in several countries, placing more decision making at lower levels (schools) has been accompanied by central levels (district, region or state) having a stronger influence on setting standards, curricula and assessment (OECD, 2018[25]). A balance should be achieved by identifying those elements where the school has better responsiveness and those elements where local, regional or national authorities need oversight to guarantee quality across the system.

Distribution of responsibilities between schools and out-of-school authorities

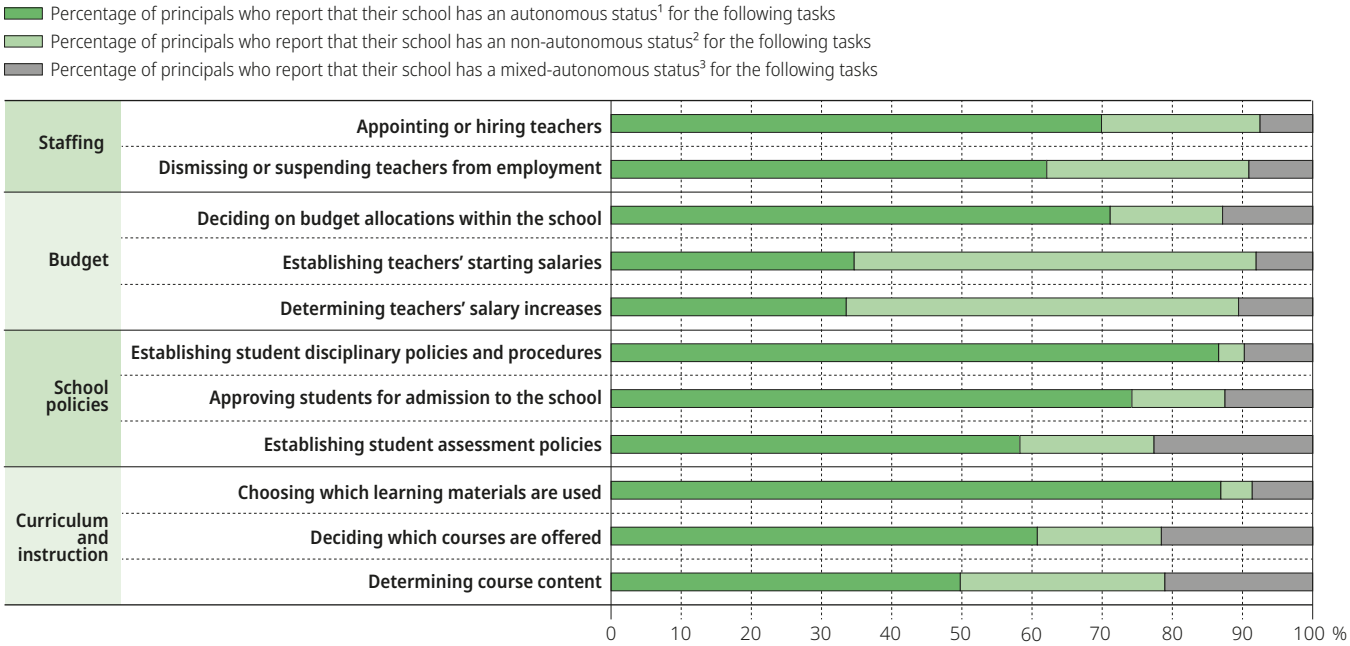
The following section describes how responsibilities for making decisions on a range of topics are taken by schools and/or out-of-school actors. Before exploring the results, it is important to clarify that decision-making processes are constrained and limited by broader policy frameworks, such as national regulations and standards (OECD, 2018[14]; OECD, 2017[12]; OECD, 2016[9]; OECD, 2005[26]). For example, staffing is routinely shaped by wider public sector employment policies and by labour market institutions, such as trade unions and teacher unions (OECD, 2018, p. 23[14]). Furthermore, in some systems, the legal education framework establishes that decisions on budgets are mainly shaped by out-of-school authorities (OECD, 2016[9]). So, the results presented in this section could be interpreted as a reflection of system-level regulation on decision making, rather than just the actions and initiatives of individual teachers and school leaders within such systems.

TALIS 2018 asked school principals which actors had significant[1] responsibility for a series of tasks at the school level: "principals"; "other members of the school management"; "teachers"; "school governing board"; and "local municipality/regional state or national/federal authority". The tasks are divided into four different groups: staffing; budget; school policies; and curriculum and instructional policies. For the purposes of reporting here, an autonomous school is assumed when significant responsibility is taken solely by either the school principal, other members of the school management team, teachers or the school governing board.[2] A non-autonomous school is assumed when significant responsibility for a given task is taken solely by the local municipality/regional state or national/federal authority. Finally, a mixed-autonomous school is assumed when significant responsibility is taken by both an agent of the school (i.e. principal, other members of the school management team, teachers or the school governing board) and the local municipality/regional state or national/federal authority.[3]

On average across the OECD,[4] a large percentage of principals report that the school has significant responsibility for staffing decisions: 70% of schools are autonomous for "appointing or hiring teachers" and 62% are autonomous for "dismissing or suspending teachers from employment", based on principals' reports (Figure II.5.1, Table II.5.1). On average across the OECD, less than 10% of schools are characterised as being mixed-autonomous (i.e. responsibilities for these two staffing tasks shared between schools and out–of-school authorities). In other words, for around 90% of schools, responsibility for staffing is taken solely by the school or solely by out-of-school authorities.

Figure II.5.1 **School autonomy**

Results based on responses of lower secondary principals (OECD average-30)



1. "Autonomous status" occurs when significant responsibility is taken solely by at least one of the following entities: principal, other members of the school management team, teachers who are not part of the school management team or the school governing board.

2. "Non-autonomous status" occurs when significant responsibility is taken solely by a local/regional/state/national/federal authority.

3. "Mixed-autonomous status" occurs when significant responsibility is taken by a local/regional/state/national/federal authority and by at least one of the following entities: principal, other members of the school management team, teachers who are not part of the school management team or the school governing board.

Values are grouped by school responsabilities and, within each group, ranked in descending order of the percentage of lower secondary principals who report that their school has an autonomous status for the above tasks.

Source: OECD, TALIS 2018 Database, Table II.5.1.

StatLink http://dx.doi.org/10.1787/888934083981

There is also significant cross-country variation for both "appointing or hiring teachers" and for "dismissing or suspending teachers from employment" (Table II.5.1). Based on principals' reports, more than 95% of schools are autonomous for "appointing or hiring teachers" in Alberta (Canada), Bulgaria, the Czech Republic, Denmark, Estonia, the Flemish Community of Belgium, Iceland, Lithuania, the Netherlands, New Zealand, the Russian Federation, the Slovak Republic and Sweden, while less than 25% are autonomous in Colombia, France, Japan, Saudi Arabia and Turkey. The results in two countries are particularly low, with only 9% of principals in Turkey and 4% in Saudi Arabia stating that decisions on "appointing or hiring teachers" are made solely by the school.

These results corroborate the findings of international OECD reviews that school systems vary considerably in the extent of autonomy in recruiting their own staff (OECD, 2018[14]). Policy reviews have noted that that school autonomy for staff-related tasks can help avoid misallocations and can better match staff profiles to the needs of the school. However, an increase in autonomy entails recruitment and management costs that may lead to greater disparities in staff qualifications among schools. This result suggests that effective allocation of teachers may depend not only on school autonomy, but also on teacher preferences, incentive programmes and the supply and demand characteristics of the teachers' labour market (OECD, 2019[23]).

An interesting pattern emerges from the activities in the second set of tasks, those related to school budgets. For areas related to determining teachers' starting salaries or salary increases, the majority of principals report that their schools do not have significant responsibility. On average across the OECD, based on principals' reports, 59% of schools are non-autonomous for decisions on teachers' starting salaries and 58% are non-autonomous for decisions on salary progression (Figure II.5.1,Table II.5.1). These results should not come as a surprise, since setting salary levels and establishing progression of salaries are usually part of local or national authorities' statutory responsibilities (OECD, 2019[23]).

However, schools seem to have greater input for decisions on budget allocations. On average across the OECD, based on the responses of principals, 71% of schools are autonomous (Figure II.5.1, Table II.5.1). More than 90% of schools are autonomous for decisions on budget allocations in Alberta (Canada), Colombia, the Czech Republic, Denmark, the Flemish Community of Belgium, France, Georgia, Italy, Korea, the Netherlands and New Zealand. But more than 50% of schools are non-autonomous for decisions on budget allocations (i.e. out-of-school authorities have sole responsibility) in Saudi Arabia (80%), Hungary (59%), Romania (59%), Turkey (59%), and Viet Nam (55%) (Table II.5.1).

The third group of tasks, those related to school policies, covers issues concerning admission, assessment and disciplinary policies for students. In this area, schools seem to have a large presence in decision making. On average across the OECD, based on the responses of principals, at least 58% of schools are autonomous concerning policies on these issues. That is the case for "establishing student disciplinary policies and procedures" (87%), "approving students for admission to the school" (74%) and "establishing student assessment policies" (58%) (Figure II.5.1, Table II.5.1). Cross-country variation across these three tasks is still considerable. For example, based on the responses of principals, more than 95% of schools are autonomous in disciplinary policies and procedures in the Czech Republic, Italy, Korea, the Netherlands, the Slovak Republic, Slovenia and Viet Nam, while 50% or less are autonomous in Norway, Saudi Arabia and the United Arab Emirates. Results are particularly low for Saudi Arabia, with only 9% of principals reporting that their school is autonomous on these issues.

Of these three tasks, establishing student assessment policies shows a greater degree of cross-country variation regarding significant responsibilities of the different educational stakeholders and the level of autonomy of schools. On average across the OECD, based on principals' reports, 58% of schools are autonomous (responsibilities taken solely within the school), 19% are non-autonomous (responsibilities taken solely by out-of-school authorities) and 23% present a mixed-autonomy approach (responsibilities taken between schools and out-of-school authorities) (Figure 5.1, Table II.5.1). The three countries and economies with the highest proportion of autonomous schools in establishing student assessment are Estonia (92%), the Flemish Community of Belgium (91%) and the Czech Republic (86%). The three countries and economies with the highest proportion of non-autonomous schools are Saudi Arabia (92%), Viet Nam (69%) and Turkey (65%), while the four with the highest proportion of mixed-autonomous schools are Singapore (52%), Alberta (Canada) (40%), France (40%) and Latvia (40%).

The relatively large proportion of non-autonomous schools may reveal the increasing tendency to allocate responsibility for assessments to dedicated agencies with a central role in governance of the evaluation and assessment framework. These are usually local or national agencies dedicated to evaluation and monitoring of learning, created in recognition of the need for specialised expertise and capacity to develop and implement evaluation and assessment policies (OECD, 2013, p. 37[20]). The large proportion of mixed-autonomous schools could reflect a balanced approach to assessment. Under such an approach, schools have significant responsibility for implementation, while the input of out-of-school authorities responds to increased needs for accountability measures to ensure quality outcomes in education.

The fourth set of activities, tasks related to curriculum and instruction, corresponds to issues more associated with the content and focus of learning opportunities, such as deciding on the courses offered, their content and textbooks. Although the involvement of out-of-school authorities in these decisions is important to ensuring certain content guidelines across education systems, school leaders and teachers have an understanding of their students' needs through their daily interactions with them. Thus, the input of schools is particularly relevant for curriculum and instruction (Hargreaves and Fullan, 2012[13]). On average across the OECD, a relatively large proportion of principals report that their school has significant responsibility for all three tasks in this set of activities. Based on the responses of principals, a large share of schools are autonomous for "choosing which learning materials are used" (87%); for "deciding which courses are offered" (60%) and for "determining course content" (48%) (Figure II.5.1, Table II.5.1).

Among these three tasks, determination of course content shows the greatest cross-country variation in responsibilities. On average across the OECD, based on principals' reports on determining course content, 48% of schools are autonomous (responsibilities taken solely within the school), 31% are non-autonomous (responsibilities taken solely by out-of-school authorities) and 21% present a mixed-autonomy approach (responsibilities taken between schools and out-of-school authorities) (Figure II.5.1, Table II.5.1). In determining course content, the three countries and economies with the highest percentage of autonomous schools are the Czech Republic (95%), CABA (Argentina) (89%) and England (United Kingdom) (88%). The three countries and economies with the highest proportion of non-autonomous schools are Saudi Arabia (96%), Turkey (87%) and France (85%), while the three with the highest proportion of mixed-autonomous schools are Singapore (52%), Malta (45%) and Shanghai (China) (44%).

The cross-country variation could be explained by different national traditions on school-based responsibility for curriculum development. It is important to note that the level of autonomy of schools within the same country or economy can vary depending on whether they are publicly managed or privately managed. The allocation of responsibilities described in this section still holds when looking only at publically managed schools (Table II.5.4).[5]

Box II.5.1. **School autonomy, from primary to upper secondary education**

The levels of school autonomy change significantly across educational levels for a few of the countries and economies with available data. However, these changes seem to be reflected more in some tasks than other ones.

Regarding the differences between schools at the primary education and lower secondary education levels, schools tend to have more autonomy with regard to staff tasks as the level of education increases. In, respectively, 4 and 5 out of the 13 countries with available data, based on principals' responses, the share of schools with autonomy for "appointing or hiring teachers" and for "dismissing or suspending teachers from employment" is greater in lower secondary than in primary education (Table II.5.2). Lower secondary schools in CABA (Argentina), France, Japan and Spain have more autonomy in these two tasks, compared to the primary education. A similar pattern is observed when looking at the differences between the two levels of education in school autonomy in budget-related decisions. In 4 out of the 13 countries with available data, based on principals' responses, the share of schools with autonomy for "establishing teachers' starting salaries" and for "determining teachers' salary increases" is greater in lower secondary than in primary education. Likewise, France shows the greatest difference in "deciding on budget allocations within the school", with only 64% of principals reporting having autonomy over this task in primary schools, compared to 94% of principals at the lower secondary education.

The differences between schools in upper secondary education and lower secondary education follow a similar trend, with greater autonomy at the upper secondary education level. The differences in levels of autonomy holds true for a majority of countries for tasks related to staffing, budget and school policies (Table II.5.3). In 6 out of the 11 countries with available data, based on principals' responses, the share of schools with autonomy for "determining teachers' salary increases" in upper secondary is higher than that in lower secondary. Likewise, in 5 out of the 11 countries with available data, the share of schools with autonomy for "establishing teachers' starting salaries" and "deciding on budget allocation" in upper secondary is higher than in lower secondary education. Denmark, Portugal and Turkey show a higher share of autonomous schools in upper secondary education compared to lower secondary education in all of these three areas concerning budgeting tasks. The most striking differences in autonomy for school policies are observed when looking at "approving students for admission to the school". In 6 out of the 11 countries with available data, the share of schools with autonomy for this task in upper secondary is lower than in lower secondary. Among the countries with the highest differences are Croatia (42 percentage points difference), Slovenia (29 percentages points difference) and Sweden (20 percentage points difference).

Tasks that concern "deciding which courses are offered" illustrate the trend for schools to reach a greater level of autonomy when the level of education increases. In 7 out of the 13 countries with available data, the share of non-autonomous schools for this task in primary education is higher than in lower secondary, with the largest differences observed in the Flemish Community of Belgium (45 percentage points difference) and Japan (27 percentage points) (Table II.5.2). A similar number of countries has a lower share of non-autonomous schools in this task in upper secondary education compared to lower secondary education. Turkey is the country with the highest difference 27 percentage points difference) (Table II.5.3).

However, despite these differences between or within countries, it is necessary to share these responsibilities with out-of-school local or national authorities to ensure consistent approaches to curriculum. A possible approach is to agree on general principles for curricular goals and objectives while allowing enough flexibility, within agreed parameters, to better meet local needs (OECD, 2013[20]). Although Austria does not have such a high proportion of autonomous schools as other countries, in 2017 they launched an interesting initiative to boost the capacities of schools to innovate and respond to local needs (Box II.5.1).

Box II.5.2. **Supporting schools and maintaining autonomy in Austria**

The Austrian National Council passed the New Education Reform Act in June 2017 that includes the autonomy package to allow teachers and school leaders to have greater scope for action. The action was taken based on the need identified by the Austrian government to account for the unique and diverse needs of different student communities across all 5 800 Austrian schools. The objective of granting greater autonomy to schools is to expand every school's capacity to innovate and facilitate regional education issues. The reforms entail school freedoms in terms of teaching organisation that include flexible teaching time for teachers in a school; the formation of groups across content and technical aspects (e.g. cross-class, interdisciplinary, etc.); professional and beneficial communication that includes co-ordination of all the teachers in a class with school partners, regional school partners, etc.; personnel selection and development; and also the use of diagnostic tools and advanced forms of teaching (e.g. project based lessons).

The reform also includes changes in school organisation where schools have the opportunity to form a school cluster under joint management. The school cluster manager takes over the tasks of the school management and serves a cross-site leadership function. Large schools with more than 200 students also have an area manager who is responsible for supporting cluster management at the location and, possibly, administrative positions.

Sources: Federal Ministry of Education, Science and Research of Austria (2020[27]), *Autonomiepaket [Autonomy package]*, https://www.bmbwf.gv.at/Themen/schule/zrp/bilref/ap.html; OECD (2019[23]) *Working and Learning Together: Rethinking Human Resource Policies for Schools*, OECD Reviews of School Resources, https://doi.org/10.1787/b7aaf050-en.

Distribution of responsibility within schools

The previous sections discussed how decision-making processes were reported to be divided between school and out-of-school responsibilities. It is also important to examine the decision-making structures within each school to have a better understanding of the capacity within schools to make pertinent and efficient decisions. The following section analyses how significant responsibilities for school tasks are held by different entities within schools compared to decisions made by out-of-school authorities. It then examines the role of the school management team, with special attention to teachers' participation.

Figure II.5.2 (Table II.5.5) displays which actors, on average across OECD countries and economies in TALIS, have main responsibility, considerable responsibility and minor responsibility in school governance for each of the tasks mentioned above.

Based on the principals' responses reflected in Figure II.5.2 (Table II.5.5), it is noteworthy that, on average across the OECD, all the listed actors can have an important role in two tasks: "establishing student assessment policies" and "deciding which courses are offered". The input of several stakeholders might be a reflection of the importance for the educational system of these two particular tasks. Indeed, the combination of multiple levels of governance for these two tasks could be a mechanism to avoid the dangers of both excessive fragmentation and centralisation (OECD, 2018[14]).

Also, according to a majority of principals in the OECD, principals alone have the main responsibility for 6 of the 11 tasks listed. For "establishing student disciplinary policies and procedures", significant responsibility is held mainly by principals and other members of the school management team. This may suggest that some form of task distribution is taking place where principals are able to share responsibilities with other members of the school management team for this task. Overall, principals have a predominant presence in tasks related to staffing and school policies. According to a majority of principals in the OECD, teachers' responsibilities are significant mainly for tasks related to curriculum and instruction, with shared responsibility on school policies. However, teachers generally have less than a minor role in 6 of the 11 tasks, including with respect to all aspects of staffing and budgets. This holds true for more than 85% of schools in the OECD, according to their principals (Figure II.5.2, Table II.5.5). Allocation of responsibilities to both principals and teachers is examined in depth in the following section on autonomy among principals and teachers – see the sections on supporting principal leadership and supporting teacher leadership.

Figure II.5.2 **Summary of responsibilities for school governance**

Based on the responses of lower secondary principals (OECD average-30)

Responsibilities		Held mainly by[1]	Considerable role[2]	Minor role[3]
Staffing tasks	Appointing or hiring teachers	Principal	Other members of the school management team and out-of-school authorities	
	Dismissing or suspending teachers from employment	Principal	Out-of-school authorities	School governing board
Budget tasks	Establishing teachers' starting salaries	Out-of-school authorities	Principal	
	Determining teachers' salary increases	Out-of-school authorities	Principal	
	Deciding on budget allocations within the school	Principal	Other members of the school management team, school governing board and out-of-school authorities	
School policies	Establishing student disciplinary policies and procedures	Principal, other members of the school management team.	Teachers and school governing board	
	Establishing student assessment policies	Principal	Other members of the school management team, teachers and out-of-school authorities	School governing board
	Approving students for admission to the school	Principal	Other members of the school management team and out-of-school-authorities	
Curriculum and instruction	Choosing which learning materials are used	Teachers	Principal and other members of the school management team	
	Determining course content	Teachers and out-of-school authorities	Principal and other members of the school management team	
	Deciding which courses are offered	Principal	Other members of the school management team, teachers, school governing board and out-of-school-authorities	

1. More than 50% of principals report that a given actor has significant responsibility, on average across the OECD.
2. 25% to 50% of principals report that a given actor has significant responsibility, on average across the OECD.
3. 15% to 25% of principals report that a given actor has significant responsibility, on average across the OECD.

Source: OECD, TALIS 2018 Database, Table II.5.5.

StatLink http://dx.doi.org/10.1787/888934084000

As shown in Figure II.5.2 (Table II.5.5), responsibility for tasks in schools may require involvement of several actors within the school. The capacity of schools to share responsibility across different bodies and entities within the school is often described as distributed leadership. This refers to the capacity of the school to build spaces in which other stakeholders in the school community can act as leaders (Spillane, 2006[28]). When authority is distributed among school staff, it can not only improve and strengthen the relationship between staff, but it can also be a vehicle to build leadership capacities (Louis et al., 2010[29]; Redding, 2007[30]).

Principals were asked if they agree with statements regarding whether the school provides opportunities for teachers, parents or guardians, and students to participate in school decisions. On average across the OECD, 98% of principals "agree" or "strongly agree" that staff have the opportunity to actively participate in school decisions, while 83% report that parents/guardians can do so, and 81% report that students can do so (Table II.5.9). There is very little cross-country variation in the percentage of principals reporting that staff have a say in school decisions; none of the TALIS countries and economies have a value under 90%. Teachers were asked the same question. Although the OECD average is elevated (77% on average across the OECD), for some countries and economies, at least 60% of teachers believe they have the opportunity to "participate in school decisions"). That is the case in Australia, Belgium and its French Community, CABA (Argentina), Chile, England (United Kingdom), Israel, South Africa and the United Arab Emirates (Chapter 4, Table II.4.24). The discrepancy between teachers and principals on the different facets and opportunities for school leadership is not uncommon, as they may have different notions of the allocated responsibilities and tasks (Bowers et al., 2017[31]).

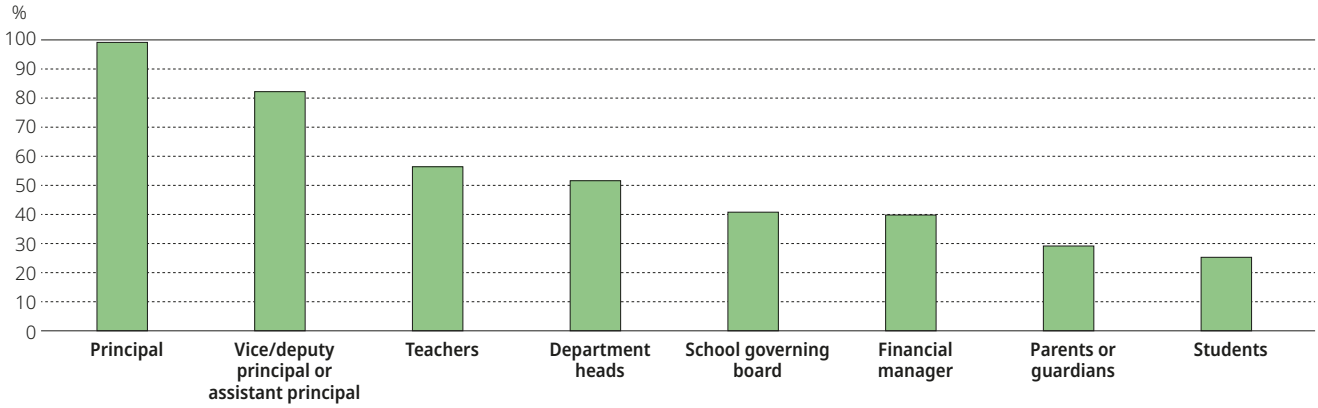
To further understand the opportunities for teachers and other stakeholders to effectively engage in school processes, it is useful to explore the management structures in schools. Allocation of responsibilities and distribution of leadership are more effective when they are embedded in the organisation (Harris, 2004[32]). Forming leadership teams makes it possible to increase the speed of improvement efforts (Pedersen, Yager and Yager, 2010[33]). The existence of a school management team can be interpreted as a very rough indicator of the installed capacities of the school to make and share decisions.

TALIS asked principals to report the presence of a school management team and describe its composition. The term "school management team" refers to a group within the school that has responsibility for leading and managing the school in decisions involving instruction, use of resources, curriculum, assessment and evaluation, as well as other strategic decisions related to appropriate functioning of the school.[6] On average across the OECD, 87% of principals report having a school management team (Table II.5.10). There is little variation across countries and economies on this answer, but it is important to highlight a few exceptional cases where the percentage of principals reporting the existence of a school management team is considerably lower than the OECD average, as in Saudi Arabia (69% of principals report having a school management team), Austria (60%) and Alberta (Canada) (54%).

TALIS 2018 asked principals who report having a school management team which actors are represented in this group. On average across the OECD, besides the principal, the most frequent reported actors are vice/deputy principals or assistant principals (82% of principals report that these actors are represented in the management team) (Figure II.5.3, Table II.5.10). Teachers are the next group mentioned (56%), followed by department heads (52%), the school governing board (41%) and financial managers (40%). Less often mentioned are parents or guardians (29% of principals report that they are represented in the school management team) and students (25%). However, there are a few exceptions to this pattern. More than 80% of principals report that parents and guardians are represented in their school management team in Colombia, Korea, Mexico, Romania and Turkey, and more than 80% of principals report students' involvement in Colombia and Turkey. The experiences of these countries should be examined more closely, as research has shown that parental involvement in decision making can affect students' academic outcomes (Cooper and Christie, 2005[34]; Noguera, 2001[35]).

Figure II.5.3 **Composition of school management teams**

Percentage of lower secondary principals who report the following to be represented in the school management team[1, 2] (OECD average-30)



1. "School management team" refers to a group within the school that has responsibilities for leading and managing the school in decisions such as those involving instruction, use of resources, curriculum, assessment and evaluation, and other strategic decisions related to the appropriate functioning of the school.

2. The analysis is restricted to principals who report having a school management team in their school.

Values are ranked in descending order of the percentage of lower secondary principals who report the following to be represented on the school management team.

Source: OECD, TALIS 2018 Database, Table II.5.10.

StatLink http://dx.doi.org/10.1787/888934084019

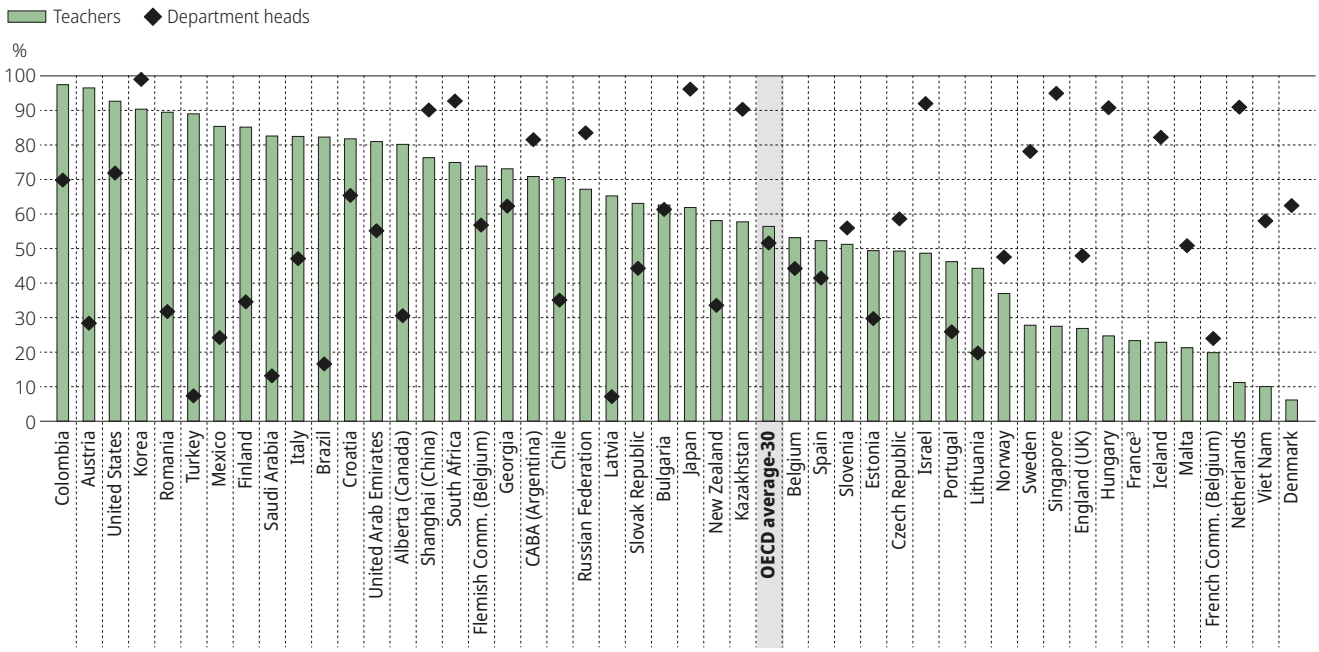
Having a formal structure of leadership, such as school management team, can help encourage teachers to grow in their role and also to take on leadership responsibilities (Hallinger and Murphy, 2012[36]). As previously mentioned, teachers are the third most frequently reported members of the school management team. Teachers are professionals who, due to their training, are subject experts and curriculum experts. Based on their everyday work, they have an understanding of the needs of their students; so, it is strongly encouraged that teachers play a role in decision-making structures at their schools (Ainley and Carstens, 2018[8]; OECD, 2017[12]). Although the importance of teacher participation also depends on the role and tasks of the management team,

their inclusion in the management team can be considered a rough indicator of the distribution of authority. More than 90% of the principals who report having a management team also report that teachers are members of their school management team in Austria, Colombia, Korea and the United States (Figure II.5.4, Table II.5.10). However, less than 25% of principals report that teachers have a role in the school management team in Denmark, France, the French Community of Belgium, Iceland, Malta, the Netherlands and Viet Nam.

In order to have a complete picture of the involvement of teachers in decision-making structures, it is also crucial to consider the role of department heads. Indeed, department heads are usually teachers leading a group of teachers who either teach the same subject or the same group of students in different subjects. An effective mechanism of distributed leadership is sharing leadership with content area expertise (Hallinger and Murphy, 2012[36]). As such, the involvement of a department head could be seen as a more productive form of allocation of responsibilities within the school. Figure II.5.4 shows that there is an important cross-country variation in the presence of department heads on the school management team. For a few countries, the lack of teachers on the school management team is compensated for by the presence of department heads. That is the case for Hungary, Iceland, the Netherlands, Singapore and Sweden where, although less than 30% of principals who have a management team report that teachers are part of it, more than 70% report that department heads have a role in the school management team (Table II.5.10).

Figure II.5.4 **Representation of teachers and department heads on school management teams**

Percentage of lower secondary principals who report that teachers and department heads are represented on the school management team[1, 2]



1. "School management team" refers to a group within the school that has responsibilities for leading and managing the school in decisions such as those involving instruction, use of resources, curriculum, assessment and evaluation, and other strategic decisions related to the appropriate functioning of the school.

2. The analysis is restricted to principals who report having a school management team in their school.

3. France's values for department heads were not included, as this classification is not meaningful in the French system.

Countries and economies are ranked in descending order of the percentage of lower secondary principals who report that teachers are represented on the school management team.

Source: OECD, TALIS 2018 Database, Table II.5.10.

StatLink http://dx.doi.org/10.1787/888934084038

Nevertheless, these results should be interpreted with caution. Formal structures such as a school management team are not the only mechanisms through which teachers can be involved in decision making or develop leadership skills. Peer collaboration, team work and other informal activities can also be instances in which they can enact their decisions. For some countries and economies, these are the areas where teachers' voices are heard. For example, even though only 6% of principals in Denmark report that teachers take in part in their school management team, the majority of principals report that they have significant responsibility for most of the school tasks (Table II.5.10) – see the section on supporting teachers' leadership.

SUPPORTING PRINCIPALS' LEADERSHIP

Principals' leadership is pivotal to creating, establishing and developing a structure of support for teachers. Successful systems are those that are able to provide a structure for teachers' professional learning and development from which all students of the school can benefit (Hallinger and Heck, 2010[11]). But principals' leadership ultimately depends on their level of autonomy and the extent of their decision-making power (Muijs, 2011[37]).

This section starts by exploring the responsibility that principals have for a range of diverse tasks in the school. It then examines the different types of leadership that principals can enact to foster student learning and describes aspects related to system leadership. Leadership does not take place only within the walls of the school, so the section concludes by exploring principals' perceptions of their relations with policy makers.

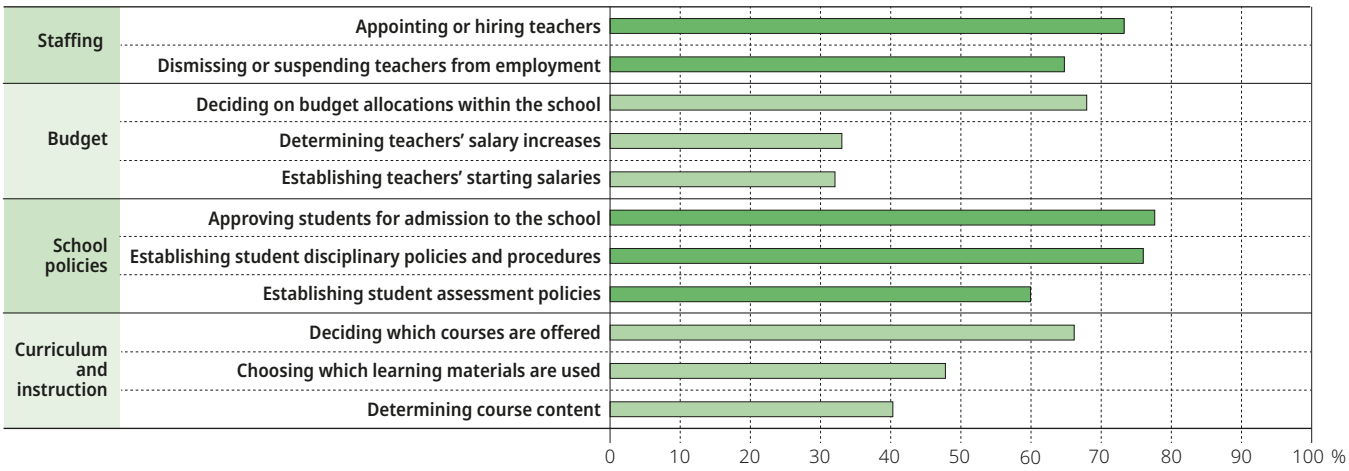
Principals' school responsibilities

This section explores whether principals have significant responsibility for a series of tasks. On average across the OECD, the percentage of principals who report that they personally have significant responsibility on issues concerning staffing is high: 73% of principals report that they have significant responsibility for "appointing or hiring teachers", while 65% report significant responsibility for "dismissing or suspending teachers from employment" (Figure II.5.5, Table II.5.5). More than 90% of principals report that they have significant responsibility in both of these tasks in Bulgaria, the Flemish Community of Belgium, the Czech Republic, Denmark, England (United Kingdom), Estonia, Georgia, Iceland, Latvia, Lithuania, the Russian Federation, the Slovak Republic and Slovenia, while half of principals or less report that they have responsibility in both of these areas in Brazil, Colombia, France, Japan, Korea, Mexico, Romania, Saudi Arabia, Spain, Turkey and the United Arab Emirates.

Regarding school budgets, principals' responsibilities seem to be relatively low, as expected given the overall low autonomy that schools have in this area – see the previous section also (Table II.5.1). On average across the OECD, 32% of principals state that they have significant responsibility for "establishing teachers' starting salaries", and 33% report significant responsibility for "determining teachers' salary increases" (Figure II.5.5, Table II.5.5). Although 68% of principals state that they have significant responsibility for "deciding on budget allocations within the school", there is important cross-country variation. At least 90% of principals report that they have significant responsibility for budget allocations within the school in Bulgaria, the Czech Republic, Denmark, Estonia, Finland, the Netherlands, New Zealand, Norway, Singapore and Sweden, while less than 30% state the same in CABA (Argentina), Colombia, Romania, Saudi Arabia and Turkey (Table II.5.5).

Figure II.5.5 **Principals' school responsibilities**

Percentage of lower secondary principals who report having significant responsibility for the following tasks (OECD average-30)



Values are grouped by school responsibilities and, within each group, ranked in descending order of the percentage of lower secondary principals who report they have significant responsibility for the above tasks within the four areas of school responsibility.

Source: OECD, TALIS 2018 Database, Table II.5.5.

StatLink http://dx.doi.org/10.1787/888934084057

A majority of principals state that they have significant responsibility on issues regarding school policies. On average across OECD countries and economies in TALIS, 78% of principals report that they have significant responsibility for "approving students' admission to the school", 76% report significant responsibility for "establishing student disciplinary policies" and 60% report significant responsibility for "establishing student assessment policies" (Figure II.5.5, Table II.5.5). More than 80% of principals report

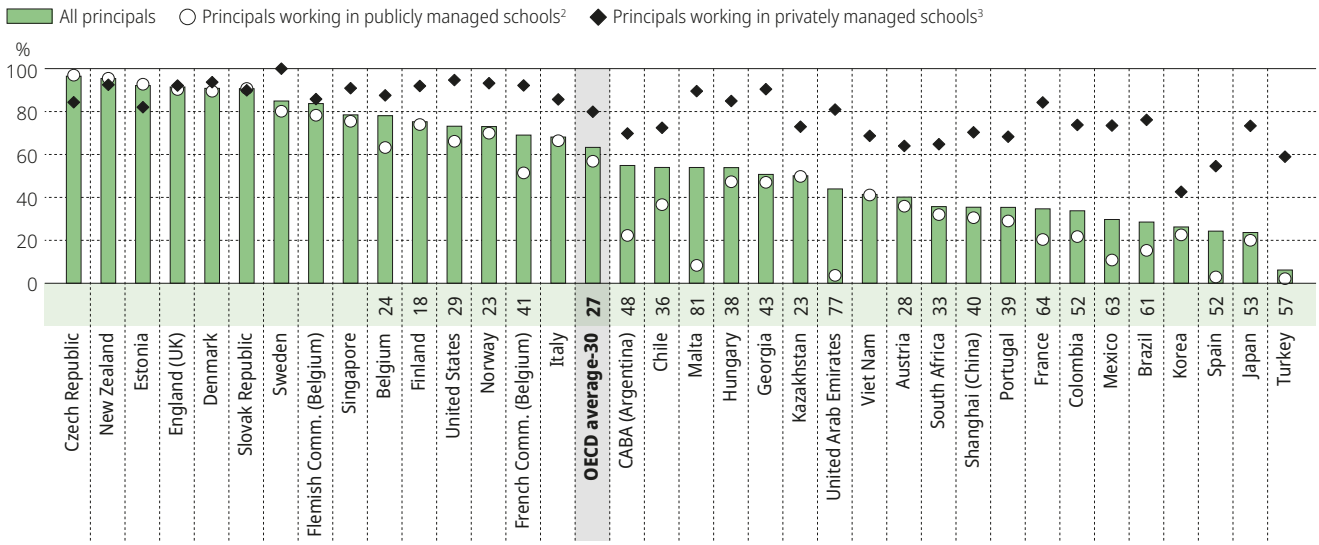
having significant responsibility in these areas in Belgium and its Flemish Community, the Czech Republic, Denmark, New Zealand and Singapore. Less than 50% of principals report that they have significant responsibility for at least two of these three issues in Brazil, Korea, Romania, Saudi Arabia, Shanghai (China), South Africa, Spain, Turkey and the United Arab Emirates.

Principals have considerable input into curriculum and instructional issues. On average across the OECD, 66% of principals report that they have significant responsibility in "deciding which courses are offered", 48% report significant responsibility in "choosing which learning materials to use", and 40% report significant responsibility in "determining course content" (Figure II.5.5, Table II.5.5). At least 50% of principals report having significant responsibility in all three tasks in CABA (Argentina), the Czech Republic, Israel, Italy, Latvia, New Zealand, the Russian Federation, Singapore, the Slovak Republic and the United States. On the other hand, less than 50% of principals report having significant responsibility for these three areas in Bulgaria, Colombia, Croatia, Georgia, Kazakhstan, Japan, Mexico, Romania, Saudi Arabia, Shanghai (China), South Africa, Spain, Sweden, Turkey, the United Arab Emirates and Viet Nam.

A way to summarise these results is observing the average number of tasks principals report having significant responsibility for (Table II.5.11). On average across the OECD, principals report having significant responsibility in 6 out of the 11 listed tasks. Results range from 9.8 activities on average in the Czech Republic to only 1.1 in Saudi Arabia. To better describe the overall responsibility of principals across all these tasks, a new measure was computed estimating the proportion of schools where principals have significant responsibility for the majority of tasks (at least 6 of the 11 tasks) (Figure II.5.6). On average across the OECD, 63% of principals report having significant responsibility for a majority of the school tasks. At least 90% of principals report having significant responsibility for the majority of school tasks in the Czech Republic, England (United Kingdom), Estonia, Denmark, New Zealand and the Slovak Republic. At the other end of the spectrum, only 6% of principals in Turkey and 3% in Saudi Arabia report that they have significant responsibility for the majority of school tasks.

Figure II.5.6 **Overall responsibilities of principals, by school type**

Percentage of lower secondary principals who have significant responsibility in a majority of school tasks[1]



1. This percentage is calculated based on whether principals report having significant responsibility for at least 6 of the following 11 tasks: "appointing or hiring teachers"; "dismissing or suspending teachers from employment"; "deciding on budget allocations within the school"; "establishing teachers' starting salaries"; "determining teachers' salary increases"; "establishing student disciplinary policies and procedures"; "approving students for admission to the school"; "establishing student assessment policies"; "choosing which learning materials are used"; "deciding which courses are offered" and "determining course content".

2. A publicly managed school is a school whose principal reported that it is managed by a public education authority, government agency, municipality, or governing board appointed by government or elected by public franchise. In the principal questionnaire, this question does not make any reference to the source of the school's funding which is reported in the preceding question.

3. A privately managed school is a school whose principal reported that it is managed by a non-governmental organisation (e.g. a church, trade union, business or other private institution). In the principal questionnaire, this question does not make any reference to the source of the school's funding, which is reported in the preceding question. In some countries, the privately managed schools category includes schools that receive significant funding from the government (government-dependent private schools).

Note: Statistically significant differences between publicly managed schools and privately managed schools are shown next to the country/economy name (see Annex B).

Countries and economies are ranked in descending order of the percentage of lower secondary principals who have significant responsibility in a majority of school tasks.

Source: OECD, TALIS 2018 Database, Table II.5.11.

StatLink http://dx.doi.org/10.1787/888934084076

It is worth noting the difference between publicly managed schools and privately managed schools in the overall responsibilities of principals. On average across the OECD, 57% of principals in publicly managed schools report having significant responsibility for the majority of tasks in their school, compared to 80% of principals in privately managed schools (Figure II.5.6, Table II.5.11). This difference is particularly pronounced (over 60 percentage points) in Brazil, France, Malta, Mexico and the United Arab Emirates. At the same time, the countries and economies that have a high proportion of schools where the principals have significant responsibility for the majority of tasks (the Czech Republic, England [United Kingdom], Estonia, Denmark, New Zealand and the Slovak Republic) do not display significant differences between publicly managed schools and privately managed schools. This may reflect system-wide regulation or standards governing the tasks of principals. The tasks and responsibilities assigned to principals may have an impact on teacher support and student achievement (OECD, 2016[9]). Thus, large differences between the actions of principals in different types of school may also translate into different levels of support for teachers and student outcomes.

In the five years since TALIS 2013, there have been few significant changes in the responsibilities of principals, except in a handful of countries and economies (Table II.5.8). A country-by-country analysis provides some interesting insights. In Iceland and the Slovak Republic, there has been a significant decrease in the proportion of principals reporting that they have significant responsibility in "establishing teachers' salaries", "determining teachers' salary increases" and "deciding on budget allocations within the school". In the case of the Slovak Republic, the majority of school principals benefit from a good structure for administrative and management support. Within the school organisation, a staff member assumes the role of taking care of planning the school budget for staff salaries and an accountant assumes responsibility for operational costs, planning the school budget for goods and services. Potentially, this can free time for principals to devote to tasks related to curriculum development or supporting instruction (Santiago et al., 2016[38]). The changes over time observed for the Slovak Republic could reflect an extension of this type of school organisation across schools.

Box II.5.3. **Principals' responsibilities, from primary to upper secondary education**

Like their peers in lower secondary education, primary principals do not share the same type of responsibilities across countries and economies. Principals at the lower secondary level tend to have more significant responsibilities over staffing-related decisions, compared to their primary counterparts. In 4 of the 13 countries/economies with available data, a significantly lower proportion of principals in primary education than their peers in lower secondary have significant responsibility for "appointing or hiring teachers", with the highest differences observed in CABA (Argentina) (28 percentage points) and France (24 percentage points) (Table II.5.6). A greater proportion of principals in primary education than in lower secondary education have significant responsibility for determining course content, with the highest differences reported in England (United Kingdom) (37 percentage points) and the Flemish Community of Belgium (29 percentage points). A similar trend is observed concerning responsibility for choosing which learning materials are used, with a striking difference of 55 percentage points in the Flemish Community of Belgium.

Differences between principals in lower secondary and upper secondary education tend to be similar to those observed between primary and lower secondary levels. Principals' reports suggest that principals in upper secondary have more responsibility for staff and budget-related tasks, but less responsibility for curriculum and instruction-related tasks. In 7 of the 11 education systems with available data, a smaller share of principals in upper secondary education than in lower secondary education approves students for admission to the school. The highest differences are observed in Croatia (23 percentage points) and Denmark (21 percentage points) (Table II.5.7).

Types of leadership for principals

Autonomy is an important component in ensuring that the actions of principals are pertinent to the needs of their students and schools. But autonomy alone is not enough. Policy reviews and research literature have shown that autonomy has more impact when there are strong leadership structures in place (Jensen, Weidmann and Farmer, 2013[39]). Research conducted using Programme for International Student Assessment (PISA) 2015 data has shown that the relation between principals' autonomy and students' performance is relatively strong, but it is even stronger for systems with high levels of leadership (OECD, 2016[24]).

This section explores how frequently principals engage in specific actions, as well as their perceptions on the levels of support provided by them and to them. TALIS 2018 asked school leaders how frequently ("never or rarely"; "sometimes"; "often"; or "very often") they engaged in a series of activities that can be allocated to different types of leadership. The term "leadership for

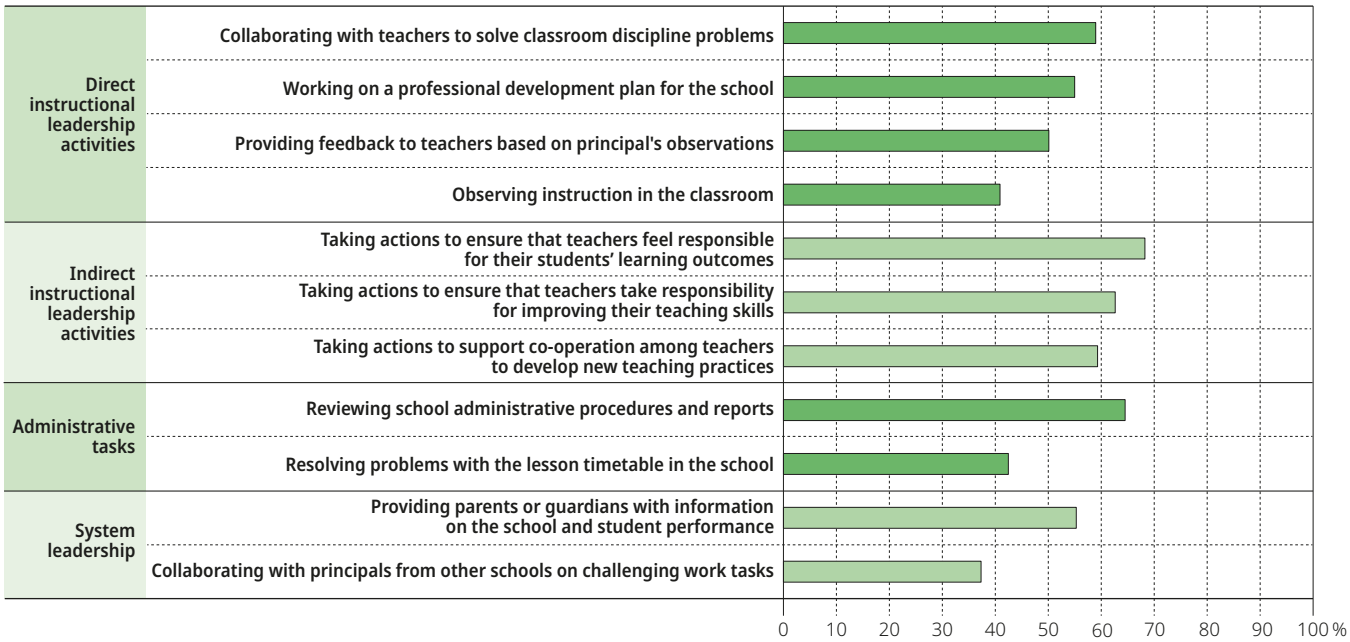
learning" refers to all the different areas and tasks of school leaders aimed at improving the work of their teachers, along with student achievement (Hallinger and Heck, 2010[11]). This section examines three aspects of principals' leadership aimed at student learning: instructional leadership (in its indirect and direct forms); administrative leadership; and system leadership. Special attention is given to system leadership, because it is the first time TALIS has collected indicators on it. The section concludes by exploring principals' perceptions of their relations with policy makers.

The first area explored corresponds to tasks associated with instructional leadership. These types of actions refer to principals' efforts focusing on the instructional quality enacted by teachers. To improve the quality of instruction, principals may focus on tasks such as managing the curriculum, attending to teachers' professional development needs or creating a culture of collaboration (Hallinger, 2015[40]; Hallinger, 2011[6]; Hallinger and Heck, 2010[11]). The emphasis on and relative importance of each of the tasks associated with instructional leadership have shifted over the years, as more empirical studies emerged testing their impact on educational outcomes (OECD, 2016[9]). A more direct or hands-on approach to instructional leadership was considered time-consuming for principals and potentially disruptive to teachers' autonomy (Horng and Loeb, 2010[41]), so, an indirect form of instructional leadership was promoted instead.[7] This focused more on creating a school climate of co-operation and support, where teachers are able to relate to the schools' goals and adopt them in terms of their performance at work (Hallinger, 2015[40]; Hallinger and Heck, 2010[16]). Results from the previous cycle, TALIS 2013, showed that principals who report more of these forms of instructional leadership tend to spend more time on curriculum and teaching-related tasks and are more likely to observe classroom teaching as part of formal appraisal of teachers' work. In some countries, these principals more often report using the results of student performance and evaluations to develop the school's educational goals and programmes (OECD, 2014[42]). Furthermore, principals who report high levels of instructional leadership work in schools where teachers share the same objectives, and collaborate and reflect on their practices (OECD, 2016[9]).

On average across the OECD, a considerable proportion of principals are invested in direct forms of instructional leadership: 59% of principals report that they "collaborated with teachers to solve classroom discipline problems"; 55% report that they "worked on a professional development plan for the school"; 50% report that they "provided feedback to teachers based on [their] observations"; and 41% report that they "observed instruction in the classroom" (Figure II.5.7, Table II.5.12). More than 70% of principals report engaging "often" or "very often" in at least three of these four activities in Bulgaria, Georgia, Kazakhstan, Romania, Saudi Arabia, Shanghai (China), Slovenia, the United Arab Emirates, the United States and Viet Nam.

Figure II.5.7 **Principals' leadership activities**

Percentage of low secondary principals who "often" or "very often" engaged in the following activities in their school in the 12 months prior to the survey (OECD average-30)



Values are grouped by leadership activity and, within each group, ranked in descending order of lower secondary principals' engagement in the above leadership activities in their school in the 12 months prior to the survey.

Source: OECD, TALIS 2018 Database, Table II.5.12.

StatLink http://dx.doi.org/10.1787/888934084095

However, in Denmark, Estonia, and Sweden, 50% of principals or less report engaging "often" or "very often" in these four tasks, and 50% of principals or less so report for three of these tasks in Belgium (and the French Community), CABA, France, Iceland, Japan, Lithuania, Netherlands, Norway, Portugal and Spain (Table II.5.12).

On average across the OECD, a relatively high proportion of principals report that they engage in the three activities corresponding to indirect forms of instructional leadership: "actions to ensure that teachers feel responsible for their students' learning outcomes" (68%); "actions to ensure that teachers take responsibility for improving their teaching skills" (63%); and "actions to support co-operation among teachers to develop new teaching practices" (59%) (Figure II.5.7, Table II.5.12). The TALIS countries and economies showing exceptionally high percentages of principals who report that they took actions to ensure that teachers feel responsible for students' learning outcomes are Viet Nam (97%), Kazakhstan (94%), Shanghai (China) (93%), Bulgaria (92%), the United Arab Emirates (92%), South Africa (91%), Georgia (90%) and Latvia (90%). However, 50% of principals or less report engaging in any of these three activities "often" or "very often" in Japan, and 50% or less do so for two of these activities in the French Community of Belgium, Estonia and Finland. Box II.5.4 describes interesting initiatives on instructional leadership in Norway and Viet Nam.

Box II.5.4. **Instructional leadership in Viet Nam and Norway**

Viet Nam

Viet Nam's school governance charter clearly defines the role of principals as "leaders of teaching and learning". Principals are required to maintain their teaching status with a minimum of two teaching periods per week. Therefore, principals are both teachers and leaders of teachers. This enables school leaders in Viet Nam to closely monitor the quality of teaching practice. To monitor teaching quality, school leaders partner with subject heads and regularly carry out classroom observations or collect observation reports from subject-group peer reviews. School principals also play a strong accountability role in the education system.

Norway

In Norway, there are several ongoing national and local initiatives strengthening the role of school leaders to improve students' academic outcomes. The Ministry of Education and Research clearly defines the instructional leadership role of school leaders, and enhances support and capacity to lead collaborative professional development at the school level. One of the national initiatives, Motivation and Mastery for Better Learning (2012-2017), has put a major focus on lower secondary schools becoming learning organisations. The expectations on the school leaders have been that they should prioritise educational management and use learning networks as one of several instruments to stimulate reflection and sharing of experience at the organisation level.

Sources: McAleavy, T., T.H. Ha and R. Fitzpatrick (2018[43]), *Promising Practice: Government Schools in Vietnam*, https://files.eric.ed.gov/fulltext/ED588856.pdf; OECD (2013[44]) *Education Policy Outlook: Norway*, http://www.oecd.org/norway/EDUCATION%20POLICY%20OUTLOOK%20NORWAY_EN.pdf.

In the majority of TALIS countries, there are no significant differences across school type, location or composition for the instructional leadership indicator "actions to support co-operation among teachers to develop new teaching practices" (Table II.5.15). But there are a few exceptions. A significantly higher proportion (18 to 31 percentage points) of principals in privately managed schools report engaging in this action than in public schools in Hungary, Mexico and Turkey, while the opposite pattern is observed in France, New Zealand, Norway and the United Arab Emirates. South Africa is the only country that displays a significantly higher proportion (32 percentage points differences) of principals in rural schools than in city schools who report that they took "actions to support co-operation among teachers to develop new teaching practices", while the Slovak Republic shows the reverse pattern (23 percentage points differences).

School composition also plays a role in the level of engagement in "actions to support co-operation among teachers to develop new teaching practices" for a few countries and economies. In Italy, New Zealand, Shanghai (China) and the United Arab Emirates, the share of principals who report that they engaged in this activity was significantly larger in schools with a high concentration of students from socio-economically disadvantaged homes than in schools with a lower proportion of such students (Table II.5.15). In CABA (Argentina), Kazakhstan and Portugal, the share of principals was significantly larger in schools with a high concentration of immigrant students. In Croatia, Japan, the Netherlands, Portugal and Spain, the share of principals was significantly larger in schools with a high concentration of students with special needs (Table II.5.15).

How can levels of instructional leadership be improved? Previous TALIS research showed that training in instructional leadership and time spent in curriculum and teaching seem to be important preconditions for the full development of principals as instructional leaders (OECD, 2016[9]). However, in the first volume of TALIS 2018, principals report that only a small fraction of their time can be devoted to curriculum and teaching and only around half of principals report having had training in instructional leadership before taking up their job – see Tables I.2.18 and I.4.28 in *TALIS 2018 Results (Volume I)* (OECD, 2019[45]). As discussed at the beginning of this section, having significant responsibility for school responsibilities could also allow principals to engage more effectively in instructional leadership. Indeed, more scope for principals to take decisions in their school could enhance their organisational commitment and their opportunities to guide their staff (Briggs and Wohlstetter, 2003[46]; Dou, Devos and Valcke, 2017[47]). TALIS 2013 found that school autonomy in certain areas and instructional leadership play a mild role in developing professional learning communities in primary and lower secondary education (OECD, 2016[9]), Another relevant aspect to consider is distributed leadership. Allocating and delegating responsibilities to members of the staff, parents and students points to a strong school community that could serve as a foundation for principals to engage in instructional leadership.

To examine these assumptions, a regression is run on TALIS 2018 to observe the relationship between the indirect forms of instructional leadership (i.e. actions to ensure that teachers feel responsible for their students' learning outcomes, that teachers take responsibility for improving their teaching skills and actions that support co-operation among teachers to develop new teaching practices) and a number of variables: 1) the average number of school activities for which principals report having significant responsibility (i.e. as a proxy for autonomy and decision making); 2) time available (i.e. the proportion of time spent on instructional leadership and meetings, the proportion of time spent on curriculum and teaching-related tasks, and the perception of lack of time for instructional leadership); 3) the participation among stakeholders index (i.e. whether the school provides staff, parents/guardians and students with opportunities to actively participate in school decisions, the school has a culture of shared responsibility for school issues and there is a collaborative school culture which is characterised by mutual support) 4) having received training in instructional leadership and 5) other variables concerning teacher demographics and school characteristics (Table II.5.17).

On average across the OECD, the results seems to suggest that those principals that spend higher proportions of time on leadership meetings and curriculum- and teaching-related tasks also show higher levels of instructional leadership. Also, the higher number of activities for which they report having significant responsibility is also associated with higher levels of instructional leadership. Other relevant findings are that principals reporting higher levels of instructional leadership are more likely to have received training in instructional leadership, to be female, and more likely to work in schools in city areas (Table II.5.17).

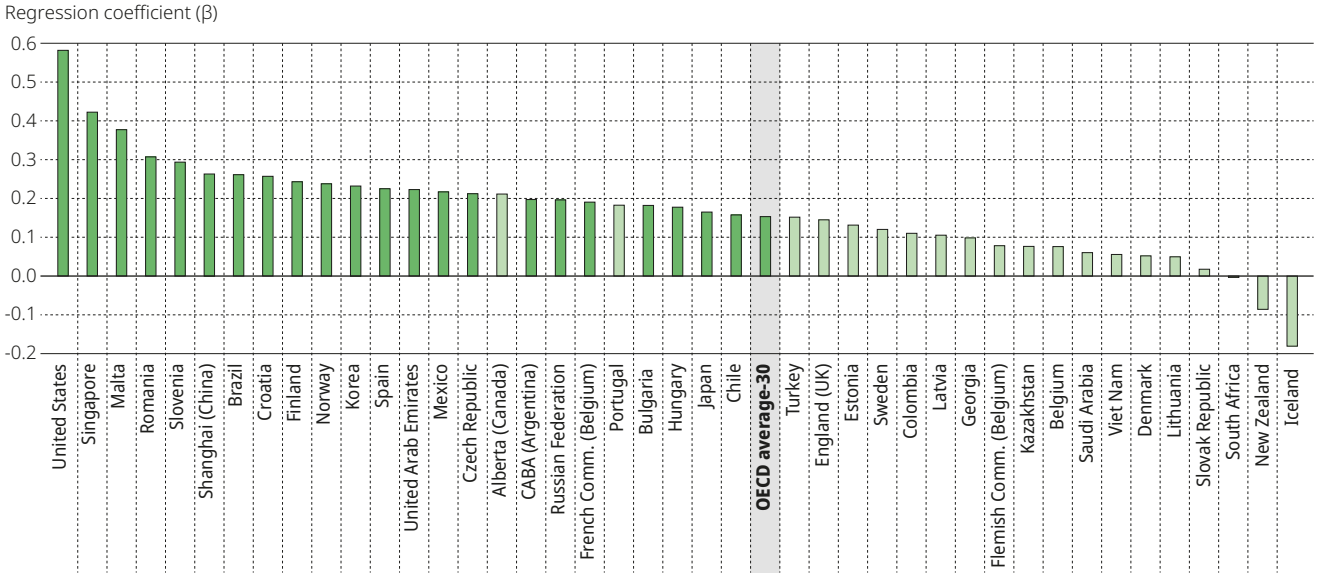
Nevertheless, the most relevant finding is the association between the index of participation among stakeholders and the index of instructional leadership. Results show that those principals who are able to involve staff, parents and students in school decisions and have a school culture of collaboration and shared responsibility are more likely to report that they take action to support co-operation among teachers, that teachers take responsibility for improving their teaching, and that they feel responsible for students' learning (Figure II.5.8, Table II.5.17). This holds true for 24 TALIS countries and economies. No causal interpretation is possible, but the results reveal the interconnectedness between a collegial school culture and a leadership committed to improving teacher instruction and commitment. Indeed, the results echo the findings of TALIS 2013, which identified a certain profile of principal, the "integrated leader", who was able to have a strong focus on both instructional and distributed leadership (OECD, 2016[9]).

As for other forms of leadership for learning, two actions of principals relate to administrative tasks. On average across the OECD, 65% of principals report that they "often" or "very often" "reviewed school administrative procedures and reports, while 42% report that they "often" or "very often" "resolved problems with the lesson timetable in this school" (Figure II.5.7, Table II.5.12). In Bulgaria, Colombia, Italy, Hungary, Mexico, and Romania, at least 90% of principals report that they "often" or "very often" "reviewed school administrative procedures and reports". As research evidence has shown, time spent on general administrative tasks can also have a positive association with student outcomes (Grissom and Loeb, 2011[15]).

System leadership addresses initiatives aimed at strengthening links between schools and their communities, especially with principals from other schools. In many systems, principals are increasingly encouraged to exercise leadership not only within their school, but also beyond their school. This is due to the growing understanding of the importance of the way schools relate to their communities, contexts and other social services (Cummings et al., 2007[48]) and of the need for schools to be interconnected and collaborate, in order to maximise positive outcomes across communities and enhance social justice (Hadfield and Chapman, 2009[49]). There is increasing, though contested, evidence of the relationship between collaboration and school improvement (Chapman and Muijs, 2014[50]; Croft, 2015[51]) and also of the challenges this involves for school leaders, not least in moving from hierarchical relationships to equal peer leadership relationships (Muijs et al., 2014[52]).

Figure II.5.8 **Relationship between principals' instructional leadership and participation among stakeholders in the school**

Change in the index of instructional leadership associated with the index of participation among stakeholders[1, 2, 3]



1. Results of linear regression based on responses of lower secondary principals.

2. The index of instructional leadership is measured by principals reporting they take action to ensure that teachers feel responsible for their students' learning outcomes, take responsibility for improving their teaching skills and co-operate to develop new teaching practices. The index of participation among stakeholders is measured by whether the school provides staff, parents/guardians and students with the opportunity to actively participate in school decisions, whether there is a culture of shared responsibility in the school and whether there is a collaborative school culture characterised by mutual support.

3. Controlling for the following: principal characteristics (gender, age, years of experience as a principal at current school), school characteristics (school location index, school type and school size), average number of school tasks for which principals report having significant responsibility, the proportion of time spent on instructional leadership, the proportion of time spent on curriculum and teaching-related tasks, the perception of time needed for instructional leadership and having received training in instructional leadership.

Note: Statistically significant coefficients are marked in a darker tone (see Annex B).

Countries and economies are ranked in descending order of the change in the index of instructional leadership associated with participation among stakeholders.

Source: OECD, TALIS 2018 Database, Table II.5.17.

StatLink http://dx.doi.org/10.1787/888934084114

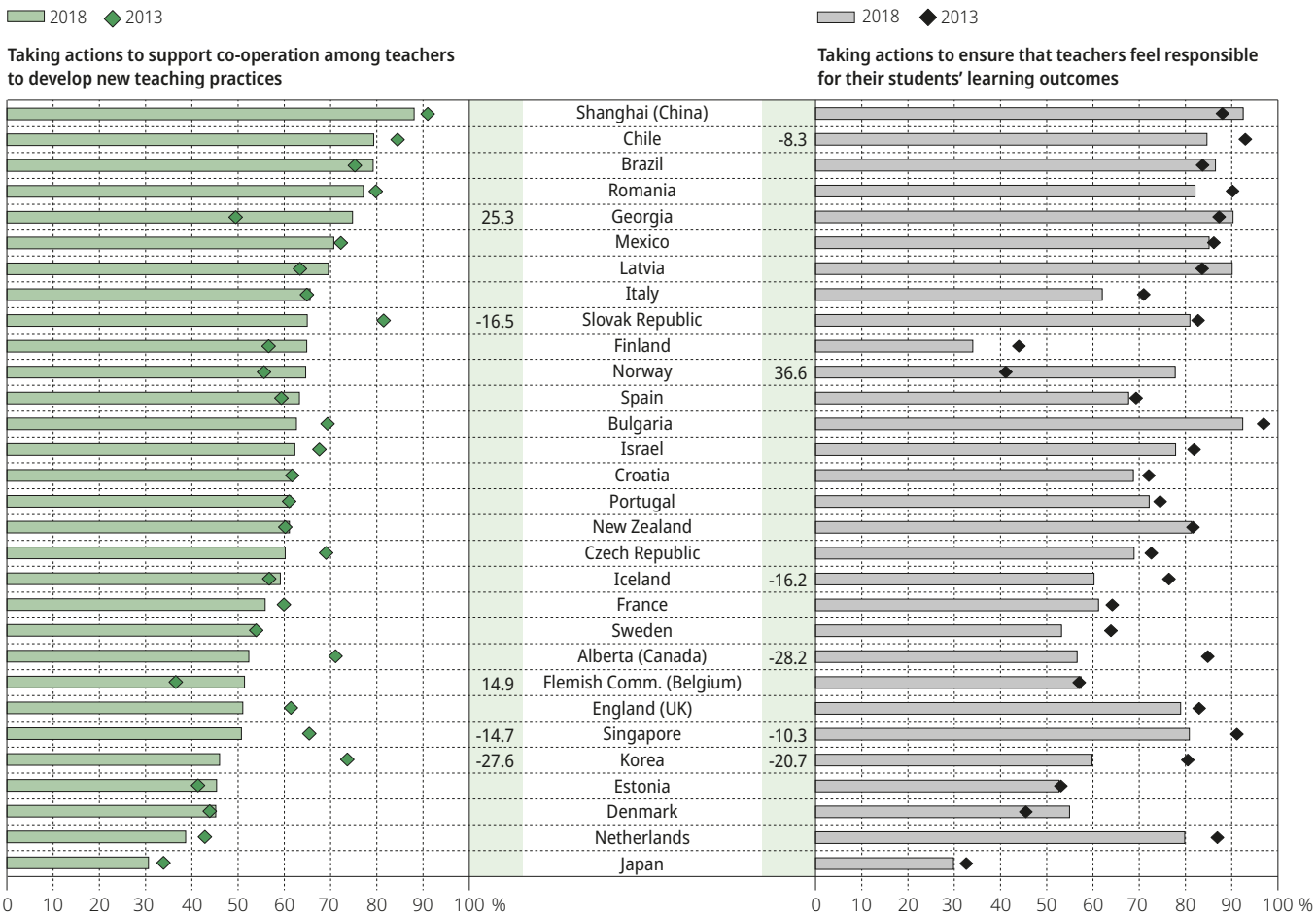
Overall, across the OECD, actions pertaining to system leadership are the least often reported by principals: 55% of principals report that they "often" or "very often" "provided parents or guardians with information on the school and student performance" and 37% of principals report that they "often" or "very often" "collaborated with principals from other schools on challenging work tasks" (Figure II.5.7 Table II.5.12). Countries and economies with exceptionally low values in the proportion of principals who reported collaborating with principals from other schools on challenging work tasks are Viet Nam (25%), Spain (24%), Malta (21%), Singapore (21%), Japan (20%), the Czech Republic (18%) and CABA (Argentina) (9%). Collaborating with principals from other schools is the activity least frequently mentioned by principals, out of the 11 school leadership activities discussed in this chapter, in 19 TALIS countries and economies. However, more than half of principals report engaging "often" or "very often" in collaboration with other principals in Finland, Hungary, Korea, the Netherlands, Romania, the Russian Federation, Slovenia, South Africa and Turkey.

Overall, across all these types of leadership, principals' engagement in these actions has not changed systematically in the last five years (Table II.5.16). An interesting pattern in a handful of countries and economies is the change in principals' collaboration with teachers to solve classroom discipline problems. For 9 of the 31 countries and economies with data available for both TALIS 2013 and TALIS 2018, there has been a significant decrease in the percentage of principals reporting that they engage "often" or "very often" in collaboration with teachers to solve classroom discipline problems. The highest decrease is observed for Norway (20 percentage points) and Singapore (19 percentage points). These changes in the engagement of principals in solving classroom discipline problems could suggest that there are fewer disciplinary problems and that the intervention of principals is no longer warranted or needed. Indeed, the classroom disciplinary climate has improved in Singapore since 2013 and in Norway since 2008 – see Table I.3.55 in *TALIS 2018 Results (Volume I)* (OECD, 2019[45]).

Looking at the specific indicators of indirect instructional leadership ("actions to ensure that teachers feel responsible for their students' learning outcomes"; "actions to ensure that teachers take responsibility for improving their teaching skills"; and "actions to support co-operation among teachers to develop new teaching practices") reveals interesting findings for some countries (Figure II.5.9, Table II.5.16). Alberta (Canada), Chile, Iceland, Korea, Singapore and the Slovak Republic have experienced a decrease in at least one of the three indicators for instructional leadership. In the case of Korea and Singapore, there has been a marked decrease in these three actions. The decline in the proportion of principals engaging in these actions could reflect time allocated to different tasks. For example, Korea has experienced an increase in actions related to resolving problems with the school's lesson timetable. In contrast, the Flemish Community of Belgium, Georgia and Norway have experienced a significant increase in at least one of the indicators of instructional leadership.

Figure II.5.9 **Change in principals' instructional leadership from 2013 to 2018**

Percentage of lower secondary principals who report to have "often" or "very often" engaged in the following activities in their school in the 12 months prior to the survey



Notes: Only countries and economies with available data for 2013 and 2018 are shown.

Statistically significant changes between 2013 and 2018 (TALIS 2018 – TALIS 2013) are found next to the category and the country/economy name (see Annex B).

Countries and economies are ranked in descending order of the percentage of lower secondary principals who report to have "often" or "very often" taken actions to support co-operation among teachers to develop new teaching practices in 2018.

Source: OECD, TALIS 2013 and TALIS 2018 Databases, Table II.5.16.

StatLink http://dx.doi.org/10.1787/888934084133

Exploring system leadership: parents and communities

As mentioned in the previous section, a relatively low percentage of principals report engaging in system leadership activities "often" or "very often". The importance of system leadership cannot be underplayed, as the relationship between the school and parents and the larger school community is vital to providing contextualised and pertinent quality education (Schleicher, 2018[53]). TALIS 2018 collected a series of additional indicators that help to shed light on these types of activities.

On average across the OECD, principals report spending one-tenth of their working time on interactions with parents and guardians (Table II.5.18). School leaders' time spent on interactions with families and guardians is comparatively higher in Latin American countries: CABA (Argentina) (15%), Brazil (14%) and Mexico (13%), as well as in Turkey, Italy and Spain (all 14%). The proportion of time spent on these interactions is slightly higher (by up to 6 percentage points) in urban schools than in rural schools in Alberta (Canada), Bulgaria, Croatia, Georgia, Italy, Lithuania, Portugal, the Russian Federation, the Slovak Republic and Sweden. In addition, on average across the OECD, principals report spending only 6% of their time on interactions with their local and regional community, business and industry (Table II.5.19). However, in Croatia, Italy, Japan and Romania, school leaders spend more than 8% of their total time, on average, on these interactions.

Overall, in the last five years, the average time principals have spent on relations with other stakeholders has not changed significantly in TALIS countries and economies. Of the 31 countries and economies with available data, only Alberta (Canada), Chile, Finland, Japan, Korea, Shanghai (China) and Singapore showed a significant decrease in the average time principals spent interacting with parents and guardians (Table II.5.20). In 12 TALIS countries and economies, the time principals' spent in interactions with the local and regional community, business and industry has decreased, although the magnitude of these changes is relatively small.[8]

TALIS also asks school leaders about their views on the level of their school's engagement with the community. Specifically, TALIS asks school leaders about their extent of agreement or disagreement with the statement "parents or guardians are involved in school activities". On average across the OECD, almost half (48%) of school leaders report that this applies "quite a bit" or "a lot" to their school (Table II.5.21). However, there are large differences between countries. This view is most prevalent in Latvia (89%), Italy (84%) and Denmark (72%) and least prevalent in Mexico, Sweden and the Slovak Republic (all less than 25%).

Regarding specific interactions with parents or guardians, the results are somewhat more nuanced. On average across the OECD, 62% of principals consider that parents or guardians support student achievement "quite bit" or "a lot", while only 48% of principals consider that parents or guardians are involved in school activities "quite a bit" or "a lot" (Table II.5.21). The results could show that, overall, principals consider that parents or guardians are concerned about the achievement of pupils but have less actual involvement in school activities.

More than 50% of principals support both statements in Brazil, Colombia, Denmark, France, Hungary, Italy, Japan, Kazakhstan, Korea, Latvia, Lithuania, New Zealand, Portugal, the Russian Federation, Shanghai (China), the United Arab Emirates, the United States and Viet Nam (Table II.5.21). Less than 30% of principals report that parents or guardians are involved with school activities in CABA (Argentina), the Czech Republic, Finland, Iceland, Mexico, the Slovak Republic and Sweden. Furthermore, in several countries and economies, the share of principals who report that parents and guardians are concerned with student achievement is much higher than the share who report that parents are involved in school activities (a difference of at least 30 percentage points). This is the case in Belgium and its French Community, England (United Kingdom), Finland, Malta, Singapore and Slovenia. These results reflect, somewhat, the results of the recent TALIS study on early childhood education. It shows that "exchanging information with parents regarding daily activities and children's development" is common, but that smaller percentages of staff report "encouraging parents to play and carry out learning activities at home with their children" (OECD, 2019[54]). In other words, these results may speak of the challenges schools face in translating the engagement and interest of parents into concrete activities.

Principals' perceptions of support from authorities and of their own policy influence

Leadership needs to be understood beyond the boundaries of the school, as opportunities are provided to principals to engage in and influence policy development. TALIS asked principals about their overall satisfaction with support received for their tasks from other stakeholders and how they perceived their own involvement with policy making. On average across the OECD, 66% of principals "agree" or "strongly agree" with the statement "I need more support from authorities" (Table II.5.25), implying that only about one-third are satisfied with the support they receive. More than 90% of principals state that they need more support from authorities in Colombia, Italy, Japan, Romania, Saudi Arabia, Shanghai (China) and Viet Nam, while less than 50% agree with this statement in Denmark, England (United Kingdom), Estonia, Finland, the Netherlands, Norway and Singapore. Values are particularly low in Denmark and England (United Kingdom), with only 29% of principals considering that they need additional support from authorities, indicating higher degrees of satisfaction.

On average across the OECD, 33% of principals consider that they cannot influence decisions that are important for their work, implying that about two-thirds feel that they can influence decisions (Table II.5.25). There is important variation across countries. More than 50% of principals feel that they cannot influence decisions in Austria, Croatia, the Czech Republic, Iceland, Portugal and Shanghai (China), while this is the case for less than 15% of principals in Israel, Japan, Korea, the Netherlands, Norway and Singapore. It is interesting to note that the proportion of principals who feel that they need more support from the authorities (66%) equals the proportion of those who disagree with the statement that they cannot influence policy (66%).

In other words, although principals may not be getting the expected support from authorities in their work, they still consider they have room to influence the development of policy. A similar appreciation is shared by teachers – see the section on teacher leadership at the end of this chapter.

Box II.5.5. **Principals' leadership, from primary to upper secondary education**

Types of leadership

Across the three levels of education covered by TALIS, there are few variations in principals' engagement in leadership activities, with some notable exceptions among countries. Principals in primary schools tend to be more engaged in direct instructional activities in CABA (Argentina), Japan and Spain, with a higher proportion of primary principals reporting that they are involved in at least two of the four direct instructional leadership activities (Table II.5.13). In France, a higher share of principals in lower secondary education report being involved in other types of activities, especially in ensuring that teachers take responsibility for their students' learning outcomes (37 percentage points) and resolving problems with the lesson timetable in the school (37 percentage points).

When comparing lower and upper secondary education, there is even less difference. In Slovenia, lower secondary principals tend to be more engaged in two of the instructional leadership activities, with significant differences observed in collaborating with teachers to solve classroom discipline problems (17 percentage points) and observing instruction in the classroom (20 percentage points) (Table II.5.14).

System leadership

Community engagement in the school tends to be more developed at the primary level. In 9 of the 13 countries and economies with available data, fewer principals in lower secondary than in primary level report that parents or guardians are involved in school activities (Table II.5.22), with the largest differences in the Flemish Community of Belgium (34 percentage points difference) and CABA (Argentina) (27 percentage points difference). For these two systems, similar tendencies can also be observed in at least two of the three other items.

The involvement of parents or guardians in school activities is even lower in upper secondary education, with significantly higher proportions of principals in lower secondary than their upper secondary counterparts reporting that parents or guardians are involved in school activities in Denmark (37 percentage points), Portugal (17 percentage points), Sweden (15 percentage points) and Turkey (13 percentage points) (Table II.5.23).

Principals' perceptions of the support from authorities

A greater share of principals in primary education than in lower secondary education report that they cannot influence decisions that are important for their work in France (33 percentage points difference), CABA (Argentina) (17 percentage points difference) and Korea (10 percentage points difference). In addition, a higher share of primary principals than lower secondary principals express the need for support from authorities in the Flemish Community of Belgium (18 percentage points difference) and England (United Kingdom) (17 percentage points difference)(Table II.5.26).

At upper secondary level, there is a more nuanced pattern. Portugal is the only country showing a significant change across levels in their support from authorities, where principals in lower secondary education need more support from authorities that their colleagues in upper secondary (8 percentage points difference) (Table II.5.27). Regarding the influence on decisions that are important for work, only Slovenia shows a significant difference, with a higher proportion of principals in upper secondary than in lower secondary considering they cannot influence these decisions (14 percentage points difference).

Overall differences between leadership styles and relations with policy makers across educational levels may be associated with the different functions and responsibilities of principals at each level.

TEACHER LEADERSHIP

There is a growing realisation of the value of harnessing the leadership potential of teachers (Ainley and Carstens, 2018[8]). Conceptualised as "teacher leadership", this presupposes flatter organisational structures, in which teachers themselves take on leadership, both in and beyond the classroom, working collaboratively with colleagues on school improvement and pedagogy and having a clear voice in the development of the school vision and goals (Gonzales and Lambert, 2001[55]; Harris and Muijs, 2004[17]; Portin et al., 2013[56]). This section first examines teachers' level of responsibility in several school tasks, as reported by principals.

It then explores teachers' feelings on control of curriculum issues for their target class and principals' perceptions of both academic leadership and curriculum leadership. The section concludes by exploring teachers' perceptions of their relations with the media and policy makers, as these are also relevant indicators for teacher leadership outside the school.

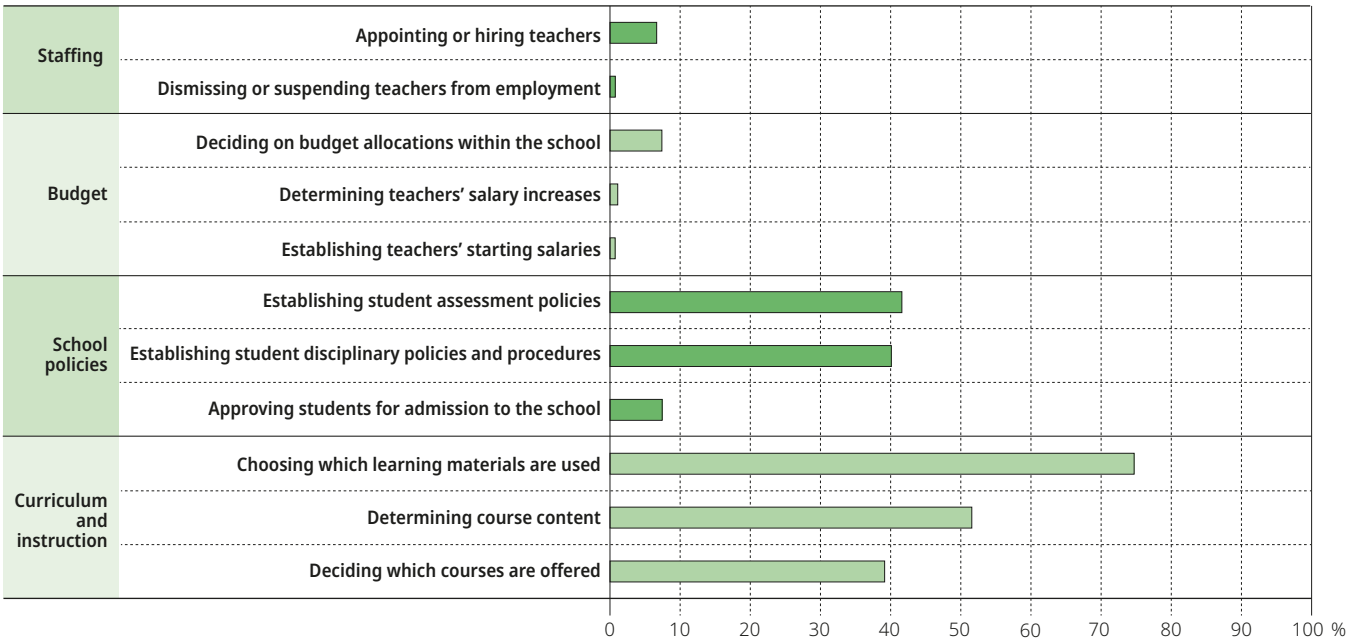
Teachers' school responsibilities

Principals report on the levels of responsibility teachers have for 11 different tasks. On average across the OECD, the percentage of principals who report that teachers have significant responsibility on issues concerning staffing or budget is quite low. Within these groups of tasks, the two that stand out most are "appointing or hiring teachers" (7% of principals report that teachers have significant responsibility on this issue) and "deciding on budget allocations within the school" (also 7%) (Figure II.5.10, Table II.5.5). Despite these overall low percentages, there are a few exceptions. For example, 46% of principals in Denmark and 44% in the Netherlands report that teachers have significant responsibility in "appointing or hiring teachers". In Korea and New Zealand, 20% of principals report that teachers have significant responsibility in "deciding on budget allocations within the school" (Table II.5.5).

Turning to issues regarding school policies, teachers' responsibilities are low, but greater than for staffing and budgets. On average across OECD countries and economies in TALIS, a minority of principals report significant responsibility for teachers in establishing student assessment policies (42%), for establishing student disciplinary policies (40%) and on approving students for admission to the school (only 7%) (Figure II.5.10, Table II.5.5). Regarding involvement in student admissions, there is a vast difference between principals and teachers. While the majority of principals (78% on average across the OECD) reported having responsibility for student admissions, only 7% of principals state that teachers have significant responsibility on this issue. A few countries and economies display high values for teachers' responsibility for disciplinary policies, such as Iceland (83%) and Slovenia (80%), while principals in Estonia (81%) and Latvia (70%) report that teachers have significant responsibility in establishing student assessment policies. However, a few TALIS countries and economies show remarkably low values in these two areas. Less than 20% of principals in Saudi Arabia, Shanghai (China), Turkey and Viet Nam report that teachers have significant responsibility in establishing disciplinary policies and student assessment policies. The proportion of principals reporting that teachers have significant responsibility on approving students' admission to schools is low (below 5% in most countries and economies), but there are some outliers, such as Austria, where 38% of principals report that teachers have significant responsibility in this area.

Figure II.5.10 **Teachers' school responsibilities**

Percentage of lower secondary principals who report that teachers have significant responsibility for the following tasks (OECD average-30)



Values are grouped by school responsibilities and, within each group, ranked in descending order of the percentage of lower secondary principals who report that teachers have significant responsibility for the above tasks.

Source: OECD, TALIS 2018 Database, Table II.5.5.

StatLink http://dx.doi.org/10.1787/888934084152

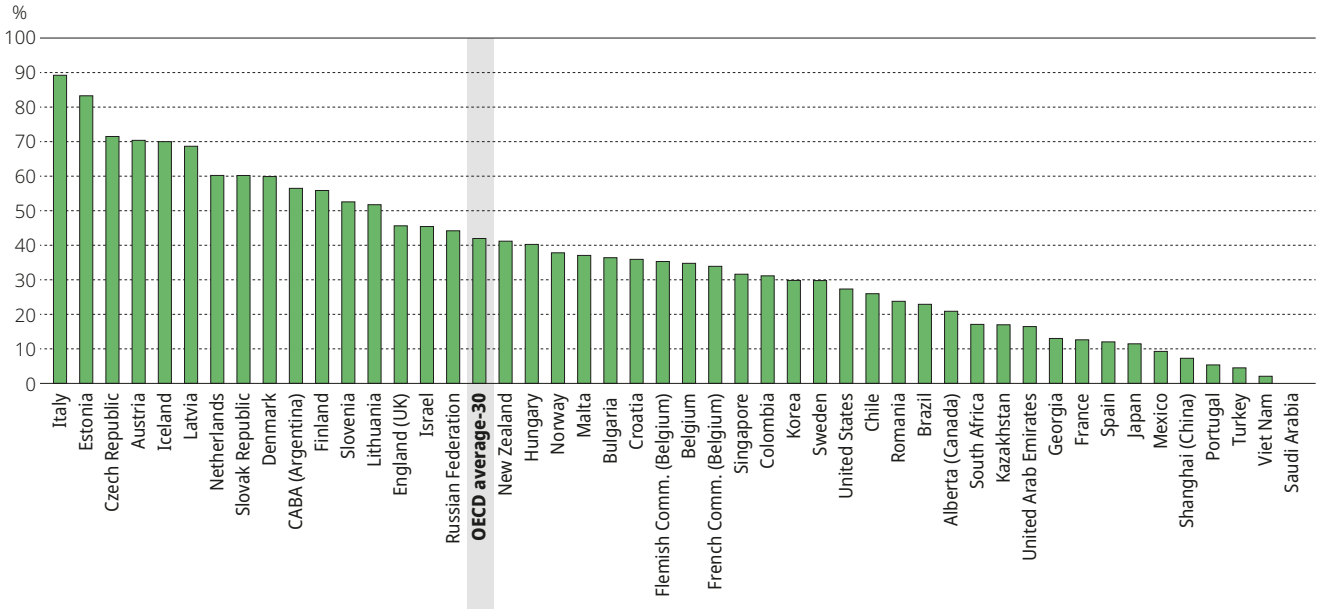
The area where teachers seem to have the greatest responsibility is curriculum and instruction (Figure II.5.10, Table II.5.5). On average across the OECD, a majority of principals report significant responsibility for teachers in choosing learning materials (75%) and determining course content (52%). Fewer principals so report for teachers' responsibility in deciding which courses are offered (39%). Choosing learning materials is most often cited as a task for which teachers have considerable responsibility (and, hence, autonomy). At least 95% of principals report that teachers have input on this issue in the Flemish Community of Belgium and Iceland. However, less than 30% of principals report that teachers have input in this area in Japan, Saudi Arabia, Shanghai (China), the United Arab Emirates and Viet Nam. For determining course content, high values are observed in the Netherlands (91%), Italy (88%), Denmark (84%) and Estonia (83%), with very low shares of principals (less than 10%) reporting that teachers have significant input in Mexico, Saudi Arabia, Turkey and Viet Nam. Deciding which courses are offered also shows interesting variation across countries, with high values in Italy (95%) and Estonia (75%), but low values in Brazil (9%), Turkey (9%), Saudi Arabia (1%) and Viet Nam (1%).

To have a comprehensive understanding of teachers' responsibility for school tasks, a simple categorisation index is created that includes the tasks where teachers had greater input. The tasks selected are: 1) "establishing student disciplinary policies and procedures"; 2) "establishing student assessment policies"; 3) "approving students for admission to the school"; 4) "choosing which learning materials are used"; 5) "determining course content, including curricula"; and 6) "deciding which courses are offered". If principals report that teachers have significant responsibility in four out of the six tasks, teachers in those schools are considered to have significant responsibility in the majority of tasks related to school policies, curriculum and instruction.

On average across the OECD, based on principals' responses, 42% of schools can be classified as schools where teachers have significant responsibility for school policies, curriculum and instruction. This is the case for at least 70% of schools in Austria, the Czech Republic, Estonia, Iceland and Italy, while less than 10% of schools can be classified under this category in Mexico, Portugal, Saudi Arabia, Shanghai (China), Turkey and Viet Nam (Figure II.5.11, Table II.5.31). Another way to look at these results is to look at the total average count of tasks per country. On average across the OECD, principals report that teachers have significant responsibility in 2.5 of a total of 6 possible tasks, ranging from 4.2 in Estonia to 0.1 in Saudi Arabia. Box II.5.6 presents two interesting cases of harnessing the leadership capabilities of teachers in the United States.

Figure II.5.11 **Overall teachers' responsibilities for school policies, curriculum and instruction**

Percentage of lower secondary principals who report that teachers have significant responsibility in a majority of tasks related to school policies, curriculum and instruction[1]



1. This percentage is calculated based on whether principals report that teachers have significant responsibility in at least four of the following six tasks: "establishing student disciplinary policies and procedures"; "approving students for admission to the school"; "establishing student assessment policies"; "choosing which learning materials are used"; "deciding which courses are offered" and "determining course content".

Countries and economies are ranked in descending order of the percentage of lower secondary principals who report that teachers have significant responsibility in a majority of tasks related to school policies, curriculum and instruction.

Source: OECD, TALIS 2018 Database, Table II.5.31.

StatLink http://dx.doi.org/10.1787/888934084171

On average across the OECD, based on principals' responses, a higher proportion of privately managed schools than publicly managed schools have teachers with significant responsibility for the majority of tasks related to school policies, curriculum and instruction. This is the case for Denmark, Hungary, Kazakhstan, Malta, the Slovak Republic and the United Arab Emirates (Table II.5.31).

Box II.5.6. **Leadership opportunities for teachers in the United States**

In the United States, teachers have leadership opportunities to be involved in education policy work offered by different levels of government. An example of this is the Chancellor's Teachers' Cabinet within the District of Columbia Public Schools (Washington, DC).

The Chancellor's Teachers' Cabinet in Washington, DC, is a year-long commitment for teachers to be a part of the district's work on education and improving the state of public schools in the area. The cabinet works as a forum where teachers reflect on their first-hand experiences, discuss the policy priorities and needs of the public schools, as well as the feasibility of new ideas. It also gives teachers the opportunity to interact with colleagues through a two-hour monthly cabinet meeting. In the past, the cabinet has discussed special education and changes to the teacher evaluation process to allow for continuous improvement and learning for the teaching workforce.

The Special Education Advisory Panel in Arizona gains policy guidance from teachers on services for students with disabilities and special education needs in the state. In addition to teachers, the panel includes parents of students with special education needs, individuals living with disabilities, representatives from higher education institutions and administrators of social programmes for these students. The panel's role is to discuss special needs education and comment on related state education plans.

Sources: Arizona Department of Education (2020[57]), *Exceptional Student Services*, https://www.azed.gov/specialeducation/seap/; District of Columbia Public Schools (2020[58]), *Chancellor's Teachers' Cabinet*, https://dcps.dc.gov/page/chancellors-teachers-cabinet; Pearson, M. (2018[59]), "The teacher effect: How teachers can impact education policies and initiatives", *Room 241*, https://education.cu-portland.edu/blog/leaders-link/teachers-impact-policy/.

An analysis of the role of teachers in decision making over the last five years shows that there are few significant changes for the majorities of countries and economies participating in TALIS (Table II.5.30). However, it is interesting to highlight the case of Georgia, where there has been a significant increase in the share of principals reporting that teachers have significant responsibility in areas concerning "appointing or hiring teachers", "establishing student disciplinary policies and procedures", "establishing student assessment policies", "choosing which learning materials" are used and "determining course content, including curricula".

Box II.5.7. **Teachers' responsibilities, from primary to upper secondary education**

On teachers' school responsibilities, TALIS data do not show a great degree of variation between primary and lower secondary education. An exception is France, where, according to principals, more than 28% of primary teachers decide on budget allocations within the school, compared to only 3% of lower secondary teachers (Table II.5.28). The largest differences across levels of education are observed for curriculum and instruction, with more leadership in this area shown by lower secondary teachers than by their primary peers, according to what principals report. In 3 of the 13 countries with available data for ISCED 1 and 2, lower secondary teachers tend to choose which learning materials are used, determine course content and decide which courses are offered. In contrast, France acts as an outlier, with a higher share of primary teachers having significant responsibility in these three tasks. Moving to the upper level of education, TALIS findings do not present clear differences in teachers' significant responsibilities with lower secondary education, except in the case of a few countries. For instance, in Portugal, the share of upper secondary teachers having significant responsibilities is higher in the three tasks related to school policies (Table II.5.29).

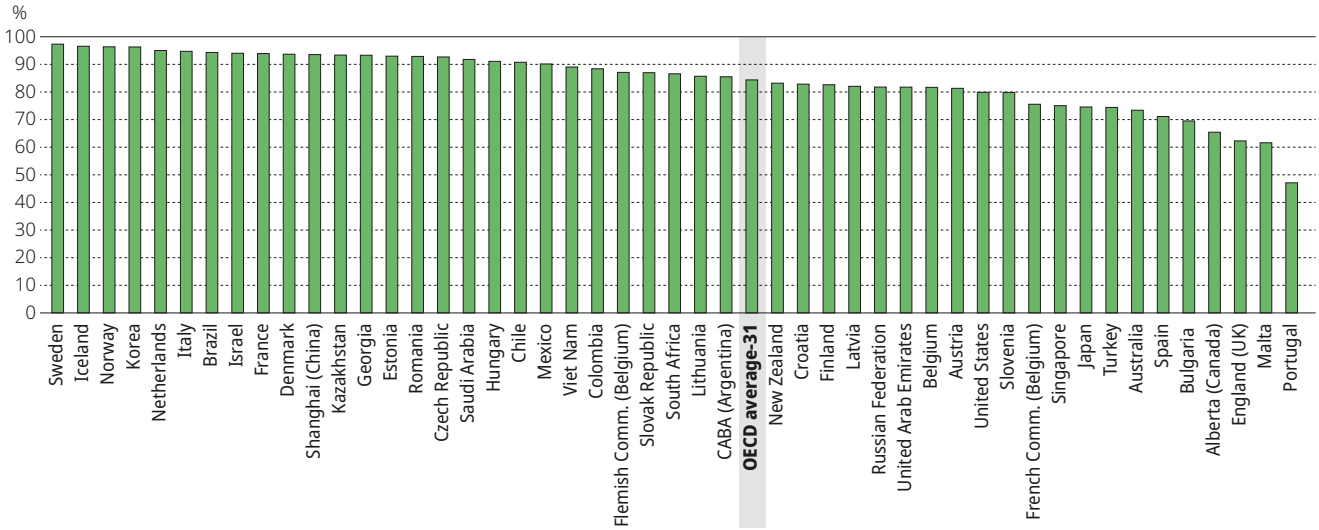
Teachers' sense of control over their work

In TALIS 2018, teachers were asked, for the first time, how strongly they agree ("strongly disagree"; "disagree"; "agree"; or "strongly agree") on their control over a series of areas regarding planning and teaching for a particular class that they teach (henceforth referred to as "target class").[9] Overall, teachers' sense of control is remarkably high across all participating countries. On average across the OECD, 96% of teachers "agree" or "strongly agree" that they have control over "selecting teaching methods", 94% state

the same about "assessing student's learning", 92% about "disciplining students", 91% about "determining the amount of homework to be assigned" and 84% about "determining course content" (Figure II.5.12, Table II.5.32). In 13 TALIS countries and economies, more than 90% of teachers "agree" or "strongly agree" that they have control in each of the areas mentioned. Cross-country variation in each of these areas is quite limited. "Determining course content" is the area displaying the widest range of values, with more than 95% of teachers reporting that they have control in this area in Iceland, Korea, Norway and Sweden and only 47% of teachers so reporting in Portugal.

Figure II.5.12 **Teachers' autonomy in determining course content**

Percentage of lower secondary teachers who "agree" or "strongly agree" that they have control over determining course content in their target class[1]



1. These data refer to a randomly chosen class that teachers currently teach from their weekly timetable. The analysis is restricted to teachers reporting that their target class is not directed entirely or mainly at special needs students.

Countries and economies are ranked in descending order of the percentage of lower secondary teachers who "agree" or "strongly agree" that they have control over determining course content.

Sources: OECD, TALIS 2018 Database, Table II.5.32.

StatLink http://dx.doi.org/10.1787/888934084190

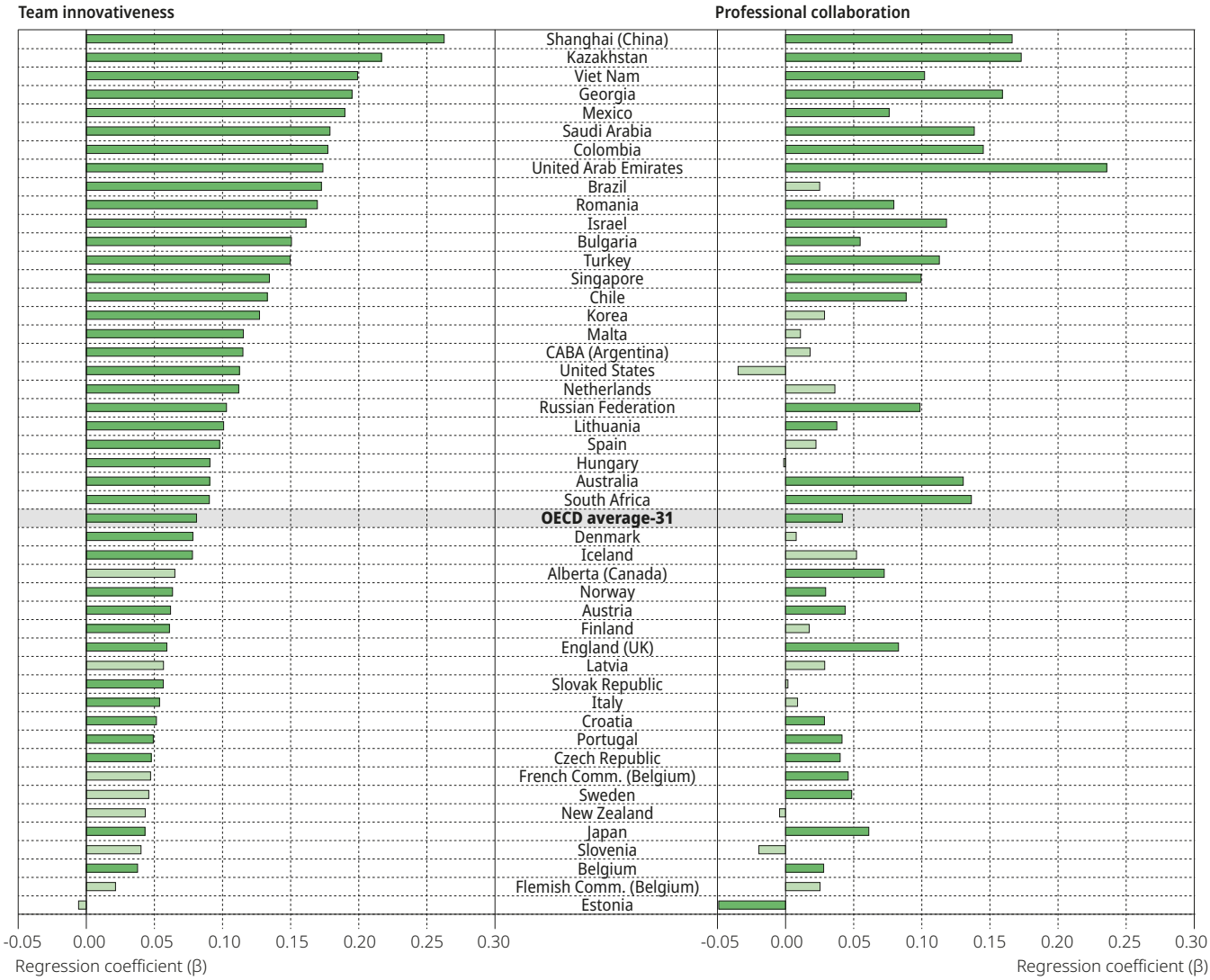
It is also worth noting that there is a very low system-level correlation between the sense of control reported by teachers and by principals on whether teachers have significant responsibility for instruction and curricular tasks (Tables II.5.5 and II.5.33). For example, the linear correlation coefficient is very weak between teachers' sense of control for determining course content and principals stating that teachers have significant responsibility for this same task (the linear correlation coefficient r is r=.18). The lack of association and the overall high percentages of teachers reporting that they have control over their planning might be because of the different perceptions teachers and principals have on these specific questions. Teachers may be reporting on the choices that they have in a regular class, while principals may have a more holistic view of the other stakeholders involved in deciding course content. The action level also differs between questions; while the principal is asked about teachers' level of responsibility in the school, teachers are asked about the sense of control they feel in their target class.

The degree in which teachers are autonomous in making decisions in their work has been identified as a cornerstone of teachers' professionalism, along with development of knowledge and the capacities for collaboration at work (Hargreaves and Fullan, 2012[13]). Regarding the relationship with collaboration, the degree of autonomy and control teachers feel over instruction could be considered as a precondition to collaboration with their peers. However, teachers' level of autonomy and control may also be interpreted as a sign of isolationism that could go against efforts for collaboration (Kelchtermans, 2006[60]). To test this relation, the scale of professional collaboration was regressed on the scale of the level of control teachers feel over their target class (measured by teachers' feelings of control over determining course content, selecting teaching methods, assessing students' learning, disciplining students and determining the amount of homework to be assigned).[10]

On average across the OECD, teachers with higher feelings of control over their target class tend to report that they engage more often in professional collaboration activities with their peers, after controlling for teacher and class characteristics. This relationship holds true for 29 countries and economies (Figure II.5.13, Table II.5.38). The results could suggest that teachers feel control over their instruction and, as such, they do not feel threatened by sharing responsibilities with peers. However, these results need to be interpreted with caution, as the explanatory power of the model is limited (the coefficients of determination R^2 are low).

Figure II.5.13 **Relationship between teachers' team innovativeness and professional collaboration and target class autonomy**

Change in the index of team innovativeness[1] and the index of professional collaboration[2] associated with the index of target class autonomy[3, 4, 5, 6]



1. The index of team innovativeness refers to teachers' reports of whether most teachers in their school strive to develop new ideas for teaching and learning; whether most teachers in this school are open to change; whether most teachers in this school search for new ways to solve problems; and whether most teachers in this school provide practical support to each other for the application of new ideas.

2. The index of professional collaboration measures teachers' engagement in deeper forms of collaboration, including teaching jointly as a team in the same class, providing feedback based on classroom observations, engaging in joint activities across different classes and age groups and participating in collaborative professional learning.

3. The index of target class autonomy measures the level of control teachers feel over determining course content, selecting teaching methods, assessing students' learning, disciplining students and determining the amount of homework to be assigned in their target class.

4. Results of linear regression based on responses of lower secondary teachers.

5. These data are reported by teachers and refer to a randomly chosen class they currently teach from their weekly timetable. The analysis is restricted to teachers reporting that their target class is not directed entirely or mainly at special needs students.

6. Controlling for the following teacher characteristics: gender, age, working full-time, years of experience as a teacher; and for the following classroom characteristics: share of low academic achievers, share of students with behavioural problems and share of students from socio-economically disadvantaged homes.

Note: Statistically significant coefficients are marked in a darker tone (see Annex B).

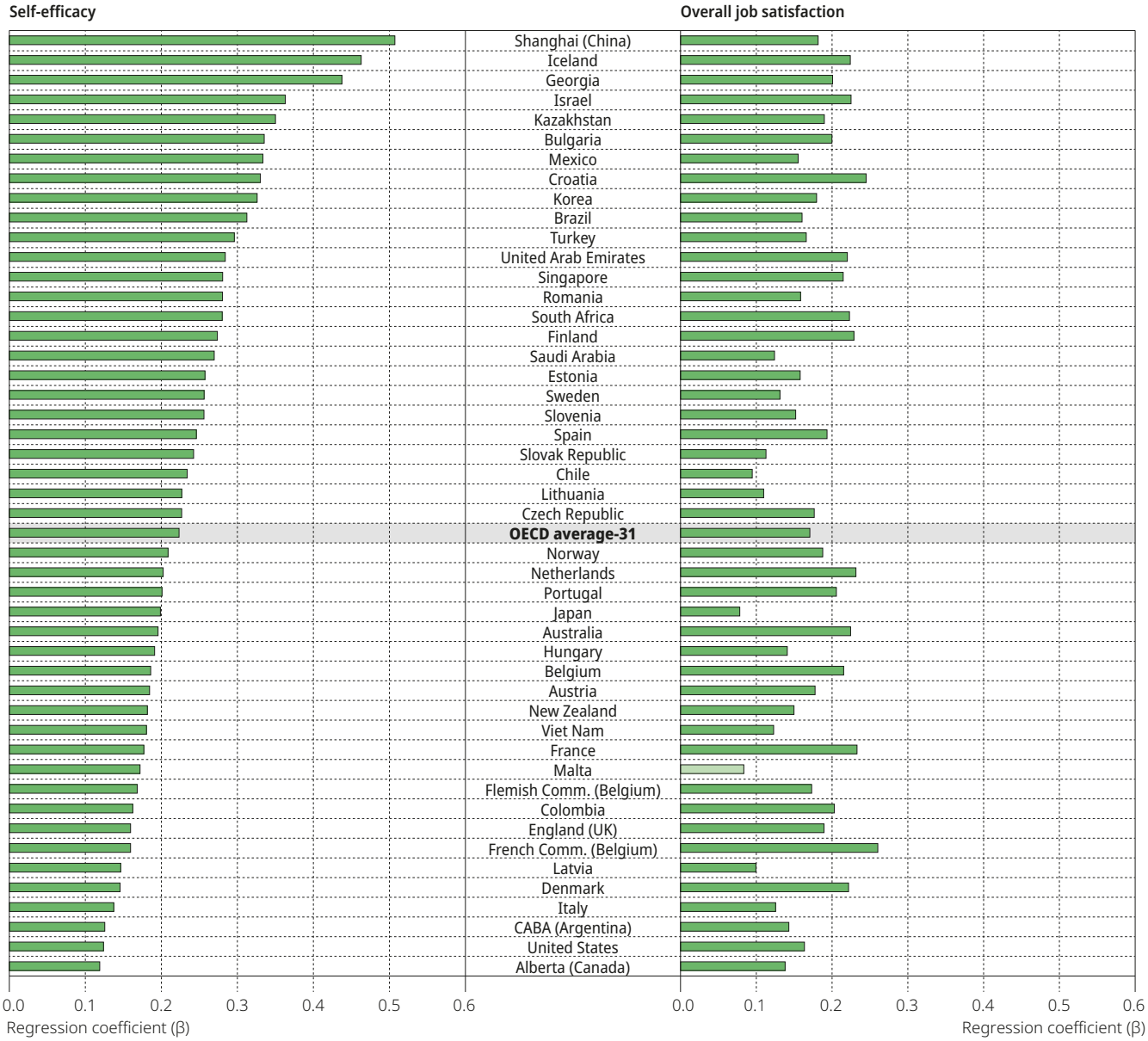
Countries and economies are ranked in descending order of the change in the index of team innovativeness associated with the index of target class autonomy.

Source: OECD, TALIS 2018 Database, Tables II.5.37 and II.5.38.

StatLink http://dx.doi.org/10.1787/888934084209

Figure II.5.14 **Relationship between teachers' self-efficacy and overall job satisfaction and target class autonomy**

Change in the index of self-efficacy[1] and the index of overall job satisfaction[2] associated with the index of target class autonomy[3, 4, 5, 6]



1. The index of self-efficacy measures teacher self-efficacy in classroom management, instruction and student engagement.

2. The index of overall job satisfaction measures satisfaction with the profession and the current work environment

3. The index of target class autonomy measures the level of control teachers feel over determining course content, selecting teaching methods, assessing students' learning, disciplining students and determining the amount of homework to be assigned in their target class.

4. Results of linear regression based on responses of lower secondary teachers.

5. These data are reported by teachers and refer to a randomly chosen class they currently teach from their weekly timetable. The analysis is restricted to teachers reporting that their target class is not directed entirely or mainly at special needs students.

6. Controlling for the following teacher characteristics: gender, age, working full-time, years of experience as a teacher; and for the following classroom characteristics: share of low academic achievers, share of students with behavioural problems and share of students from socio-economically disadvantaged homes.

Note: Statistically significant coefficients are marked in a darker tone (see Annex B).

Countries and economies are ranked in descending order of the change in the index of self-efficacy associated with the index of target class autonomy.

Source: OECD, TALIS 2018 Database, Tables II.5.39 and II.5.40.

StatLink http://dx.doi.org/10.1787/888934084228

In the literature for school improvement, teachers' sense of autonomy and participation in decision making has also been linked to the effective implementation of innovation programmes (Geijsel et al., 2001[61]). Studies have identified the "bottom up" influence in decision making as a characteristic of high-innovative schools as opposed to low-innovative schools (Geijsel, Sleegers and Van den Berg, 1999[62]). To explore this relationship the scale of team innovativeness is regressed to the scale of target class autonomy.[11] Regression analyses show that, on average across the OECD, teachers who feel a higher sense of control over their target class are more likely to report that they work in an innovative environment, after controlling for teacher and class characteristics (Figure II.5.13, Table II.5.37). This holds true for 40 TALIS countries and economies. The results show that, when teachers feel more control of the decisions regarding their classes, they also tend to report that they work in innovative environments. As with the previous regression, the results need to be interpreted with caution (the coefficients of determination R^2 are low). Nevertheless, the results of Tables II.5.38 and II.5.37, seem to hint at a certain degree of interdependency between autonomy, collaboration and innovation.

Furthermore, there seems to be an important link between teachers' sense of autonomy and work satisfaction. In particular, the desire to retain autonomy in the classroom has been identified as highly influential in the decision of teachers to remain in teaching (Brunetti, 2001[63]). Even more, the sense of lack of control in the classroom can lead to teachers feeling tension, frustration, anxiety and stress (Davis and Wilson, 2000[64]). In addition, teachers' sense of autonomy has been linked to teachers' self-efficacy, as both are considered essential attributes for teachers' adaptive faculties and engagement with work (Skaalvik and Skaalvik, 2014[65]).

Regression analyses show that, on average across the OECD, teachers who feel that they have greater levels of control over their target class: 1) feel more confident in their teaching (all TALIS countries and economies show a positive association between control of the target class and self-efficacy); 2) are more satisfied with their work (all TALIS countries and economies, except Malta, show a positive association between control of the target class and job satisfaction); and 3) report lower levels of stress (31 TALIS countries and economies show a negative association between control of the target class and levels of stress) (Tables II.5.39, II.5.40 and II.5.41). Results should be interpreted with caution, as the explanatory power of the model is limited (the coefficients of determination R^2 are low).[12] Regression results for the relationship between target class autonomy and self-efficacy and job satisfaction are displayed in Figure II.5.14.

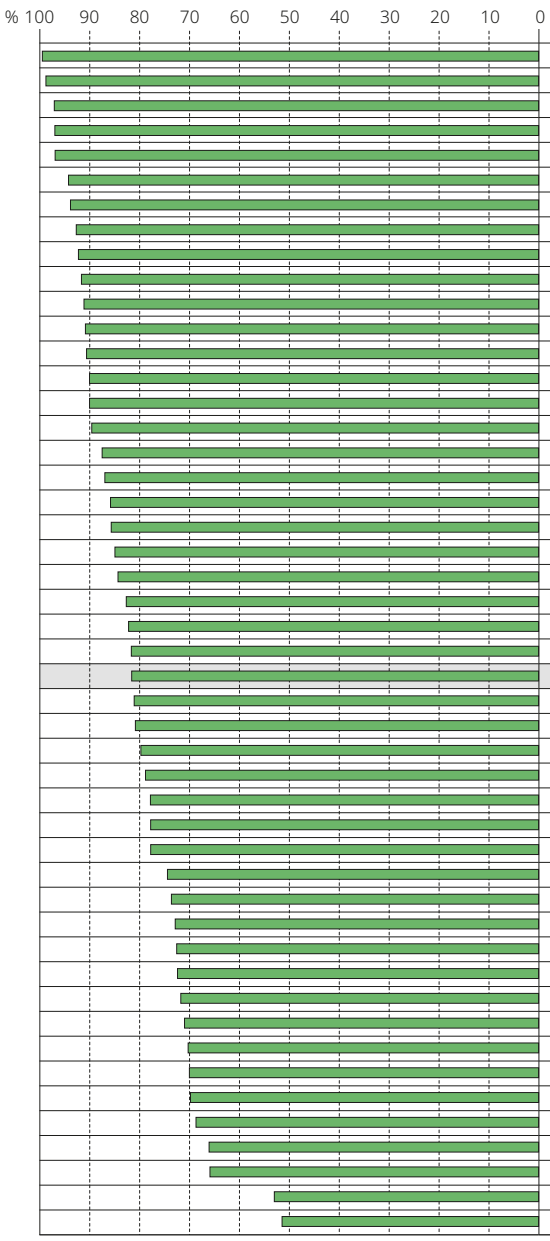
Teachers' actions towards achieving academic success

Leadership can be explored in teachers' ability to lead instruction. Academic environments or pressure are usually conceptualised as an attribute of the school climate. However, in this section they are explored as principals' perceptions on how able teachers are to lead their classroom (Ainley and Carstens, 2018[8]). For the first time in TALIS 2018, principals were asked if a series of actions took place frequently in their schools. These actions labelled "academic leadership" are understood as actions focusing on the overall quality of the academic atmosphere of the school (Ainley and Carstens, 2018[8]) Principals' reports on these actions are remarkably high. On average across the OECD, 92% of principals report that teachers understand the school's curricular goals "quite a bit" or "a lot", 90% report that teachers succeed in implementing the school's curriculum and 82% report that teachers hold high expectations for student achievement (Table II.5.42). In 13 TALIS countries and economies, for each of the three aspects of teachers' academic leadership, more than 90% of principals report that they take place "quite a bit" or "a lot" in their schools. However, there are a few TALIS countries and economies where teachers' academic leadership is comparatively lower. For example, although the values are still high, Mexico and the Netherlands are at the bottom of the distribution of principals reporting that academic leadership of teachers takes place "quite a bit" or "a lot" in their schools.

There is interesting variation across countries and economies in teachers' expectations for student achievement. More than 95% of principals report that teachers hold high expectations for student achievement in Denmark, France, the French Community of Belgium, Latvia and Viet Nam, but only around 50% of the principals report this in Bulgaria and the Netherlands (Figure II.5.15, Table II.5.45). Furthermore, this aspect of teachers' academic leadership shows great variation across school characteristics. On average across the OECD, principals in schools with a high proportion of students from socio-economically disadvantaged homes (more than 30%) report less frequently than their colleagues in schools with lower concentrations of such students that teachers hold high expectations for student achievement. This holds true for 14 TALIS countries and economies. The differences are particularly pronounced in Spain (a gap of 47 percentage points), the United States (43 percentage points) and Romania (40 percentage points). Also on average across the OECD, principals in schools with high concentrations (more than 10%) of students with special needs and of immigrant students report less frequently than their colleagues with lower concentrations of these student populations that their teachers hold high expectations for student achievement. The articulation between expectation, student performance and students' characteristics is intricate and complex. Nevertheless, there is a certain consensus that expectations could play the role of a self-fulfilling prophecy in which students will not perform beyond what teachers expect of them (Rubie-Davies, Hattie and Hamilton, 2006[66]). As such, more efforts should be put into the expectations that both teachers and principals have of their students in disadvantaged schools.

Figure II.5.15 **Teachers' high expectations for student achievement, by school characteristics**

Results based on responses of lower secondary principals



	Difference by school characteristics		
	City – Rural area	Private – public schools	High – low concentration of disadvantaged students[1]
Latvia			
Viet Nam			
Denmark			
France		+	-
French Comm. (Belgium)			
Alberta (Canada)			
England (UK)			-
Malta		+	
Colombia			-
Singapore		+	
Austria	-		-
Belgium	-		
Brazil		+	
New Zealand			
Portugal	+	+	-
Shanghai (China)			+
Italy		+	
Flemish Comm. (Belgium)			
Israel			-
Sweden			
Iceland			
Saudi Arabia			
Lithuania	+		
Estonia			
South Africa		+	-
OECD average-30		+	-
Slovenia			
United Arab Emirates			
Kazakhstan			
Chile			-
Norway		+	
Korea			
Romania			-
Hungary			-
Czech Republic			
Turkey		+	
Finland	+	+	
Croatia			
Georgia		+	
Russian Federation			
Japan		+	
CABA (Argentina)			
United States			-
Slovak Republic	+		
Spain		+	-
Mexico		+	
Netherlands			
Bulgaria	+		-
Education systems with a positive difference	5	14	1
Education systems with no difference	31	21	21
Education systems with negative difference	2	0	13

+ Positive difference
– Negative difference
Difference is not significant
Missing values

1. "High concentration of disadvantaged students" refers to schools with more than 30% of students from socio-economically disadvantaged homes.

Countries and economies are ranked in descending order of the percentage of lower secondary principals who report that teachers holding high expectations for student achievement applies "quite a bit" or "a lot" to their school.

Source: OECD, TALIS 2018 Database, Table II.5.45.

StatLink http://dx.doi.org/10.1787/888934084247

Variations in teachers' expectations are also observable by the type of school (Figure II.5.15, Table II.5.45). On average across the OECD, principals in privately managed schools report more frequently than their colleagues in publicly managed schools that their teachers hold high expectations for student achievement. This holds true for 16 TALIS countries and economies. The three countries with the sharpest differences are: Japan, with a gap of 32 percentage points (100% of principals in privately managed schools report that teachers hold high expectation for student achievement compared to 68% of principals in publicly managed schools); Finland, with a gap of 30 percentage points (100% versus 70%); and Turkey, with a gap of 29 percentage points (100% versus 71%). Across the OECD, the average differences based on school locations are not significant regarding teachers' expectations for their students, but there are still interesting results in some countries and economies. For six TALIS countries and economies, principals in rural schools report less frequently than their colleagues in city schools that teachers hold high expectations for student achievement. The sharpest differences are observable in: Finland, with a gap of 38 percentage points (43% of principals in rural schools report that their teachers hold high expectations for student achievement compared to 81% in city schools); Bulgaria, with a gap of 34 percentage points (42% versus 76%); the Slovak Republic, with a gap of 30 percentage points (58% versus 88%); and Portugal, with a gap of 30 percentage points (60% versus 90%).

How can teachers' actions towards achieving academic excellence can be improved? Past research has shown that school leaders' instructional leadership can be instrumental in teachers' efforts to achieve academic success (OECD, 2016[9]). To examine this association, regression analyses are conducted between the instructional leadership scale (the frequency with which principals get teachers to collaborate, make teachers feel responsible for students' learning and have teachers work towards improving their skills) and the scale of the school academic pressure as reported by principals (measured by whether teachers understand the school's curricular goals, whether they succeed in implementing the school's curriculum, whether they hold high expectations for student achievement and whether students have a desire to do well in school). Regression analyses show that, on average across the OECD, there is a significant positive association between instructional leadership and academic pressure, after controlling for principal and school characteristics (Table II.5.46). This relationship holds true for 17 TALIS countries and economies. An important aspect to take into account when interpreting these results is that both of these indicators are reported by principals. A possible explanation might be that, as principals engage more often in instructional leadership, they have a better appreciation of teachers' efforts to strive for academic excellence.

Teachers' relations with policy makers and the media

TALIS 2018 attempts to dig more deeply into teacher leadership by exploring teachers' perceptions of their relationship with the media and policy makers. Indeed, leadership can be showcased not only within the walls of the school, but also in the capacity of teachers to have input into more general discussions about education taking place in society.

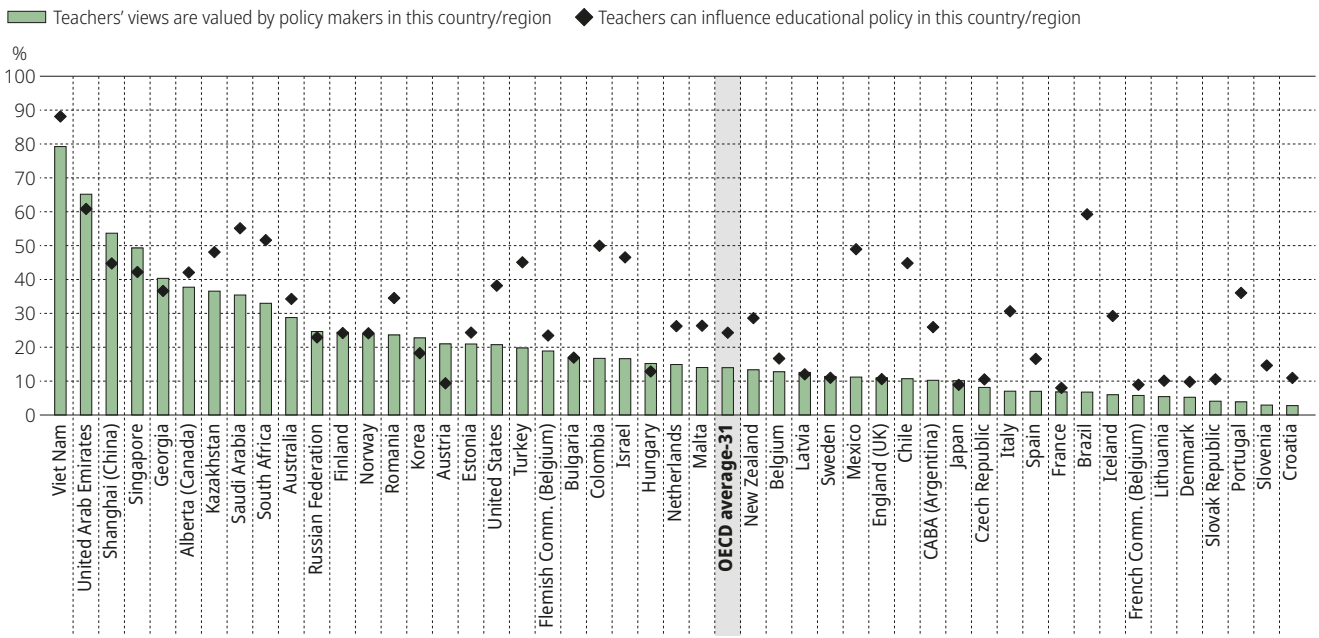
The mass media have a crucial role in shaping society's perceptions of teachers and their work (Stromquist, 2018[67]). Some studies have even suggested that the media have a direct influence on perceptions of the prestige of the teaching workforce across society (Pérez-Díaz and Rodríguez, 2014[68]; Smak and Walczak, 2017[69]). On average across the OECD, only 19% of teachers report that the media in their country/region value their profession (Table II.5.47). In Kazakhstan, Shanghai (China), Singapore, the United Arab Emirates and Viet Nam, more than 50% of teachers feel that the teaching profession is valued by the media. Results are lower than 10% in Austria, Chile, Croatia, Denmark, France, the French Community of Belgium, Hungary, Iceland, Japan, Portugal and Slovenia.

Making teaching careers attractive and prestigious also entails empowering teachers and offering them the possibility to be actors of change through advocacy and advising on educational reform (Schleicher, 2011[70]). This makes the perceived relations between teachers and policy makers another crucial area to explore. On average across OECD countries, only 14% of teachers consider that policy makers in their country/region value their view. Less than 5% of teachers agree with this statement in Croatia, Portugal, the Slovak Republic and Slovenia (Table II.5.47).

On average across the OECD, 24% of teachers believe that they can influence education policy. However, there is important cross-country variation, with only 8% of teachers believing they can influence policy making in France, compared to 88% of teachers in Viet Nam. More than half of teachers share this belief in Brazil, Saudi Arabia, South Africa, the United Arab Emirates and Viet Nam. In a few countries and economies participating in TALIS, the percentage of teachers asserting that they can influence educational policy is much larger than the percentage of teachers reporting that policy makers value their views (Figure II.5.16, Table II.5.47). The most remarkable cases are: Brazil, with a gap of 52 percentage points (59% of teachers feel they can influence policy, but only 7% state that their views are valued by policy makers); Mexico, with a gap of 38 percentage points (49% versus 11%); Chile, with a gap of 34 percentage points (45% versus 11%), Colombia, with a gap of 33 percentage points (50% versus 17%); Portugal, with a gap of 32 percentage points (36% versus 4%); and Israel, with a gap of 30 percentage points (47% versus 17%). A possible interpretation of these results is that, for these countries, although teachers feel that their views are not valued by policy makers, they may still have alternative mechanisms or pathways (e.g. union representation, industrial action) through which they are able to shape the policy development (Stromquist, 2018[67]).

Figure II.5.16 **Teacher's views on their relation with policy making**

Percentage of lower secondary teachers who "agree" or "strongly agree" with the following statements



Countries and economies are ranked in descending order of the percentage of lower secondary teachers who "agree" or "strongly agree" that teachers' views are valued by policy makers in this country/region.

Source: OECD, TALIS 2018 Database, Table II.5.47.

StatLink http://dx.doi.org/10.1787/888934084266

Box II.5.8. **Teacher leadership, from primary education to upper secondary education**

Autonomy over target class

Primary teachers tend to have less autonomy than their lower secondary counterparts in a few education systems. A significantly lower proportion of primary teachers in 6 of the 13 education systems with available data report having control over "determining the amount of homework to be assigned", with the highest differences observed in Viet Nam (25 percentage points) and France (12 percentage points) (Table II.5.33). In the area of "determining course content", this is the case for 4 of the 13 countries/economies with available data for ISCED 1 and 2. In contrast, primary teachers have more control over "disciplining students" in 5 of the 13 countries and economies with available data for ISCED 1 and 2, with the notable exception of Viet Nam (20 percentage points), experiencing the opposite pattern. Moving to the upper secondary level, TALIS findings indicate fewer differences across levels of education when comparing available data for ISCED 2 and 3. However, significant differences are observed for "determining course content" with differences observed in 7 of the 13 countries and economies (Table II.5.34). In Alberta (Canada), Croatia, Slovenia and Viet Nam, upper secondary teachers have more control over determining course content, whereas they have less control over this issue in Denmark, Sweden and the United Arab Emirates.

Teachers' actions towards achieving academic success

Teachers' actions towards academic excellence in the 13 countries and economies with data on ISCED 1 and 2 do not suggest large differences across levels of education, with a few notable exceptions. In 2 of the 13 education systems (CABA [Argentina] and the Flemish Community of Belgium), primary principals report that teachers in their school have better academic leadership with a significant difference across all three items (Table II.5.43). In contrast, principals in lower secondary schools in Viet Nam tend to observe more academic leadership among teachers as compared to principals' views in primary schools. Results at the lower and upper secondary levels show even fewer variations, with the exception of Turkey, where a lower share of principals report that teachers understand the school's curricular goals (5 percentage points) and hold high expectations for student achievement (12 percentage points) at upper secondary level as compared to lower secondary level (Table II.5.44).

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Teachers' relations with policy makers

The perception of teachers towards policy makers does not differ considerably between primary and lower secondary teachers. Two exceptions worth highlighting are Korea, where a larger percentage of teachers in primary education than their colleagues in lower secondary consider that teachers are valued by policy makers (a gap of 8 percentage points) and the Flemish Community of Belgium, where a higher percentage of teachers in primary education than their colleagues in lower secondary consider that teachers are valued by the media (7 percentage points) (Table II.5.49).

Regarding upper secondary education, teachers' perceptions on whether their views are valued by policy makers or whether they can influence education policy do not vary considerably across educational levels. Two exceptions are Viet Nam, where a higher percentage of teachers in lower secondary education than their colleagues in upper secondary consider that their views are valued by policy makers (a gap of 8 percentage points) and Alberta (Canada), where a higher percentage of teachers in upper secondary education than their colleagues in lower secondary consider they can influence education policy (a gap of 8 percentage points) (Table II.5.49). A more distinctive pattern can be noticed in the perception of teachers regarding whether they are valued by the media. In 7 of the 11 countries with available data, the share of teachers in upper secondary education who think they are valued by the media is significantly higher than the percentage in lower secondary education. Denmark shows the greatest difference (a gap of 11 percentage points). Alberta (Canada) shows the opposite pattern, with a higher percentage of teachers in lower secondary education feeling valued by the media than their colleagues in upper secondary (a gap of 14 percentage points).

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Notes

1. The use of the word "significant" does not refer to the statistical properties of the results, but to the wording used in the questionnaire to phrase the question to principals.
2. A school governing board is directly responsible for the governance of a school. The board may be totally external to the school or may have staff and student representation. The school's governing board is usually (but not always) the governing board of that school only (i.e. it is not a district board). The composition and responsibilities of a school governing board vary greatly by country (OECD, 2016[24]). However, OECD analysis has consistently considered school governing boards as agents that contribute to school autonomy. The analysis presented in TALIS 2018 follows the same pattern.
3. The term "school autonomy", as used in this chapter, is limited to notions of school decision making. Analysis of school autonomy usually also takes into account elements of parental choice, accountability and composition of school markets (Hanushek, Link and Woessmann, 2013[21]; OECD, 2016[24]; Whitty, 1997[71]). However, the TALIS questionnaire does not elicit sufficient data on these additional aspects to provide comprehensive analysis on the topic of accountability.
4. The OECD average corresponds to the arithmetic mean of the estimates of the OECD countries and economies that participate in TALIS, with adjudicated data.
5. A direct comparison between the proportion of autonomous schools that are publically managed and privately managed is not feasible since there are too few observations for private schools to provide reliable estimates and/or to ensure the confidentiality of respondents in 41 out of the 48 countries and economies.
6. The school management team typically consists of the principal, vice-principal(s) and heads of department or subjects. It typically does not include receptionists, typists, clerks or others who support the administrative activities of the school, but it could include school financial or business managers.
7. In several studies, indirect forms of instructional leadership have been called "transformational leadership". For this publication, it was decided to preserve the term "instructional leadership" to remain consistent with the terms used in previous cycles of TALIS. For a more in-depth discussion of these concepts, see Urick and Bowers (2014[10]).
8. Interpretations regarding Table II.5.20 should be made carefully as the list of items have changed in 2018 compared to 2013. As such, differences could be attributed to the measurement instruments rather than actual changes in the response patterns of principals.
9. This target class was defined as the first ISCED level 2 class that the teacher (typically) taught in the school where she or he works after 11 a.m. on the previous Tuesday. The question was answered only by those teachers who report that their lesson was not specifically targeted at students with special needs.
10. The scale of target class autonomy is measured by teachers' feelings of control over determining course content, selecting teaching methods, assessing students' learning, disciplining students and determining the amount of homework to be assigned. The scale of professional collaboration is measured by how often teachers teach jointly as a team in the same class; whether they observe other teachers' classes and provide feedback; whether they engage in joint activities across different classes and age groups, e.g. projects; and whether they take part in collaborative professional learning.
11. The scale of team innovativeness is measured by teachers' sense of whether most teachers in their school strive to develop new ideas for teaching and learning; whether most teachers in this school are open to change; whether most teachers in this school search for new ways to solve problems; and whether most teachers in this school provide practical support to each other for the application of new ideas.
12. As measured by the scales of self-efficacy (measured by teachers' self-efficacy with classroom management, student engagement and efficacy in instruction), satisfaction (measured by satisfaction with the profession and the current work environment) and well-being (the extent to which teachers experience stress in their work; if work leaves room for personal time; the impact on their mental health; and the impact on their physical health), respectively.

ANNEX A

Technical notes on sampling procedures, response rates and adjudication for TALIS 2018

ANNEX A
Technical notes on sampling procedures, response rates and adjudication for TALIS 2018

SAMPLING PROCEDURES AND RESPONSE RATES

The objective of the Teaching and Learning International Survey (TALIS) in 2018 was to obtain, in each participating country and economy, a representative sample of teachers for each ISCED level in which the country and economy participated. Moreover, a representative sample of teachers teaching students of the appropriate age in schools selected for the Programme for International Student Assessment (PISA) in 2018 was required for each country and economy that opted to participate in the TALIS-PISA link. TALIS 2018 identified policy issues that encompass the classroom, teachers, schools and school management, so the coverage of TALIS 2018 extends to all teachers of each concerned ISCED level and to the principals of the schools where they teach. The international sampling plan prepared for TALIS 2018 used a stratified two-stage probability sampling design. This means that teachers (second stage units, or secondary sampling units) were to be randomly selected from the list of in-scope teachers in each of the randomly selected schools (first stage units, or primary sampling units). A more detailed description of the survey design and its implementation can be found in the *TALIS 2018 Technical Report* (OECD, 2019[1]).

A teacher of ISCED level 1, 2 or 3 is one who, as part of his or her regular duties in their school, provides instruction in programmes at that ISCED level. Teachers who teach a mixture of programmes at different ISCED levels in the target school are included in the TALIS universe. There is no minimum cut-off for how much teaching these teachers need to be engaged in at any of the three ISCED levels.

The international target population of TALIS 2018 restricts the survey to those teachers who teach regular classes in ordinary schools and to the principals of those schools. Teachers teaching to adults and teachers working in schools exclusively devoted to children with special needs are not part of the international target population and are deemed out of scope. Unlike in TALIS 2008, however, teachers working with special needs students in a regular school setting were considered in scope in TALIS 2013 and 2018. When a school is made up exclusively of these teachers, the school itself is said to be out of scope. Teacher aides, pedagogical support staff (e.g. guidance counsellors and librarians) and health and social support staff (e.g. doctors, nurses, psychiatrists, psychologists, occupational therapists and social workers) were not considered to be teachers and, thus, not part of the TALIS international target population.

For national reasons, participating countries could choose to restrict the coverage of their national implementation of TALIS 2018 to parts of the country. For example, a province or state experiencing civil unrest or in an area struck by a natural disaster could be removed from the international target population to create a national target population that does not include these provinces or states. Participating countries were invited to keep these exclusions to a minimum by keeping the national survey population to at least 95% of the teachers.

TALIS 2018 recognised that attempting to survey teachers in very small schools can be inefficient and difficult. For each ISCED level, surveying teachers in schools with no more than three teachers at a specific ISCED level and those teaching in schools located in geographically remote areas could be a costly, time-consuming and statistically inefficient exercise. Therefore, participating countries were allowed to exclude those teachers for TALIS 2018 data collection, thus creating a national survey population different from the national target population. The national project manager (NPM) for each country was required to document the reasons for exclusion, the size, the location, the clientele, etc., of each excluded school. This documentation was required for each ISCED level in which a country participated. The school exclusions for the TALIS-PISA link were the same as those used in PISA 2018.

Within a selected in-scope school, the following categories of teachers were excluded from the sample:

- teachers teaching in schools exclusively serving special needs students
- teachers who also act as school principals: no teacher data collected, but school principal data collected
- substitute, emergency or occasional teachers
- teachers on long-term leave
- teachers teaching exclusively to adults
- teachers who had taken part in the TALIS 2018 field trial.

SAMPLE SIZE REQUIREMENTS

For each ISCED level, the same requirements for sample size and precision of estimates were established. To allow for reliable estimation and modelling, while allowing for some amount of non-response, the minimum sample size was set at 20 teachers within each participating school. A minimum sample of 200 schools was to be drawn from the population of in-scope schools. Thus, the nominal international sample size was a minimum of 4 000 teachers for each ISCED level in which a country or economy participated. Participating countries and economies could choose to augment their national sample by selecting more schools, by selecting more teachers within each selected school or by increasing both. Some countries and economies were asked to increase the within-school sample to counterbalance the effect of selecting too many schools with fewer than 20 teachers. The sample size requirement was reduced for some participating countries and economies because of the smaller number of schools available for sampling. In a few cases, because the average number of teachers in the schools was fewer than expected in the international plan, the number of schools sampled was increased to maintain a minimum total number of participating teachers.

In many countries, the separation of grades in ISCED levels does not correspond to a physical separation of school buildings or administrations: schools that offer grades 8 to 12 straddle ISCED levels 2 and 3, but all of ISCED level 2 would not be covered by those schools. In countries and economies that participated in more than one ISCED level, arrangements were made with the NPM and their team to optimise the selection of the school sample by either minimising the overlap of the respective samples (one school is selected for participation in only one ISCED level) or maximising the sample overlap (a selected school contributes to all concerned ISCED levels). However, in the case of maximised overlap, teachers who taught at more than one level would be asked to participate in only one.

DEFINITION OF TEACHERS

As in previous cycles, TALIS 2018 followed the INES (Indicators of Educational Systems) data collection definition of a teacher for sampling and analysis:

> *"A classroom teacher (ISCED 0-4) is defined as a person who plans, organises and conducts a group of activities with the aim of developing students' knowledge, skills and competencies as stipulated by educational programmes."* (OECD, 2018, p. 43[2]).

ADJUDICATION PROCESS

The basic principle that guides the adjudication is to determine, for each participating country and economy and for each of the TALIS options, whether the data released to the countries and economies are fit to provide policy relevant, robust international indicators and analysis on teachers and teaching in a timely and cost effective manner.

To establish fitness for use, a number of quality assurance processes were designed and activated throughout the survey process. Some processes relied on expert advice and opinion; some relied on qualitative information and learned judgement; some relied on quantitative information. For more detailed information, please refer to the *TALIS 2018 Technical Report* (OECD, 2019[1]).

During the adjudication session, each individual dataset – that is, the combination of participating countries/economies, survey options and questionnaire types – was submitted to the same examination. For the first time in a TALIS cycle, principal data were evaluated on their own. In other words, principal and teacher data received separate adjudication evaluation per TALIS option and per country and economy.

The issues evaluated concerned the questionnaire adaptation to national context, translation and verification, quality of the sampling frame, handling of out-of-scope and refusal units (i.e. teachers and/or schools), within-school sampling, data collection, data cleaning, the reports of quality observers, participation rates and overall compliance with the technical standards. Once each survey process had been assessed, a recommended rating was formulated, accounting for the participation rates, and for any unresolved issue.

The adjudication rules, based on participation rates for principals and teachers, are displayed in Tables AII.A.1 and AII.A.2. An explanation of the codes used is given below.

Table AII.A.1 **Adjudication rules for school or principal data in TALIS 2018**

School participation (returned principal questionnaires)		Risk of school non-response bias	Rating
Before replacement	After replacement		
≥75%	≥75%		Good
50% - 75%	≥75%		Fair (A)
	50% - 75%	Low	Fair (C)
		High	Poor (D)
< 50%			Insufficient

Table AII.A.2 **Adjudication rules for teacher data in TALIS 2018**

School participation (minimum teacher participation)		Teacher participation after school replacement	Risk of teacher non-response bias	Rating
Before replacement	After replacement			
≥75%	≥75%	≥75%		Good
		50% - 75%		Fair (A)
50% - 75%	≥75%	≥75%		Fair (B)
		50% - 75%	Low	Fair (C)
			High	Poor (D)
50% - 75%	50% - 75%			Poor (E)
< 50%	≥75%			Poor (F)
< 50%	< 75%			Insufficient

The following bulleted list is a simple guide aimed at helping data users appreciate the limitations on use or quality:

- **Good:** the participating country's/economy's data can be used for all reporting and analytical purposes and can be included in international comparisons
- **Fair (A):** national and sub-national estimates can be produced; some teacher characteristics may suffer from a larger standard error (s.e.), hence the warning "Fair" and no additional warnings to users appear necessary
- **Fair (B, only for teacher data adjudication):** national and sub-national estimates can be produced; some sub-national estimates may be of lower precision (larger s.e.) if sample size is locally low, hence the warning "Fair" and no additional warnings to users appear necessary
- **Fair (C):**
  - national and sub-national estimates can be produced
  - some sub-national estimates may be of lower precision (larger s.e.) if sample size is locally low, hence the warning "Fair", but a note on data quality could appear pointing to the outcome of the non-response bias analysis (NRBA)
  - since school participation is somewhat lower than under (B), comparing sub-national estimates should be done with care, as some of those results are based on few schools
  - comparing small sub-national estimates with similar groups from other countries is likely to uncover any statistically meaningful differences as s.e. are likely too large
- **Poor (D):**
  - in addition to the warnings issued for the previous category, a note should warn users of indications of non-response biases in some estimates
  - comparisons of sub-national estimates should be limited to the groups with the larger sample sizes
  - at this point, the sample represents between 37% and 56% of the teaching workforce, from a rather small sample of schools
  - comparisons with similar groups in foreign countries would not be encouraged
- **Poor (E, only for teacher data adjudication):** sub-national estimates would not be recommended; there should be a note pointing out the difficulty of obtaining a representative sample of schools
- **Poor (F, only for teacher data adjudication):** limitations similar to those of line E, but there should be a note pointing out the difficulty of obtaining at least 50% participation of the selected sample of schools; risks of having a non-representative sample of schools
- **Insufficient:** weights should not be calculated for any official tabulations; hence, data should not be incorporated into international tables, models, averages, etc.

The participation rates and the adjudication rating per participating country/economy and by ISCED level are presented in Tables AII.A.3 to AII.A.8.[1]

NOTES REGARDING THE USE AND INTERPRETATION OF THE DATA

This section lists issues to be noted regarding the sampling or field operations that should be considered when interpreting the data reported for these countries.

- **Alberta (Canada):**
  - TALIS data collection conducted during a labour dispute.
  - Non-response bias analysis shows no evidence of high risk of school non-response bias on the investigated variables for teachers or principals in ISCED 2 or ISCED 3 and, as such, their rating was upgraded from "poor" to "fair".
- **Australia:**
  - For both ISCED 1 and 2, the data collection window for both teachers and principals was extended from the end of the academic year in 2017 to the beginning of the following academic year in 2018.
  - For ISCED 1 principals and teachers and for ISCED 2 principals, data from Australia are located below the line in selected tables in this report and not included in the calculations for the international average. This is because Australia did not meet the international standards for participation rates, as shown in Tables AII.A.3 to AII.A.5.
- **Colombia:** Non-response bias analysis shows no evidence of high risk of school non-response bias on the investigated variables for teachers or principals and, as such, their rating was upgraded from "poor" to "fair".
- **Czech Republic:** Trend items should be interpreted carefully due to complications arising from the translation process.
- **Denmark:** Non-response bias analysis shows no evidence of high risk of school non-response bias on the investigated variables for teachers or principals in ISCED1, ISCED 2 or ISCED 3 and, as such, their rating was upgraded from "poor" to "fair".
- **Flemish Community of Belgium:** For both ISCED 1 and 2, entries on the sampling frame are administrative units and not "schools" as they are usually defined; a "school" may be comprised of one or several administrative units and the principal would be reporting for the school and not only the selected administrative unit; therefore, users should exercise care when analysing and comparing school-level statistics.
- **French Community of Belgium:** Items regarding the share of students with special needs should be interpreted carefully due to complications that could arise from the interpretation of the definition of special needs. Students studying for a differentiated first degree, which is organised for students who did not pass their primary certificate and who receive extra support and resources, are formally identified as having learning difficulties but most of them do not suffer from any kind of disability.
- **Georgia:**
  - Items repeated from the TALIS 2013 questionnaire (hereafter "trends items") should be interpreted carefully due to complications arising from the translation process.
  - Some translation issues could still exist in the Georgian and Azerbaijani version of the questionnaires.
- **Israel:** Coverage falls below 95%, after *post facto* exclusion of ultraorthodox schools for low response rates, making coverage identical to that of TALIS 2013. Because translation issues could still exist in the trends items, users need to exercise caution when comparing results across TALIS cycles.
- **Italy:** Trends items should be interpreted carefully due to complications arising from the translation process.
- **Latvia:**
  - Trends items should be interpreted carefully due to complications arising from the translation process.
  - Some translation issues could still exist in the national instruments that could affect the data.
- **Korea:** For ISCED 2, in four schools, teacher listings were found to be incorrect; those schools were set to "non-participant".
- **Netherlands:**
  - For ISCED 1 and 2, the Netherlands had a six-week early start and extended collection window.
  - For ISCED 1 and 2, the Netherlands had an unapproved collection protocol that resulted in the inclusion of some 50 "national" schools that were not included in the international dataset but left on the national dataset; participation rates were computed on the international dataset.
  - For ISCED 1 principals and teachers, data from the Netherlands are located below the line in in the result tables of this report. This is because the Netherlands did not meet the international standards for participation rates, as shown in Tables AII.A.3 and AII.A.4.
- **New Zealand:** Coverage was extended to small schools (four or fewer teachers). While the impact of this action on the target population of teachers was negligible, the impact on the target population of principals is important because, compared to TALIS 2013, the target population for principals nearly doubled in size. The TALIS 2018 results reported in the result tables on changes since 2013 for New Zealand were estimated after excluding from New Zealand's TALIS 2018 sample those schools with four or fewer eligible teachers. This was done in order to ensure comparability with their TALIS 2013 results (as such, small schools were excluded from the TALIS 2013 sampling frame). Therefore, these results can differ from those reported for the full TALIS 2018 sample, especially those derived from the school and/or principal data.

- **Russian Federation:** Coverage falls below 95% after the exclusion of Moscow.
- **Saudi Arabia:** Coverage falls below 95% after the sampling excluded two provinces bordering Yemen.
- **Singapore:** Coverage included both privately and publicly managed schools. Nevertheless, private schools were excluded from the sample in TALIS 2013 due to confidentiality issues. Sensitivity analyses (i.e. restricting the analysis between 2013 and 2018 to just public schools) revealed that the impact of including private schools was negligible for most of the trends results produced for the report. Nevertheless, analyses revealed that the results displayed for Tables II.3.6, II.3.10, II.3.33 and II.5.8 and Figure II.3.3 are due largely to the compositional difference between the 2013 and 2018 samples. Thus, trends results coming from these tables should be interpreted with extreme caution.
- **Spain:** Trends items should be interpreted carefully due to complications arising from the translation process.
- **United Arab Emirates:**
  - Comparisons with TALIS 2013 must be limited to Abu Dhabi.
  - Because of the selection of multi-level schools, the principal data were copied from the original ISCED level 2 principal questionnaire to the ISCED level 1 and ISCED level 3 corresponding forms, except for question 17 in the principal questionnaire.

Table AII.A.3 **ISCED 1 principals' participation and recommended ratings**

	Number of participating principals	Estimated size of principal population	Principals' participation before replacement (%)	Principals' participation after replacement (%)	Recommended rating
Australia	223	6 522	48.8	77.9	Insufficient
Flemish Community (Belgium)	184	2 193	70.0	92.2	Fair
CABA (Argentina)*	175	878	85.0	87.5	Good
Denmark	145	1 567	56.6	73.2	Fair
England (UK)	161	16 945	76.4	89.5	Good
France	178	29 636	89.3	91.5	Good
Japan	197	19 962	97.2	99.5	Good
Korea	161	5 913	78.0	80.5	Good
Netherlands	135	6 158	40.7	69.6	Insufficient
Spain	436	13 305	98.2	98.2	Good
Sweden	166	3 983	84.7	87.4	Good
Chinese Taipei	200	2 644	99.8	100.0	Good
Turkey	171	17 696	99.3	99.3	Good
United Arab Emirates	502	554	90.6	90.6	Good
Viet Nam	194	15 318	100.0	100.0	Good

* CABA (Argentina): the Ciudad Autónoma de Buenos Aires, Argentina.

Table AII.A.4 **ISCED 1 teachers' participation and recommended ratings**

	Number of participating schools	Number of participating teachers	Estimated size of teacher population	School participation before replacement (%)	School participation after replacement (%)	Teacher participation in participating schools (%)	Overall teacher participation (%)	Recommended rating
Australia	213	3 030	133 915	48.8	74.0	76.4	56.5	Insufficient
Flemish Community (Belgium)	177	2 662	30 192	66.3	88.5	92.2	81.7	Fair
CABA (Argentina)*	167	2 514	16 221	81.0	83.5	86.9	72.5	Good
Denmark	154	2 592	34 166	58.6	77.8	87.5	68.1	Fair
England (UK)	152	2 009	225 194	74.3	85.9	85.0	73.1	Fair
France	178	1 429	209 981	88.6	91.2	92.1	84.0	Good
Japan	197	3 308	354 795	97.0	99.5	98.8	98.3	Good
Korea	182	3 207	128 831	86.0	91.0	91.9	83.6	Good
Netherlands	130	1 504	68 640	39.3	67.0	86.8	58.2	Insufficient
Spain	442	7 246	210 627	99.3	99.5	95.4	95.0	Good
Sweden	178	2 404	57 183	90.0	93.7	78.8	73.8	Good
Chinese Taipei	200	3 494	89 608	99.5	100.0	97.6	97.6	Good
Turkey	172	3 204	212 347	99.4	99.4	98.5	97.9	Good
United Arab Emirates	552	9 188	16 372	99.6	99.6	96.6	96.2	Good
Viet Nam	194	3 991	385 301	100.0	100.0	98.3	98.3	Good

* CABA (Argentina): the Ciudad Autónoma de Buenos Aires, Argentina.

Table A II.A.5 **ISCED 2 principals' participation and recommended ratings**

	Number of participating principals	Estimated size of principal population	Principals' participation before replacement (%)	Principals' participation after replacement (%)	Recommended rating
Alberta (Canada)	129	1 038	54.4	66.2	Fair
Australia	230	2 680	49.0	75.7	Insufficient
Austria	277	1 483	96.0	100.0	Good
Belgium	307	1 169	86.6	95.9	Good
Flemish Community (Belgium)	188	721	82.5	94.0	Good
French Community (Belgium)	119	448	93.3	99.2	Fair
Brazil	184	52 187	88.0	95.4	Good
Bulgaria	200	1 730	97.5	100.0	Good
Chile	169	5 214	78.9	87.6	Good
CABA (Argentina)*	121	488	77.5	82.6	Good
Colombia	141	10 392	68.8	70.9	Fair
Croatia	188	896	95.0	95.6	Good
Cyprus[1]	88	99	88.9	88.9	Good
Czech Republic	218	2 606	99.5	99.5	Good
Denmark	140	1 457	51.5	71.4	Fair
England (UK)	157	3 990	71.9	81.8	Fair
Estonia	195	389	88.3	100.0	Good
Finland	148	706	100.0	100.0	Good
France	195	6 770	97.6	98.0	Good
Georgia	177	2 151	91.7	91.7	Good
Hungary	182	2 640	91.2	94.3	Good
Iceland	101	136	74.3	74.3	Fair
Israel	184	1 196	90.9	93.7	Good
Italy	190	5 622	92.4	98.6	Good
Japan	195	10 071	93.9	99.4	Good
Kazakhstan	331	6 302	100.0	100.0	Good
Korea	150	3 134	68.1	77.8	Fair
Latvia	136	653	80.4	91.9	Good
Lithuania	195	833	100.0	100.0	Good
Malta	54	58	93.1	93.1	Good
Mexico	193	16 327	90.6	97.0	Good
Netherlands	125	524	56.2	85.6	Fair
New Zealand	189	1 732	71.7	92.0	Fair
Norway	162	1 091	67.5	81.0	Fair
Portugal	200	1 255	97.7	100.0	Good
Romania	199	4 658	100.0	100.0	Good
Russian Federation	230	31 948	99.1	100.0	Good
Saudi Arabia	192	6 119	96.5	96.5	Good
Shanghai (China)	198	630	100.0	100.0	Good
Singapore	167	193	97.0	98.8	Good
Slovak Republic	180	1 593	84.4	90.5	Good
Slovenia	119	448	74.8	79.3	Good
South Africa	169	8 026	92.3	92.3	Good
Spain	396	6 861	98.7	99.2	Good
Sweden	171	1 739	85.9	89.1	Good
Chinese Taipei	202	935	100.0	100.0	Good
Turkey	196	16 100	99.0	99.0	Good
United Arab Emirates	476	521	91.4	91.4	Good
United States	164	65 095	63.1	77.6	Fair
Viet Nam	196	10 799	100.0	100.0	Good

* CABA (Argentina): the Ciudad Autónoma de Buenos Aires, Argentina.

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

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

Table A II.A.6 **ISCED 2 teachers' participation and recommended ratings**

	Number of participating schools	Number of participating teachers	Estimated size of teacher population	School participation before replacement (%)	School participation after replacement (%)	Teacher participation in participating schools (%)	Overall teacher participation (%)	Recommended rating
Alberta (Canada)	122	1 077	9 991	51.8	62.6	83.0	52.0	Fair
Australia	233	3 573	116 679	50.3	76.6	77.7	59.6	Fair
Austria	246	4 255	45 869	85.9	88.8	84.4	75.0	Good
Belgium	302	5 257	34 442	86.0	95.1	86.9	82.6	Good
Flemish Community (Belgium)	182	3 122	18 615	80.0	91.0	84.4	76.8	Good
French Community (Belgium)	120	2 135	15 827	93	100	89.7	89.7	Fair
Brazil	185	2 447	568 510	89.9	96.6	94.9	91.6	Good
Bulgaria	200	2 862	21 208	97.1	100.0	98.3	98.3	Good
Chile	179	1 963	55 969	82.6	91.5	94.3	86.2	Good
CABA (Argentina)*	130	2 099	10 218	81.3	86.7	88.6	76.8	Good
Colombia	154	2 398	164 225	73.9	77.4	93.4	72.3	Fair
Croatia	188	3 358	15 762	95.4	96.2	87.0	83.7	Good
Cyprus	88	1 611	3 860	89.8	89.8	90.3	81.0	Good
Czech Republic	219	3 447	42 348	100.0	100.0	93.8	93.8	Good
Denmark	141	2 001	22 475	51.1	72.0	86.8	62.5	Fair
England (UK)	149	2 376	193 134	72.7	81.5	83.6	68.1	Fair
Estonia	195	3 004	7 354	86.6	100.0	95.2	95.2	Good
Finland	148	2 851	18 938	100.0	100.0	96.2	96.2	Good
France	176	3 006	197 013	87.3	87.8	88.1	77.3	Good
Georgia	192	3 101	38 195	99.5	99.5	95.8	95.3	Good
Hungary	189	3 245	44 018	94.9	97.7	95.0	92.8	Good
Iceland	123	1 292	1 883	90.4	90.4	75.8	68.5	Good
Israel	172	2 627	32 603	85.3	87.3	84.9	84.9	Good
Italy	191	3 612	190 447	92.8	99.1	93.5	93.0	Good
Japan	196	3 555	230 558	92.4	99.5	99.0	98.5	Good
Kazakhstan	331	6 566	195 383	100.0	100.0	99.8	99.8	Good
Korea	163	2 931	75 654	70.5	81.5	92.2	75.1	Fair
Latvia	135	2 315	12 003	77.1	91.2	87.9	80.2	Good
Lithuania	195	3 759	19 848	100.0	100.0	97.4	97.4	Good
Malta	55	1 656	1 941	94.8	94.8	86.5	82.0	Good
Mexico	193	2 926	254 794	90.4	96.3	94.3	90.8	Good
Netherlands	116	1 884	66 672	56.7	79.5	80.9	64.3	Fair
New Zealand	185	2 257	23 227	62.8	79.5	79.6	63.3	Fair
Norway	185	4 154	21 828	77.4	92.6	83.2	77.0	Good
Portugal	200	3 676	39 703	97.9	100.0	92.7	92.7	Good
Romania	199	3 658	66 039	100.0	100.0	98.3	98.3	Good
Russian Federation	230	4 011	646 405	98.7	100.0	99.9	99.9	Good
Saudi Arabia	179	2 744	99 661	89.7	89.7	86.0	77.1	Good
Shanghai (China)	198	3 976	38 902	100.0	100.0	99.5	99.5	Good
Singapore	169	3 280	11 544	98.2	100.0	99.2	99.2	Good
Slovak Republic	176	3 015	24 746	82.4	88.9	95.4	84.7	Good
Slovenia	132	2 094	7 422	82.2	88.0	91.5	80.5	Good
South Africa	170	2 046	92 127	92.3	92.9	89.7	83.3	Good
Spain	399	7 407	186 171	99.5	100.0	94.6	94.6	Good
Sweden	180	2 782	31 421	89.1	93.9	81.3	76.3	Good
Chinese Taipei	200	3 835	53 208	99.0	99.0	97.2	96.2	Good
Turkey	196	3 952	277 187	99.0	99.0	98.5	97.5	Good
United Arab Emirates	521	8 648	14 489	100.0	100.0	96.0	96.0	Good
United States	165	2 560	1 144 751	60.1	76.8	89.6	68.8	Fair
Viet Nam	196	3 825	295 033	100.0	100.0	96.3	96.3	Good

* CABA (Argentina): the Ciudad Autónoma de Buenos Aires, Argentina.

Table A II.A.7 **ISCED 3 principals' participation and recommended ratings**

	Number of participating principals	Estimated size of principal population	Principals' participation before replacement (%)	Principals' participation after replacement (%)	Recommended rating
Alberta (Canada)	115	606	51.8	59.6	Fair
Brazil	187	27 140	91.4	97.5	Good
Croatia	145	391	96.7	96.7	Good
Denmark	96	372	58.3	70.8	Fair
Portugal	195	834	98.0	99.5	Good
Slovenia	103	148	69.6	69.6	Fair
Sweden	174	1 160	91.6	93.8	Good
Chinese Taipei	151	496	100.0	100.0	Good
Turkey	448	9 256	98.0	98.0	Good
United Arab Emirates	366	408	89.7	89.7	Good
Viet Nam	199	2 899	100.0	100.0	Good

Table AII.A.8 **ISCED 3 teachers' participation and recommended ratings**

	Number of participating schools	Number of participating teachers	Estimated size of teacher population	School participation before replacement (%)	School participation after replacement (%)	Teacher participation in participating schools (%)	Overall teacher participation (%)	Recommended rating
Alberta (Canada)	112	1 094	7 819	51.6	56.6	80.2	45.4	Fair
Brazil	186	2 828	421 593	92.3	97.4	94.5	92.0	Good
Croatia	147	2 661	14 818	97.9	97.9	89.7	87.9	Good
Denmark	111	1 670	16 726	72.2	85.6	84.7	72.4	Fair
Portugal	195	3 551	36 188	99.0	99.7	91.3	91.0	Good
Slovenia	119	2 200	5 393	80.4	80.4	87.8	70.6	Good
Sweden	181	2 933	26 891	95.3	97.8	81.7	79.9	Good
Chinese Taipei	148	2 800	41 220	98.1	98.1	95.8	94.1	Good
Turkey	457	8 342	252 277	100.0	100.0	98.0	98.0	Good
United Arab Emirates	405	6 118	10 143	99.3	99.3	95.7	95.0	Good
Viet Nam	199	3 884	175 061	100.0	100.0	97.7	97.7	Good

References

OECD (2019), *TALIS 2018 Technical Report*, OECD, Paris, http://www.oecd.org/education/talis/TALIS_2018_Technical_Report.pdf. [1]

OECD (2018), *OECD Handbook for Internationally Comparative Education Statistics 2018: Concepts, Standards, Definitions and Classifications*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264304444-en. [2]

Note

1. Tables AII.A.3 to AII.A.8 display the participation rate estimates that were the most favourable for the adjudication rating. The most favourable estimates could have been weighted or unweighted depending on the characteristics of the country/economy, the teacher and principals population and the educational level.

ANNEX B

Technical notes on analyses in this volume

ANNEX B
Technical notes on analyses in this volume

USE OF TEACHER AND SCHOOL WEIGHTS

The statistics presented in this report were derived from data obtained through samples of schools, school principals and teachers. The sample was collected following a stratified two-stage probability sampling design. This means that teachers (second-stage units or secondary sampling units) were randomly selected from the list of in-scope teachers for each of the randomly selected schools (first-stage or primary sampling units). For these statistics to be meaningful for a country, they needed to reflect the whole population from which they were drawn and not merely the sample used to collect them. Thus, survey weights must be used in order to obtain design-unbiased estimates of population or model parameters.

Final weights allow the production of country-level estimates from the observed sample data. The estimation weight indicates how many population units are represented by a sampled unit. The final weight is the combination of many factors reflecting the probabilities of selection at the various stages of sampling and the response obtained at each stage. Other factors may also come into play as dictated by special conditions to maintain the unbiasedness of the estimates (e.g. adjustment for teachers working in more than one school).

Statistics presented in this report that are based on the responses of school principals and that contribute to estimates related to school principals were estimated using school weights (SCHWGT). Results based only on responses of teachers or on responses of teachers and principals (i.e. responses from school principals were merged with teachers' responses) were weighted by teacher weights (TCHWGT).

USE OF COMPLEX VARIABLES AND SCALES

Scales

In this report, several scale indices are used in regression analyses. Descriptions of the construction and validation of these scales can be found in Chapter 11 of the *TALIS 2018 Technical Report* (OECD, 2019 [1]).

Ratios and other variables derived from TALIS data

Ratio of teachers to number of teachers who permanently left the school in the 12 months prior to the survey or were absent for the prior Tuesday – Proxies of absenteeism and turnover are covered in TALIS 2018 by asking principals about the number of teachers (full-time or part-time) who were absent the most recent Tuesday that school was in session and the number of teachers who permanently left their school during the 12 months prior to the survey. Principals were asked to report the head count using the following response ranges: 0; 1-5; 6-10; 11-15; and 16 or more. Principals' responses regarding the number of absences and the number of teachers who left the schools were recoded as the low value of the response ranges: 0; 1; 6; 11 and 16. Based on this answer, a proxy of the school's teacher absence and turnover ratio was estimated for the proportion of teachers absent from their school compared to the overall teaching staff. The Chapter 2 tables displaying this ratio were prepared at the school level and, therefore, used the final school estimation weight (SCHWGT). However, reporting a ratio based on a categorical measure (head counts of absent teachers and teachers who have left) and continuous measure (overall teaching staff) leads to problematic results, as measures are heavily dependent on the school size. Therefore, results for absenteeism and turnover are not reported in the main text, but the results can be found in Tables II.2.59 and II.2.60.

Overall principals' responsibilities – For the Chapter 5 analyses, to assess overall principals' responsibilities in the decision-making process for school tasks, TALIS asked school principals to indicate who has significant responsibility for making decisions at the school level by responding to a number of statements. The school principals answered the statements with "yes" or "no", depending on who has the significant responsibility for making the decisions: the principal, other members of the school management team, teachers, school governing boards or local authorities.

A simple categorisation technique is used for the index. If the principal selected:

- the principal as having a significant responsibility in a majority of the specified tasks, the principal was considered as having an overall significant responsibility for school tasks
- the principal as having a significant responsibility in a minority of the specified tasks, the principal was not considered as having an overall significant responsibility for school tasks
- the principal as having a significant responsibility for half of the specified tasks, these cases were excluded from the index.

The questionnaire items forming these indices are the following:

- School autonomy for staffing:
  - appointing or hiring teachers
  - dismissing or suspending teachers from employment
- School autonomy for budgeting:
  - establishing teachers' starting salaries, including setting pay scales
  - determining teachers' salary increases
  - deciding on budget allocations within the school
- School autonomy for instructional policies:
  - establishing student disciplinary policies and procedures
  - establishing student assessment policies, including national/regional assessments
  - approving students for admission to the school
  - choosing which learning materials are used
  - determining course content, including national/regional curricula
  - deciding which courses are offered

The categories for the index are 1 for "Responsible" and 0 for "Not responsible".

Overall teachers' responsibilities for instructional policies – For the Chapter 5 analyses, to assess overall teachers' responsibilities in the decision-making process for school instructional policies, TALIS asked school principals to indicate who has significant responsibility for making decisions at the school level by responding to a number of statements. The school principals answered the statements with "yes" or "no", depending on who has the significant responsibility for making the decisions: the principal, other members of the school management team, teachers, school governing boards or local authorities.

A simple categorisation technique is used for the index. If the principal selected:

- teachers as having a significant responsibility in a majority of the specified tasks, teachers were considered as having an overall significant responsibility for school tasks
- teachers as having a significant responsibility for a minority of the specified tasks, teachers were not considered as having an overall significant responsibility for school tasks
- teachers as having a significant responsibility for half of the specified tasks, these cases were excluded from the index.

The questionnaire items forming these indices are the following:

- School autonomy for instructional policies
  - establishing student disciplinary policies and procedures
  - establishing student assessment policies, including national/regional assessments
  - approving students for admission to the school
  - choosing which learning materials are used
  - determining course content, including national/regional curricula
  - deciding which courses are offered

The categories for the index are 1 for "Responsible" and 0 for "Not responsible".

INTERNATIONAL AVERAGES

The OECD and TALIS averages, which were calculated for most indicators presented in this report, correspond to the arithmetic mean of the respective country estimates. When the statistics are based on responses of teachers, the OECD and TALIS averages cover, respectively, 31 and 48 countries and economies (Table AII.B.1). In those cases where the analysis is based on principals' responses, the OECD and TALIS averages cover, respectively, 30 and 47 countries and economies.

The EU total represents the 23 European Union member states that also participated in TALIS 2018 as a single entity and to which each of the 23 EU member states contribute in proportion to the number of teachers or principals, depending on the basis of the analysis. Therefore, the EU total is calculated as a weighted arithmetic mean based on the sum of final teacher (TCHWGT) or principal (SCHWGT) weights by country, depending on the target population.

Table AII.B.1 **Country coverage of international averages in TALIS 2018**

	TALIS average-48 (teachers)	TALIS average-47 (principals)	OECD average-31 (teachers)	OECD average-30 (principals)	EU total-23
Alberta (Canada)	x	x	x	x	–
Australia	x	–	x	–	–
Austria	x	x	x	x	x
Belgium	x	x	x	x	x
Flemish Comm. (Belgium)	–	–	–	–	–
French Comm. (Belgium)	–	–	–	–	–
Brazil	x	x	–	–	–
Bulgaria	x	x	–	–	x
CABA (Argentina)*	x	x	–	–	–
Chile	x	x	x	x	–
Colombia[1]	x	x	x	x	–
Croatia	x	x	–	–	x
Cyprus	x	x	–	–	x
Czech Republic	x	x	x	x	x
Denmark	x	x	x	x	x
England (UK)	x	x	x	x	x
Estonia	x	x	x	x	x
Finland	x	x	x	x	x
France	x	x	x	x	x
Georgia	x	x	–	–	–
Hungary	x	x	x	x	x
Iceland	x	x	x	x	–
Israel	x	x	x	x	–
Italy	x	x	x	x	x
Japan	x	x	x	x	–
Kazakhstan	x	x	–	–	–
Korea	x	x	x	x	–
Latvia	x	x	x	x	x
Lithuania	x	x	x	x	x
Malta	x	x	–	–	x
Mexico	x	x	x	x	–
Netherlands	x	x	x	x	x
New Zealand	x	x	x	x	–
Norway	x	x	x	x	–
Portugal	x	x	x	x	x
Romania	x	x	–	–	x
Russian Federation	x	x	–	–	–
Saudi Arabia	x	x	–	–	–
Shanghai (China)	x	x	–	–	–
Singapore	x	x	–	–	–
Slovak Republic	x	x	x	x	x
Slovenia	x	x	x	x	x
South Africa	x	x	–	–	–
Spain	x	x	x	x	x
Sweden	x	x	x	x	x
Chinese Taipei	x	x	–	–	–
Turkey	x	x	x	x	–
United Arab Emirates	x	x	–	–	–
United States	x	x	x	x	–
Viet Nam	x	x	–	–	–

* CABA (Argentina): Ciudad Autónoma de Buenos Aires, Argentina.

1. On 25 May 2018, the OECD Council invited Colombia to become a Member. While Colombia is included in the OECD averages reported in this publication, at the time of its preparation, Colombia was in the process of completing its domestic procedures for ratification and the deposit of Colombia's instrument of accession to the OECD Convention was pending.

In this publication, the OECD average is generally used when the focus is on providing a global tendency for an indicator and comparing its values across education systems. In the case of some countries and economies, data may not be available for specific indicators, or specific categories may not apply. Therefore, readers should keep in mind that the term "OECD average" refers to the OECD countries and economies included in the respective comparisons. In cases where data are not available or do not apply to all sub-categories of a given population or indicator, the "OECD average" may be consistent within each column of a table but not necessarily across all columns of a table.

STANDARD ERRORS AND SIGNIFICANCE TESTS

The statistics in this report represent estimates based on samples of teachers and principals, rather than values that could be calculated if every teacher and principal in every country had answered every question. Consequently, it is important to measure the degree of uncertainty of the estimates. In TALIS, each estimate has an associated degree of uncertainty that is expressed through a standard error. The use of confidence intervals provides a way to make inferences about the population means and proportions in a manner that reflects the uncertainty associated with the sample estimates. From an observed sample statistic and assuming a normal distribution, it can be inferred that the corresponding population result would lie within the confidence interval in 95 out of 100 replications of the measurement on different samples drawn from the same population. The reported standard errors were computed with a balanced repeated replication (BRR) methodology.

Differences between sub-groups

Differences between sub-groups along teacher (e.g. female teachers and male teachers) and school characteristics (e.g. schools with a high concentration of students from socio-economically disadvantaged homes and schools with a low concentration of students from socio-economically disadvantaged homes) were tested for statistical significance. All differences marked in bold in the data tables of this report are statistically significantly different from 0 at the 95% level.

In the case of differences between sub-groups, the standard error is calculated by taking into account that the two sub-samples are not independent. As a result, the expected value of the covariance might differ from 0, leading to smaller estimates of standard error as compared to estimates of standard error calculated for the difference between independent sub-samples.

Tables presenting the proportion of teachers and principals, by the breakdown variables of teacher and school characteristics (Tables AII.B.3, AII.B.4, AII.B.5 and AII.B.6) can be found in Annex C.

Differences between cycles

Differences between TALIS cycles (e.g. change between 2013 and 2018) were tested for statistical significance. All differences marked in bold in the data tables of this report are statistically significant at the 95% level. As samples from different TALIS cycles are considered independent, the standard error for any comparison between cycles is calculated with the expected value of the covariance being equal to 0.

STATISTICS BASED ON REGRESSIONS

Regression analysis was conducted to explore the relationships between different variables. Multiple linear regression was used in those cases where the dependent (or outcome) variable was considered continuous. Binary logistic regression was employed when the dependent (or outcome) variable was a binary categorical variable. Regression analyses were carried out for each country separately. Similarly to other statistics presented in this report, the OECD and TALIS averages refer to the arithmetic mean of country level estimates, while the EU total is calculated as a weighted arithmetic mean based on the sum of final teacher (TCHWGT) or principal (SCHWGT) weights by country, depending on the target population.

Control variables included in a regression model are selected based on theoretical reasoning and, preferably, limited to the most objective measures or those that do not change over time. Controls for teacher characteristics include: teacher's gender, age, employment status (i.e. full-time/part-time) and years of teaching experience. Controls for class characteristics include: variables of classroom composition (i.e. share of students whose first language is different from the language of instruction, low academic achievers, students with special needs, students with behavioural problems, students from socio-economically disadvantaged homes, academically gifted students, immigrant students or students with an immigrant background, refugee students) and class size.

In the case of regression models based on multiple linear regression, the explanatory power of the regression models are also highlighted by reporting the R-squared (R^2), which represents the proportion of the observed variation in the dependent (or outcome) variable that can be explained by the independent (or explanatory) variables.

In order to ensure the robustness of the regression models, independent variables were introduced into the models in steps. This approach also required that the models at each step be based on the same sample. The restricted sample used for the different versions of the same model corresponded to the sample of the most extended (i.e. with the maximum number of independent variables) version of the model. Thus, the restricted sample of each regression model excluded those observations where all independent variables had missing values.

Multiple linear regression analysis

Multiple linear regression analysis provides insights into how the value of the continuous dependent (or outcome) variable changes when any one of the independent (or explanatory) variable varies while all other independent variables are held constant. In general, and with everything else held constant, a one-unit increase in the independent variable (X_i) increases, on average, the dependent variable (Y) by the units represented by the regression coefficient (β_i):

$$Y = \beta_0 + \beta_1 X_1 + \ldots + \beta_j X_j + \varepsilon$$

When interpreting multiple regression coefficients, it is important to keep in mind that each coefficient is influenced by the other independent variables in a regression model. The influence depends on the extent to which independent variables are correlated. Therefore, each regression coefficient does not capture the total effect of independent variables on dependent variables. Rather, each coefficient represents the additional effect of adding that variable to the model, if the effects of all other variables in the model are already accounted for. It is also important to note that, because cross-sectional survey data were used in these analyses, no causal conclusions can be drawn.

Regression coefficients in bold in the data tables presenting the results of regression analysis are statistically significantly different from 0 at the 95% confidence level.

Binary logistic regression analysis

Binary logistic regression analysis enables the estimation of the relationship between one or more independent (or explanatory) variables and the dependent (or outcome) variable with two categories. The regression coefficient (ß) of a logistic regression is the estimated increase in the log odds of the outcome per unit increase in the value of the predictor variable.

More formally, let Y be the binary outcome variable indicating no/yes with 0/1, and p be the probability of Y to be 1, so that p = prob(Y=1). Let $X_1,...X_k$ be a set of explanatory variables. Then, the logistic regression of Y on $X_1,...X_k$ estimates parameter values for $ß_0, ß_1, . . . , ß_k$ via the maximum likelihood method of the following equation:

$$Logit(p) = log(p/(1-p)) = ß_0 + ß_1X_1 + ... + ß_kX_k$$

Additionally, the exponential function of the regression coefficient (*exp(ß)*) is obtained, which is the odds ratio (OR) associated with a one-unit increase in the explanatory variable. Then, in terms of probabilities, the equation above is translated into the following:

$$p = exp(ß_0 + ß_1X_1 + ... + ß_kX_k)/(1+exp(ß_0 + ß_1X_1 + ... + ß_kX_k))$$

The transformation of log odds (ß) into odds ratios (*exp(ß)*; OR) makes the data more interpretable in terms of probability. The odds ratio (OR) is a measure of the relative likelihood of a particular outcome across two groups. The odds ratio for observing the outcome when an antecedent is present is:

$$OR = (p_{11}/p_{12})/(p_{21}/p_{22})$$

where p_{11}/p_{12} represents the "odds" of observing the outcome when the antecedent is present, and p_{21}/p_{22} represents the "odds" of observing the outcome when the antecedent is not present. Thus, an odds ratio indicates the degree to which an explanatory variable is associated with a categorical outcome variable with two categories (e.g. yes/no) or more than two categories. An odds ratio below one denotes a negative association; an odds ratio above one indicates a positive association; and an odds ratio of one means that there is no association. For instance, if the association between being a female teacher and having chosen teaching as first choice as a career is being analysed, the following odds ratios would be interpreted as:

- **0.2:** Female teachers are five times less likely to have chosen teaching as a first choice as a career than male teachers.
- **0.5:** Female teachers are half as likely to have chosen teaching as a first choice as a career than male teachers.
- **0.9:** Female teachers are 10% less likely to have chosen teaching as a first choice as a career than male teachers.
- **1:** Female and male teachers are equally likely to have chosen teaching as a first choice as a career.
- **1.1:** Female teachers are 10% more likely to have chosen teaching as a first choice as a career than male teachers.
- **2:** Female teachers are twice more likely to have chosen teaching as a first choice as a career than male teachers.
- **5:** Female teachers are five times more likely to have chosen teaching as a first choice as a career than male teachers.

The odds ratios in bold indicate that the relative risk/odds ratio is statistically significantly different from 1 at the 95% confidence level. To compute statistical significance around the value of 1 (the null hypothesis), the relative-risk/odds-ratio statistic is assumed to follow a log-normal distribution, rather than a normal distribution, under the null hypothesis.

The logistic models described in Tables II.2.53, II.2.54, II.2.55 and II.2.56 (Chapter 2) measure how the probability of experiencing work-related stress "a lot" (binary outcome variable) varies across teachers as a function of specific task intensities (expressed in number of hours, i.e. continuous explanatory variable) and of their quadratic terms, to take into account possible nonlinearities.

Once estimated, the coefficients of the logistic model are converted into probabilities as follows:

$$P(Y = 1|intensity_i) = \frac{exp^{(\beta_0+\beta_1 \cdot intensity_i+\beta_2 \cdot intensity_i{}^2)}}{1 + (\beta_0 + \beta_1 \cdot intensity_i + \beta_2 \cdot intensity_i{}^2)}$$

Where

- P(Y=1 | intensity) is the probability of experiencing work-related stress "a lot", given the number of hours task *i* is performed (intensity *i*, with *i* being teaching, individual planning or preparation of lessons, marking/correcting student work, general administrative work)
- β_0, β_1, β_2 are the coefficients of the logistic model, β_0 being the intercept

Finally, the probability of experiencing work-related stress "a lot" at a given task intensity is multiplied by 100 in order to obtain the expected share of teachers experiencing stress in their work "a lot" at the given task intensity.

STATISTICS BASED ON MULTILEVEL MODELS: INTRA-CLASS CORRELATION COEFFICIENT

Statistics based on multilevel models, which are displayed in Chapters 2 and 4, include variance components (between- and within-school variance), and the intra-class correlation coefficient derived from these components. Multilevel models are specified as two-level regression models (the teacher and school levels), with normally distributed residuals, and estimated with maximum likelihood estimation. Models were estimated using the Stata (version 15.1) "mixed" module.

The intra-class correlation coefficient represents the share of the variance that lies between the cluster variable, in this case schools, and it is defined and estimated as:

$$100 \times \frac{\sigma_B^2}{\sigma_W^2 + \sigma_B^2}$$

Where σ_B^2 and σ_W^2 , respectively, represent the between- and within-variance estimates.

Standard errors in statistics estimated from multilevel models

For statistics based on multilevel models, such as the estimates of variance components, the standard errors are not estimated with the usual replication method, which accounts for stratification and sampling rates from finite populations. Instead, standard errors are "model-based": their computation assumes that schools, and teachers within schools, are sampled at random (with sampling probabilities reflected in school and teacher weights) from a theoretical, infinite population of schools and teachers, which complies with the model's parametric assumptions. The standard error for the estimated index of inclusion is calculated by deriving an approximate distribution for it from the (model-based) standard errors for the variance components, using the delta method.

PEARSON CORRELATION COEFFICIENT

Correlation coefficient measures the strength and direction of the statistical association between two variables. Correlation coefficients vary between -1 and 1; values around 0 indicate a weak association, while the extreme values indicate the strongest possible negative or positive association. The Pearson correlation coefficient (indicated by the letter r) measures the strength and direction of the linear relationship between two variables.

In this report, Pearson correlation coefficients are used to quantify relationships between country-level statistics.

CHANGES BETWEEN TALIS CYCLES AND IMPLICATIONS FOR ANALYSES

Change in the definition of the target population between TALIS cycles

The third TALIS cycle (i.e. TALIS 2018) allows analysis of changes over a 10-year period. Nevertheless, such analysis poses particular challenges and, therefore, requires caution. The various challenges include: country coverage and the target population within a given country may differ across cycles; the variables of interest could change, in addition, through changes in the questionnaires; moreover, the context of teaching and learning might also change. Therefore, comparisons across cycles need to be interpreted with care.

In TALIS 2008, teachers whose teaching is directed entirely or mainly at students with special needs were not part of the target population. However, this changed for TALIS 2013 and 2018, as teachers of special needs students got included in the target population. Hence, estimates representing the change from 2008 to 2013 and from 2008 to 2018 need to interpreted with caution. Nevertheless, it is important to note that teachers who work in schools that teach only special needs students were excluded from all TALIS cycles.

In the case of New Zealand, the definition of the target population has changed between TALIS 2013 and TALIS 2018. While, in 2013, schools with four or fewer eligible teachers were excluded, it was no longer the case in 2018. As a result, a filter variable (TALIS13POP), which excludes schools with four or fewer teachers for New Zealand, was used to estimate 2018 statistics for New Zealand in order to ensure comparability in data tables representing changes over time. Therefore, these results can differ from those reported for the full TALIS 2018 sample of New Zealand, especially for those based on principals' reports.

Table AII.B.2 **Correspondence between ISCED-2011 and ISCED-97 levels used in TALIS 2018 publications**

TALIS 2008	TALIS 2013		TALIS 2018	
ISCED-97	ISCED-97	ISCED-97 categories	ISCED-2011	ISCED-2011 categories
–	–	–	Level 0	**Early childhood education** Refers to early childhood programmes that have an intentional education component and aim to develop cognitive, physical and socio-emotional skills necessary for participation in school and society. Programmes at this level are often differentiated by age.
–	–	–	Level 01	*Early childhood educational development*
Level 0	Level 0	**Pre-primary education** Initial stage of organised instruction, designed primarily to introduce very young children to a school-type environment.	Level 02	*Pre-primary education*
Level 1	Level 1	**Primary education or first stage of basic education** Normally designed to give students a sound basic education in reading, writing and mathematics.	Level 1	**Primary education** Designed to provide a sound basic education in reading, writing and mathematics and a basic understanding of some other subjects. Entry age: between 5 and 7. Typical duration: 6 years.
Level 2	Level 2	**Lower secondary education or second stage of basic education** The lower secondary level of education generally continues the basic programmes of the primary level, although teaching is typically more subject-focused, often employing more specialised teachers who conduct classes in their field of specialisation.	Level 2	**Lower secondary education** Completes provision of basic education, usually in a more subject-oriented way with more specialist teachers. Programmes may differ by orientation, general or vocational, though this is less common than at upper secondary level. Entry follows completion of primary education and typical duration is 3 years. In some countries, the end of this level marks the end of compulsory education.
Level 3	Level 3	**Upper secondary education** The final stage of secondary education in most OECD countries. Instruction is often more organised along subject- matter lines than at ISCED Level 2 and teachers typically need to have a higher level, or more subject-specific, qualification than at ISCED 2.[1]	Level 3	**Upper secondary education** Stronger specialisation than at lower secondary level. Programmes offered are differentiated by orientation: general or vocational. Typical duration is 3 years.
Level 4	Level 4	**Post-secondary non-tertiary education** These programmes straddle the boundary between upper secondary and post-secondary education from an international point of view, even though they might clearly be considered as upper secondary or postsecondary programmes in a national context.[2]	Level 4	**Post-secondary non-tertiary education** Serves to broaden rather than deepen the knowledge, skills and competencies gained in the upper secondary level. Programmes may be designed to increase options for participants in the labour market, for further studies at tertiary level, or both. Usually, programmes at this level are vocationally oriented.
Level 5	Level 5	**First stage of tertiary education** ISCED 5 programmes have an educational content more advanced than those offered at Levels 3 and 4.	–	–
Level 5B	*Level 5B*	*ISCED 5B programmes that are generally more practical/technical/occupationally specific than ISCED 5A programmes.*	Level 5	**Short-cycle tertiary education** Serves to deepen the knowledge developed at previous levels by imparting new techniques, concepts and ideas not generally covered in upper secondary education.
Level 5A Bachelor's degree	*Level 5A*	*ISCED 5A programmes that are largely theoretically based and are intended to provide sufficient qualifications for gaining entry into advanced research programmes and professions with high skills requirements.*	Level 6	**Bachelor's or equivalent level** Designed to provide participants with intermediate academic and/or professional knowledge, skills and competencies, leading to a first degree or equivalent qualification. Typical duration: 3-4 years full-time study.
Level 5A Master's degree			Level 7	**Master's or equivalent level** Stronger specialisation and more complex content than bachelor's level. Designed to provide participants with advanced academic and/or professional knowledge. May have a substantial research component.
Level 6	Level 6	**Second stage of tertiary education** This level is reserved for tertiary programmes that lead to the award of an advanced research qualification. The programmes are devoted to advanced study and original research.	Level 8	**Doctoral or equivalent level** Designed to lead to an advanced research qualification. Programmes at this level are devoted to advanced study and original research, and exist in both academic and professional fields.

1. There are substantial differences in the typical duration of ISCED 3 programmes, both across and between countries, typically ranging from two to five years of schooling.

2. They are often not significantly more advanced than programmes at ISCED 3, but they serve to broaden the knowledge of participants who have already completed a programme at Level 3. The students are typically older than those in ISCED 3 programmes.

Source: UNESCO-UIS (2012[2]), *International Standard Classification of Education: ISCED 2011, UNESCO Institute for Statistics*, Montreal, http://uis.unesco.org/sites/default/files/documents/international-standard-classification-of-education-isced-2011-en.pdf.

Change in the ISCED classification

The classification of levels of education is based on the International Standard Classification of Education (ISCED). ISCED is an instrument for compiling statistics on education internationally. In TALIS 2008 and 2013, ISCED-97 was used to report on teachers' and principals' educational attainment. The first classification, ISCED-97, was revised and the new one, ISCED-2011, was formally adopted in November 2011. ISCED-2011 is the basis of the education levels presented in the TALIS 2018 questionnaires for teachers and for school principals. The data tables reporting teachers' and principals' educational attainment in this report are based on ISCED-2011. A correspondence table (Table AII.B.2) was used to translate ISCED-97 education categories used in TALIS 2008 and 2013 into the categories of the new ISCED-2011, in order to produce tables reporting changes in teachers' and principals' educational attainment from 2008 to 2018. This correspondence table was used to compile Tables I.4.11 and I.4.27 in Chapter 4 of Volume I. However, changes over time in teachers' and principals' educational attainment will need to be interpreted with caution because of the change in the classification.

For certain countries, the correspondence between ISCED-97 and ISCED-2011 was revised to reflect country specificities, compared to the general approach presented in Table AII.B.2. As a result, for Tables I.4.11 and I.4.27, ISCED-97 level 5B was reclassified as ISCED-2011 level 6 in the cases of Italy and the Flemish Community of Belgium.

In Austria, the former "Pädagogische Akadmie" (pedagogical academy, ISCED-97 level 5B) was transformed into "Pädagogische Hochschule" (university college of teacher education, ISCED-2011 level 6) in 2007. Thus, in the case of Austria, the large change from 2008 to 2018 in ISCED levels 5 and 6 in Tables I.4.11 and I.4.27 is not only caused by the change in ISCED classification, but it is also a result of the change in the system of teacher education.

In Portugal, the teachers with a "pre-Bologna master's degree" are categorised as ISCED level 6. The question is presented in a way that prevents the disaggregation between "pre-Bologna master's degree" and "doctorate degree".

In Slovenia, teachers with a "pre-Bologna bachelor's degree" are categorised as ISCED level 5 (which typically corresponds to short-term tertiary education). The question is presented in a way that prevents the disaggregation between "pre-Bologna bachelor's degree" and "bachelor's degree".

References

OECD (2019), *TALIS 2018 Technical Report*, OECD, Paris, http://www.oecd.org/education/talis/TALIS_2018_Technical_Report.pdf. [1]

UNESCO-UIS (2012), *International Standard Classification of Education: ISCED 2011*, UNESCO Institute for Statistics, Montreal, http://uis.unesco.org/sites/default/files/documents/international-standard-classification-of-education-isced-2011-en.pdf. [2]

ANNEX C

List of tables available on line

The following tables are available in electronic form only.

Chapter 2 Boosting the prestige and standing of the profession

http://dx.doi.org/10.1787/888934084285

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ANNEX D

List of TALIS 2018 contributors

TALIS is a collaborative effort, bringing together expertise from participating countries that share an interest in developing a survey programme to inform their policies about teachers, teaching and learning. This report is the product of collaboration and co-operation among the member countries of the OECD and the partner countries participating in the third round of TALIS. Engagement with bodies representing teachers (Education International) and regular briefings and exchanges with the Trade Union Advisory Council (TUAC) at the OECD have been very important in the development and implementation of TALIS. In particular, the co-operation of the teachers and principals in the participating schools has been crucial in ensuring the success of TALIS.

The TALIS Governing Board has, in the context of OECD objectives, driven the development of TALIS and has determined its policy objectives. This includes the objectives of the analysis and reports produced, the conceptual framework and the development of the TALIS questionnaires. The governing board has also overseen the implementation of the survey and the preparation of this report.

Participating countries implemented TALIS at the national level at national project centres through, among others, national project managers (NPMs), national data managers (NDMs) and national sampling managers (NSMs), who were subject to rigorous technical and operational procedures. The NPMs played a crucial role in helping to secure the co-operation of schools, to oversee the national adaptation, translation and validation of the questionnaires, to manage the national data collection and processing and to verify the results from TALIS. The NDMs co-ordinated data processing at the national level and liaised in the cleaning of the data. The NSMs were responsible for implementing TALIS, respecting sampling procedures and other rigorous technical and operational procedures.

A Questionnaire Expert Group (QEG) was established to translate the policy priorities into questionnaires to address the policy and analytical questions that had been agreed by the participating countries. A Technical Advisory Group (TAG) was assembled to advise during the decision-making process for technical or analytical issues. A group of subject-matter experts and analysts were also critical in the analytical phase and drafting of the initial reports.

The co-ordination and management of implementation at the international level was the responsibility of the appointed contractor, the International Association for the Evaluation of Educational Achievement (IEA) and its consortium members, Statistics Canada (Ottawa, Canada) and the Australian Council for Educational Research (ACER, Melbourne, Australia). The TALIS Consortium included staff from the IEA offices in Amsterdam and Hamburg, Statistics Canada and ACER. The IEA Hamburg was responsible for the overall survey planning, survey administration and the international data management. The IEA Amsterdam Secretariat was responsible for overseeing the verification of the translation and for quality control in general. Statistics Canada, as a sub-contractor of the IEA, Hamburg, developed the sampling plan, advised countries on its application, calculated the sampling weights and advised on the calculation of sampling errors. Furthermore, ACER was responsible for the quality control of the final report tables and select analytical advice.

The OECD Secretariat had overall responsibility for managing the programme, monitoring its implementation on a day-to-day basis and serving as the secretariat of the TALIS Governing Board.

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Note

1. This information was correct as at 2 March 2020.

TALIS 2018 Results:

TEACHERS AND SCHOOL LEADERS AS VALUED PROFESSIONALS

VOLUME II

Understanding teachers and school leaders as "professionals" means having high expectations of them as advanced knowledge workers. It means they should not only conduct their work in an effective manner, but also strive to improve their skills throughout their career, collaborate with colleagues and parents to work towards school improvement, and think creatively about the challenges they face. However, if we expect teachers and schools leaders to act as professionals, we should treat them as such. This report aims to provide an in-depth analysis of teachers' and school leaders' perceptions of the value of their profession, their work-related well-being and stress, and their satisfaction with their working conditions. It also offers a description of teachers' and school leaders' contractual arrangements, opportunities to engage in professional tasks such as collaborative teamwork, autonomous decision making, and leadership practices. Based on the voice of teachers and school leaders, the report offers a series of policy recommendations to help strengthen the professionalisation of teaching careers.

The OECD Teaching and Learning International Survey (TALIS) is the largest international survey asking teachers and school leaders about their working conditions and learning environments, and provides a barometer of the profession every five years. Results from the 2018 cycle explore and examine the various dimensions of teacher and school leader professionalism across education systems.

Consult this publication on line at: ***https://doi.org/10.1787/19cf08df-en***

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