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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.

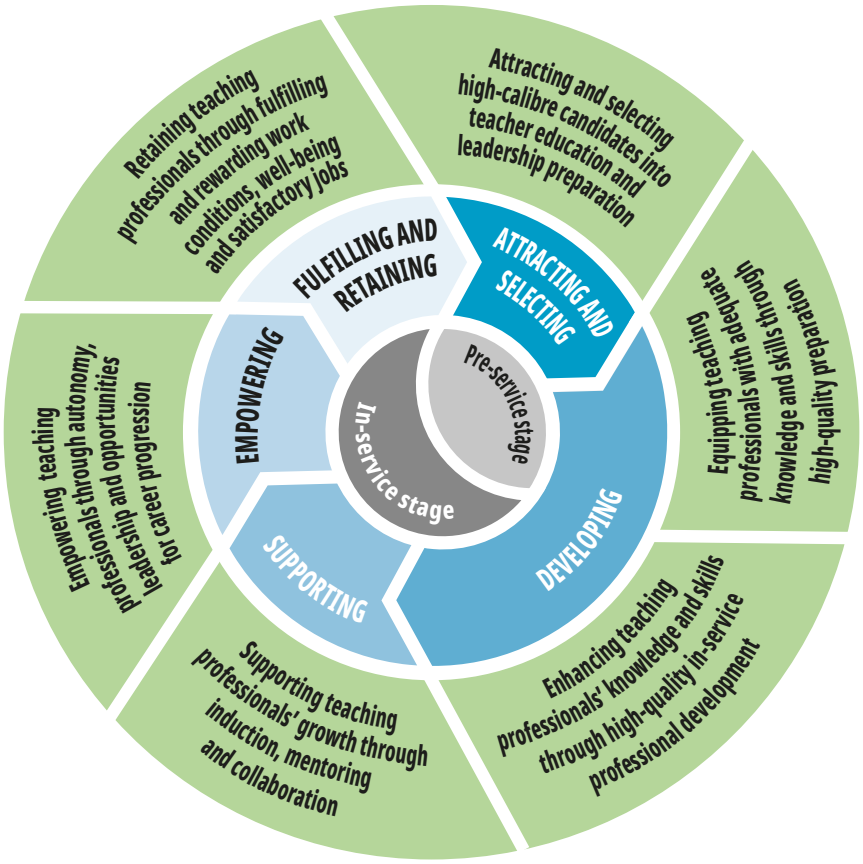
But the characteristics of professional occupations are not limited to their knowledge and skills base. Historically, professions have been defined through the notions of expert judgement and autonomous decision making, the construction of a specialised body of knowledge and skills and the collegial 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.

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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.

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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.

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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.

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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

References

Abbiati, G., G. Argentin and **T. Gerosa** (2017), "Different teachers for different students? Evidence on teacher-student matching and its consequences in the Italian case", *Politica economica* 1, pp. 12-58, http://dx.doi.org/10.1429/86375. [95]

Ainley, J. and **R. Carstens** (2018), "Teaching and Learning International Survey (TALIS) 2018 Conceptual Framework", *OECD Education Working Papers*, No. 187, OECD Publishing, Paris, https://dx.doi.org/10.1787/799337c2-en. [76]

Antinluoma, M. et al. (2018), "Schools as professional learning communities", *Journal of Education and Learning*, Vol. 7/5, pp. 76-91, http://dx.doi.org/10.5539/jel.v7n5p76. [55]

Avalos, B. (2011), "Teacher professional development in Teaching and Teacher Education over ten years", *Teaching and Teacher Education*, Vol. 27/1, pp. 10-20, http://dx.doi.org/10.1016/j.tate.2010.08.007. [29]

Bakker, A. et al. (2007), "Job resources boost work engagement, particularly when job demands are high", *Journal of Educational Psychology*, Vol. 99/2, pp. 274-284, http://dx.doi.org/10.1037/0022-0663.99.2.274. [105]

Barber, M. and **M. Mourshed** (2009), *Shaping the Future: How Good Education Systems Can Become Great in the Decade Ahead*, Report on the International Education Roundtable, 7 July 2009, Singapore, McKinsey & Company, London. [1]

Bautista, A., J. Wong and **S. Gopinathan** (2015), "Teacher professional development in Singapore: Depicting the landscape", *Psychology, Society, & Education*, Vol. 7/3, pp. 311-326, http://dx.doi.org/10.25115/psye.v7i3.523. [35]

Berliner, D. (2001), "Learning about and learning from expert teachers", *International Journal of Educational Research*, Vol. 35/5, pp. 463-482, http://dx.doi.org/10.1016/S0883-0355(02)00004-6. [92]

Bertoni, E. et al. (2018), "School finance in Latin America: A conceptual framework and a review of policies", *Technical Note*, No. IDB-TN-01503, Inter-American Development Bank, Washington, DC, http://dx.doi.org/10.18235/0001306. [100]

Bolam, R. et al. (2005), "Creating and Sustaining Effective Professional Learning Communities", *DfES Research Report*, No. 637, University of Bristol, Bristol, http://dera.ioe.ac.uk/5622/1/RR637.pdf. [60]

Borko, H. (2004), "Professional development and teacher learning: Mapping the terrain", *Educational Researcher*, Vol. 33/8, pp. 3-15, http://dx.doi.org/10.3102/0013189X033008003. [28]

Borman, G. and **N. Dowling** (2008), "Teacher attrition and retention: A meta-analytic and narrative review of the research", *Review of Educational Research*, Vol. 78/3, pp. 367-409, http://dx.doi.org/10.3102/0034654308321455. [20]

Braun, H. (2005), *Using Student Progress to Evaluate Teachers: A Primer on Value-Added Models*, Educational Testing Service, Princeton, NJ, http://www.ets.org/research/policy_research_reports/publications/report/2005/cxje. [91]

Bruns, B., D. Filmer and **H. Patrinos** (2011), *Making Schools Work: New Evidence on Accountability Reforms*, The World Bank, Washington, DC, http://dx.doi.org/10.1596/978-0-8213-8679-8. [101]

Cerna, L. et al. (2019), "Strength through diversity's Spotlight Report for Sweden", *OECD Education Working Papers*, No. 194, OECD Publishing, Paris, https://dx.doi.org/10.1787/059ce467-en. [34]

Chapman, C. et al. (eds.) (2016), *Routledge International Handbook of Educational Effectiveness and Improvement Research: Research, Policy, and Practice*, Routledge, Abingdon; New York, NY. [73]

Cheng, M., A. Cheng and **S. Tang** (2010), "Closing the gap between the theory and practice of teaching: Implications for teacher education programmes in Hong Kong", *Journal of Education for Teaching*, Vol. 36/1, pp. 91-104, http://dx.doi.org/10.1080/02607470903462222. [46]

Cochran-Smith, M. (2004), "The problem of teacher education", *Journal of Teacher Education*, Vol. 55/4, pp. 295-299, http://dx.doi.org/10.1177/0022487104268057. [106]

Collie, R. and **A. Martin** (2017), "Teachers' sense of adaptability: Examining links with perceived autonomy support, teachers' psychological functioning, and students' numeracy achievement", *Learning and Individual Differences*, Vol. 55, pp. 29-39, http://dx.doi.org/10.1016/j.lindif.2017.03.003. [107]

Collie, R., J. Shapka and **N. Perry** (2012), "School climate and social-emotional learning: Predicting teacher stress, job satisfaction, and teaching efficacy", *Journal of Educational Psychology*, Vol. 104/4, pp. 1189-1204, http://dx.doi.org/10.1037/a0029356. [110]

Crossman, A. and **P. Harris** (2006), "Job satisfaction of secondary school teachers", *Educational Management Administration and Leadership*, Vol. 34/1, pp. 29-46, http://dx.doi.org/10.1177/1741143206059538. [118]

Curry, J. and **E. O'Brien** (2012), "Shifting to a wellness paradigm in teacher education: A promising practice for fostering teacher stress reduction, burnout resilience, and promoting retention", *Ethical Human Psychology and Psychiatry*, Vol. 14/3, pp. 178-191, http://dx.doi.org/10.1891/1559-4343.14.3.178. [115]

Daresh, J. (2004), "Mentoring school leaders: Professional promise or predictable problems?", *Educational Administration Quarterly*, Vol. 40/4, pp. 495-517, http://dx.doi.org/10.1177/0013161X04267114. [43]

Darling-Hammond, L. (2017), "Teacher education around the world: What can we learn from international practice?", *European Journal of Teacher Education*, Vol. 40/3, pp. 291-309, http://dx.doi.org/10.1080/02619768.2017.1315399. [2]

Darling-Hammond, L. et al. (2009), *Professional Learning in the Learning Profession: A Status Report on Teacher Development in the United States and Abroad*, National Staff Development Council, Dallas, TX and and The School Redesign Network at Stanford University, [37]

Darling-Hammond, L. et al. (2007), *Preparing School Leaders for a Changing World: Lessons from Exemplary Leadership Development Programs*, Stanford University, Stanford Educational Leadership Institute, Stanford, CA, https://edpolicy.stanford.edu/sites/default/files/publications/preparing-school-leaders-changing-world-lessons-exemplary-leadership-development-programs_1.pdf. [23]

Department for Education, UK (2019), *National Statistics. School workforce in England: November 2018*, https://www.gov.uk/government/statistics/school-workforce-in-england-november-2018 (accessed on 29 January 2020). [41]

Dolton, P. et al. (2018), *Global Teacher Status Index 2018*, Varkey Foundation, London, https://www.varkeyfoundation.org/media/4867/gts-index-13-11-2018.pdf. [21]

Erickson, G. et al. (2005), "Collaborative teacher learning: Findings from two professional development projects", *Teaching and Teacher Education*, Vol. 21/7, pp. 787-798, http://dx.doi.org/10.1016/j.tate.2005.05.018. [62]

Espey, M. (2008), "Does space matter? Classroom design and team-based learning", *Applied Economic Perspectives and Policy*, Vol. 30/4, pp. 764-775, http://dx.doi.org/10.1111/j.1467-9353.2008.00445.x. [47]

Evans, L. (2008), "Professionalism, professionality and the development of education professionals", *British Journal of Educational Studies*, Vol. 56/1, pp. 20-38, https://www.jstor.org/stable/20479569. [7]

Fraillon, J. et al. (2014), *Preparing for Life in a Digital Age: The IEA International Computer and Information Literacy Study International Report*, Springer International Publishing, Heidelberg, https://www.iea.nl/publications/study-reports/international-reports-iea-studies/preparing-life-digital-age. [30]

Gil-Flores, J., J. Rodríguez-Santero and **J. Torres-Gordillo** (2017), "Factors that explain the use of ICT in secondary-education classrooms: The role of teacher characteristics and school infrastructure", *Computers in Human Behavior*, Vol. 68, pp. 441-449, http://dx.doi.org/10.1016/J.CHB.2016.11.057. [31]

Glazerman, S. et al. (2010), *Impacts of Comprehensive Teacher Induction: Final Results from a Randomized Controlled Study*, (NCEE 2010-4027), National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S., Washington, DC, https://ies.ed.gov/ncee/pubs/20104027/pdf/20104027.pdf. [38]

Goddard, Y., R. Goddard and **M. Tschannen-Moran** (2007), "A theoretical and empirical investigation of teacher collaboration for school improvement and student achievement in public elementary schools", *Teachers College Record*, Vol. 109/4, pp. 877-896, https://www.tcrecord.org/content.asp?contentid=12871. [49]

Goldhaber, D. et al. (2015), "Crossing the border? Exploring the cross-state mobility of the teacher workforce", *Educational Researcher*, Vol. 44/8, pp. 421-431, http://dx.doi.org/10.3102/0013189X15613981. [117]

Guerriero, S. (ed.) (2017), *Pedagogical Knowledge and the Changing Nature of the Teaching Profession*, Educational Research and Innovation, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264270695-en. [5]

Gu, Q. and **C. Day** (2007), "Teachers resilience: A necessary condition for effectiveness", *Teaching and Teacher Education*, Vol. 23/8, pp. 1302-1316, http://dx.doi.org/10.1016/j.tate.2006.06.006. [111]

Hakanen, J., A. Bakker and **W. Schaufeli** (2006), "Burnout and work engagement among teachers", *Journal of School Psychology*, Vol. 43/6, pp. 495-513, http://dx.doi.org/10.1016/j.jsp.2005.11.001. [108]

Hallinger, P. (2018), "Bringing context out of the shadows of leadership", *Educational Management Administration & Leadership*, Vol. 46/1, pp. 5-24, http://dx.doi.org/10.1177/1741143216670652. [74]

Hallinger, P. (2015), "The evolution of instructional leadership", in *Assessing Instructional Leadership with the Principal Instructional Management Rating Scale*, Springer International Publishing, Cham, http://dx.doi.org/10.1007/978-3-319-15533-3_1. [86]

Hallinger, P. (2011), "Leadership for learning: Lessons from 40 years of empirical research", *Journal of Educational Administration*, Vol. 49/2, pp. 125-142, http://dx.doi.org/10.1108/09578231111116699. [79]

Hallinger, P. and **R. Heck** (2010), "Collaborative leadership and school improvement: understanding the impact on school capacity and student learning", *School Leadership & Management*, Vol. 30/2, pp. 95-110, http://dx.doi.org/10.1080/13632431003663214. [87]

Hallinger, P. and **R. Heck** (2010), "Leadership for learning: Does collaborative leadership make a difference in school improvement?", *Educational Management Administration & Leadership*, Vol. 38/6, pp. 654-678, http://dx.doi.org/10.1177/1741143210379060. [80]

Hall, W. (2017), "The effectiveness of policy interventions for school bullying: A systematic review", *Journal of the Society for Social Work and Research*, Vol. 8/1, pp. 45-69, http://dx.doi.org/10.1086/690565. [48]

Hargreaves, A. (2000), "Four ages of professionalism and professional learning", *Teachers and Teaching: Theory and Practice*, Vol. 6/2, pp. 151-182, http://dx.doi.org/10.1080/713698714. [18]

Hargreaves, A. and **M. Fullan** (2012), *Professional Capital: Transforming Teaching in Every School*, Teachers College Press, New York, NY. [72]

Hargreaves, L. (2009), "The status and prestige of teachers and teaching", in Saha, L. and A. Dworkin (eds.), *The International Handbook of Research on Teachers and Teaching*, Springer, Boston, MA, https://doi.org/10.1007/978-0-387-73317-3_13. [17]

Harris, A. and **D. Muijs** (2004), *School Improvement through Teacher Leadership*, Open University Press, Ballmoor, Buckinghamshire. [81]

Hattie, J. (2009), *Visible Learning: A Synthesis of over 800 Meta-Analyses Relating to Achievement*, Routledge, London. [63]

Helms-Lorenz, M., B. Slof and **W. van de Grift** (2013), "First year effects of induction arrangements on beginning teachers' psychological processes", *European Journal of Psychology of Education*, Vol. 28/4, pp. 1265-1287, http://dx.doi.org/10.1007/s10212-012-0165-y. [39]

Hoban, G. and **G. Erickson** (2004), "Dimensions of learning for long-term professional development: Comparing approaches from education, business and medical contexts", *Journal of In-Service Education*, Vol. 30/2, pp. 301-324, https://www.tandfonline.com/doi/pdf/10.1080/13674580400200247. [26]

Hoyle, E. (2001), "Teaching: Prestige, status and esteem", *Educational Management Administration & Leadership*, Vol. 29/3, pp. 139-152, http://doi.org/10.1177/0263211X010292001. [19]

Ingersoll, R. and **G. Collins** (2018), "The status of teaching as a profession", in Ballantine, J., J. Spade and J. Stuber (eds.), *Schools and Society: A Sociological Approach to Education*, Pine Forge Press/Sage Publications, Thousand Oaks, CA, https://repository.upenn.edu/gse_pubs/221. [6]

Ingvarson, L., M. Meiers and **A. Beavis** (2005), "Factors affecting the impact of professional development programs on teachers' knowledge, practice, student outcomes and efficacy", *Education Policy Analysis Archives*, Vol. 13/10, pp. 1-28, http://dx.doi.org/10.14507/epaa.v13n10.2005. [64]

Jacobsen, C., J. Hvitved and **L. Andersen** (2014), "Command and motivation: How the perception of external interventions relates to intrinsic motivation and public service motivation", *Public Administration*, Vol. 92/4, pp. 790-806, http://dx.doi.org/10.1111/padm.12024. [15]

Jensen, B. and **J. Reichl** (2011), "Better teacher appraisal and feedback: Improving performance", *Grattan Institute Report*, No. 2011-3, APR 2011, Grattan Institute, Melbourne, https://grattan.edu.au/wp-content/uploads/2014/04/081_report_teacher_appraisal.pdf. [65]

Johnson, S. and **M. Donaldson** (2007), "Overcoming the obstacles to leadership", *Educational Leadership*, Vol. 65/1, pp. 8-13, http://www.ascd.org/publications/educational-leadership/sept07/vol65/num01/Overcoming-the-Obstacles-to-Leadership.aspx. [82]

Johnson, S., M. Kraft and **J. Papay** (2012), "How context matters in high-need schools: The effect of teachers' working conditions on their professional satisfaction and their students' achievement", *Teachers College Record*, Vol. 114, pp. 1-39, https://www.tcrecord.org/content.asp?contentid=16685. [51]

Kini, T. and **A. Podolsky** (2016), *Does Teaching Experience Increase Teacher Effectiveness? A Review of the Research*, Learning Policy Institute, Palo Alto, http://mrbartonmaths.com/resourcesnew/8.%20Research/Improving%20Teaching/Teaching%20Experience.pdf. [96]

Klassen, R. and **M. Chiu** (2010), "Effects on teachers' self-efficacy and job satisfaction: Teacher gender, years of experience, and job stress", *Journal of Educational Psychology*, Vol. 102/3, pp. 741-756, http://dx.doi.org/10.1037/a0019237. [114]

Klassen, R. et al. (2013), "Preservice teachers' work stress, self-efficacy, and occupational commitment in four countries", *European Journal of Psychology of Education*, Vol. 28/4, pp. 1289-1309, http://dx.doi.org/10.1007/s10212-012-0166-x. [112]

Kools, M. and **L. Stoll** (2016), "What Makes a School a Learning Organisation?", *OECD Education Working Papers*, No. 137, OECD Publishing, Paris, https://dx.doi.org/10.1787/5jlwm62b3bvh-en. [58]

Kraft, M., D. Blazar and **D. Hogan** (2018), "The effect of teacher coaching on instruction and achievement: A meta-analysis of the causal evidence", *Review of Educational Research*, Vol. 88/4, pp. 547-588, https://doi.org/10.3102/0034654318759268. [27]

Kumrow, D. and **B. Dahlen** (2002), "Is peer review an effective approach for evaluating teachers?", *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, Vol. 75/5, pp. 238-241, http://dx.doi.org/10.1080/00098650209603947. [66]

Kyriacou, C. (2001), "Teacher stress: Directions for future research", *Educational Review*, Vol. 53/1, pp. 27-35, http://dx.doi.org/10.1080/00131910120033628. [116]

Ladd, H. and **L. Sorensen** (2017), "Returns to teacher experience: Student achievement and motivation in middle school", *Education Finance and Policy*, Vol. 12/2, pp. 241-279, http://dx.doi.org/10.1162/EDFP_a_00194. [93]

Lillejord, S. and **K. Børte** (2019), "Trapped between accountability and professional learning? School leaders and teacher evaluation", *Professional Development in Education*, http://dx.doi.org/10.1080/19415257.2019.1585384. [89]

Lipowsky, F. et al. (2009), "Quality of geometry instruction and its short-term impact on students' understanding of the Pythagorean Theorem", *Learning and Instruction*, Vol. 19/6, pp. 527-537, http://dx.doi.org/10.1016/j.learninstruc.2008.11.001. [45]

Little, J. (1990), "The persistence of privacy: Autonomy and initiative in teachers' professional relations", *Teachers College Record*, Vol. 91/4, pp. 509-536, https://www.tcrecord.org/content.asp?contentid=406. [52]

Lomos, C., R. Hofman and **R. Bosker** (2011), "Professional communities and student achievement – a meta-analysis", *School Effectiveness and School Improvement: An International Journal of Research, Policy and Practice*, Vol. 22/2, pp. 121-148, http://dx.doi.org/10.1080/09243453.2010.550467. [56]

Louis, K. and **H. Marks** (1998), "Does professional community affect the classroom? Teachers' work and student experiences in restructuring schools", *American Journal of Education*, Vol. 106/4, pp. 532-575, https://doi.org/10.1086/444197. [61]

Marzano, R., T. Waters and **B. McNulty** (2005), *School Leadership That Works: From Research to Results*, Association for Supervision and Curriculum Development, Alexandria, VA. [75]

Melnick, S. and **D. Meister** (2008), "A comparison of beginning and experienced teachers' concerns", *Educational Research Quarterly*, Vol. 31/3, pp. 40-56, https://eric.ed.gov/?id=EJ788428. [94]

Ministerio de Educación, Cultura y Deporte (2014), "Real Decreto 894/2014, de 17 de octubre...[Royal Decree 894/2014, of 17 October...]", *Boletín Oficial del Estado* 270, pp. 91819-91827, https://www.boe.es/eli/es/rd/2014/10/17/894. [119]

Moreno, J. (2007), "Do the initial and the continuous teachers' professional development sufficiently prepare teachers to understand and cope with the complexities of today and tomorrow's education?", *Journal of Educational Change*, Vol. 8/2, pp. 169-173, http://dx.doi.org/10.1007/s10833-007-9027-9. [24]

Mostafa, T. and **J. Pál** (2018), "Science teachers' satisfaction: Evidence from the PISA 2015 teacher survey", *OECD Education Working Papers*, No. 168, OECD Publishing, Paris, https://dx.doi.org/10.1787/1ecdb4e3-en. [109]

Niemi, H. (2015), "Teacher professional development in Finland: Towards a more holistic approach", *Psychology, Society & Education*, Vol. 7/3, pp. 279-294, http://ojs.ual.es/ojs/index.php/psye/article/view/519. [120]

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

OECD (2019), *Education Policy Outlook 2019: Working Together to Help Students Achieve their Potential*, OECD Publishing, Paris, https://dx.doi.org/10.1787/2b8ad56e-en. [71]

OECD (2019), *TALIS 2018 Results (Volume I): Teachers and School Leaders as Lifelong Learners*, TALIS, OECD Publishing, Paris, https://dx.doi.org/10.1787/1d0bc92a-en. [13]

OECD (2019), *Working and Learning Together: Rethinking Human Resource Policies for Schools*, OECD Reviews of School Resources, OECD Publishing, Paris, https://dx.doi.org/10.1787/b7aaf050-en. [16]

OECD (2018), *Curriculum Flexibility and Autonomy in Portugal: an OECD Review*, OECD, Paris, https://www.oecd.org/education/2030/Curriculum-Flexibility-and-Autonomy-in-Portugal-an-OECD-Review.pdf. [84]

OECD (2018), *Effective Teacher Policies: Insights from PISA*, PISA, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264301603-en. [3]

OECD (2017), *Pensions at a Glance 2017: OECD and G20 Indicators*, OECD Publishing, Paris, https://dx.doi.org/10.1787/pension_glance-2017-en. [14]

OECD (2016), *PISA 2015 Results (Volume II): Policies and Practices for Successful Schools*, PISA, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264267510-en. [85]

OECD (2016), *School Leadership for Learning: Insights from TALIS 2013*, TALIS, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264258341-en. [77]

OECD (2016), *Supporting Teacher Professionalism: Insights from TALIS 2013*, TALIS, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264248601-en. [8]

OECD (2015), *Students, Computers and Learning: Making the Connection*, PISA, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264239555-en. [32]

OECD (2014), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, TALIS, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264196261-en. [53]

OECD (2013), *Synergies for Better Learning: An International Perspective on Evaluation and Assessment*, OECD Reviews of Evaluation and Assessment in Education, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264190658-en. [88]

OECD (2009), *Creating Effective Teaching and Learning Environments: First Results from TALIS*, TALIS, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264068780-en. [54]

OECD (2005), *Teachers Matter: Attracting, Developing and Retaining Effective Teachers*, Education and Training Policy, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264018044-en. [4]

OECD/Gregory Wurzburg (2010), "Making reform happen in education", in *Making Reform Happen: Lessons from OECD Countries*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264086296-7-en. [102]

Opfer, D. (2016), "Conditions and Practices Associated with Teacher Professional Development and Its Impact on Instruction in TALIS 2013", *OECD Education Working Papers*, No. 138, OECD Publishing, Paris, https://dx.doi.org/10.1787/5jlss4r0lrg5-en. [25]

Opfer, V. and **D. Pedder** (2011), "Conceptualizing Teacher Professional Learning", *Review of Educational Research*, Vol. 81/3, pp. 376-407, http://dx.doi.org/10.3102/0034654311413609. [36]

Papay, J. (2012), "Refocusing the debate: Assessing the purposes and tools of teacher evaluation", *Harvard Educational Review*, Vol. 2/1, pp. 123-141, https://doi.org/10.17763/haer.82.1.v40p0833345w6384. [90]

Papay, J. and **M. Kraft** (2015), "Productivity returns to experience in the teacher labor market: Methodological challenges and new evidence on long-term career improvement", *Journal of Public Economics*, Vol. 130, pp. 105-119, http://dx.doi.org/10.1016/j.jpubeco.2015.02.008. [97]

Pont, B., D. Nusche and **H. Moorman** (2008), *Improving School Leadership, Volume 1: Policy and Practice*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264044715-en. [99]

Price, H. and **K. Weatherby** (2018), "The global teaching profession: How treating teachers as knowledge workers improves the esteem of the teaching profession", *School Effectiveness and School Improvement: An International Journal of Research, Policy and Practice*, Vol. 29/1, pp. 113-149, http://dx.doi.org/10.1080/09243453.2017.1394882. [9]

Reeves, P., W. Pun and **K. Chung** (2017), "Influence of teacher collaboration on job satisfaction and student achievement", *Teaching and Teacher Education*, Vol. 67, pp. 227-236, http://dx.doi.org/10.1016/J.TATE.2017.06.016. [50]

Rockoff, J. (2008), "Does Mentoring Reduce Turnover and Improve Skills of New Employees? Evidence from Teachers in New York City", *NBER Working Paper Series*, No. 13868, National Bureau of Economic Research, Cambridge, MA, http://www.nber.org/papers/w13868. [40]

Rowan, B. (1994), "Comparing teachers' work with work in other occupations: Notes on the professional status of teaching", *Educational Researcher*, Vol. 23/6, pp. 4-17, http://dx.doi.org/10.3102/0013189X023006004. [10]

Rundstrom Williams, T. (2005), "Exploring the impact of study abroad on students' intercultural communication skills: Adaptability and sensitivity", *Journal of Studies in International Education*, Vol. 9/4, pp. 356-371, http://dx.doi.org/10.1177/1028315305277681. [33]

Sanders, W. and **J. Rivers** (1996), *Cumulative and Residual Effects of Teachers on Future Student Academic Achievement*, University of Tennessee Value-Added Research and Assessment Center, Knoxville, TN, https://www.beteronderwijsnederland.nl/files/cumulative%20and%20residual%20effects%20of%20teachers.pdf. [42]

Schleicher, A. (2018), *Valuing our Teachers and Raising their Status: How Communities Can Help*, International Summit on the Teaching Profession, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264292697-en. [11]

Schleicher, A. (2011), *Building a High-Quality Teaching Profession: Lessons from around the World*, International Summit on the Teaching Profession, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264113046-en. [83]

Simmie, G. et al. (2017), "Discursive positioning of beginning teachers' professional learning during induction: A critical literature review from 2004 to 2014", *Asia-Pacific Journal of Teacher Education*, Vol. 45/5, pp. 505-519, http://dx.doi.org/10.1080/1359866X.2017.1280598. [69]

Skaalvik, E. and **S. Skaalvik** (2018), "Job demands and job resources as predictors of teacher motivation and well-being", *Social Psychology of Education*, Vol. 21/5, pp. 1251-1275, http://dx.doi.org/10.1007/s11218-018-9464-8. [113]

Smak, M. and **D. Walczak** (2017), "The prestige of the teaching profession in the perception of teachers and former teachers", *Edukacja. An Interdisciplinary Approach*, pp. 22-40, http://dx.doi.org/10.24131/3724.170502. [22]

Southworth, G. (1995), "Reflections on mentoring for new school leaders", *Journal of Educational Administration*, Vol. 33/5, pp. 17-28, http://dx.doi.org/10.1108/09578239510098509. [44]

Spillane, J., M. Shirrell and **M. Hopkins** (2016), "Designing and deploying a professional learning community (PLC) organizational routine: Bureaucratic and collegial arrangements in tandem", *Les dossiers des sciences de l'éducation* 35, pp. 97-122, http://dx.doi.org/10.4000/dse.1283. [57]

Spooner-Lane, R. (2017), "Mentoring beginning teachers in primary schools: Research review", *Professional Development in Education*, Vol. 43/2, pp. 253-273, http://dx.doi.org/10.1080/19415257.2016.1148624. [70]

Steinberg, M. and **L. Sartain** (2015), "Does teacher evaluation improve school performance? Experimental evidence from Chicago's Excellence in Teaching Project", *Education Finance and Policy*, Vol. 10/4, pp. 535-572, http://dx.doi.org/10.1162/EDFP_a_00173. [67]

Stromquist, N. (2018), *The Global Status of Teachers and the Teaching Profession*, Education International, Brussels, http://ei-ie-al.org/sites/default/files/docs/2018_ei_research_statusofteachers_eng_final.pdf. [104]

Taylor, E. and **J. Tyler** (2012), "The effect of evaluation on teacher performance", *American Economic Review*, Vol. 102/7, pp. 3628-3651, http://dx.doi.org/10.1257/aer.102.7.3628. [68]

Urick, A. and **A. Bowers** (2014), "The impact of principal perception on student academic climate and achievement in high school: How does it measure up?", *Journal of School Leadership*, Vol. 24/2, pp. 386-414, http://dx.doi.org/10.1177/105268461402400207. [78]

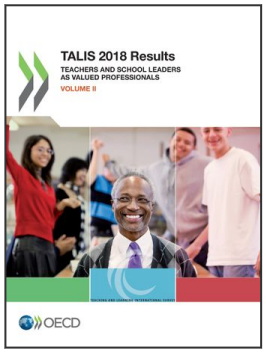
Viac, C. and **P. Fraser** (2019), "Teacher's well-being: A framework for data collection and analysis", *OECD Education Working Papers*, No. 213, OECD Publishing, Paris, https://doi.org/10.1787/c36fc9d3-en. [98]

Vieluf, S. et al. (2012), *Teaching Practices and Pedagogical Innovations: Evidence from TALIS*, TALIS, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264123540-en. [59]

Viennet, R. and **B. Pont** (2017), "Education policy implementation: A literature review and proposed framework", *OECD Education Working Papers*, No. 162, OECD Publishing, Paris, https://dx.doi.org/10.1787/fc467a64-en. [103]

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.



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