Chapter 2. Raising the attractiveness of a career in schools

This chapter analyses how entry requirements, career structures, compensation and working conditions can help to attract, retain and motivate effective staff working in schools and specifically teachers and school leaders. It explores how the horizontal and vertical structure of teachers' careers can provide opportunities for professional growth within the classroom and offer clear pathways to positions of educational leadership. The chapter also considers how policies can shape working conditions in ways that enable teachers and leaders to employ their skills effectively, as well as the role that autonomy and teachers' voice play in strengthening the profession. The chapter emphasises implementation challenges and considers under which conditions employment reforms are most likely to have the desired effect on staff, schools and students. The chapter concludes with a set of ideas that policy makers may consider as they develop responses for their particular contexts, challenges and goals.

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

Attracting talented individuals to a career in schools is a pressing concern in many OECD countries, particularly those with rising student enrolments or a large share of teachers, school leaders or other staff approaching retirement age. Retaining the best teachers and leaders, motivating them throughout their careers and enabling them to use their talents effectively to foster student learning and well-being is at the heart of what makes a successful education system. Raising the status of a career in schools has been a priority for education policy makers not only because it is critical for systems to attract the next generation of quality candidates to the profession. The social status of teachers and school leaders is also a reflection of the status quo and can indicate whether a system's current human resource policies are well designed to promote educational success.

The OECD Teaching and Learning International Survey (TALIS) points to significant differences in the social and professional status of teachers and the public perception of a career in schools among OECD review countries (OECD, 2019[1]; OECD, 2014[2]). The status of teachers and school leaders is driven not only by the material but also by the intellectual fulfilment that the work in schools provides, and it often mirrors the extent to which teachers and leaders are capable, enabled and trusted to act upon their professional expertise. Not surprisingly then, there is more than one way to raise the status and attractiveness of a career in schools and – depending on national contexts – this is rarely straightforward, especially with limited resources.

Individuals choose a career in school education for a variety of reasons, but evidence from TALIS 2018 suggests that the great majority of serving teachers were motivated by a strong commitment to public service and the social impact of teaching. When asked about their decision to become a teacher, across the OECD, 92% of lower secondary teachers reported that it was important to them to influence the development of children and young people and 88% said they were motivated by the profession's contribution to society (OECD, 2019, p. 123[1]). The tasks that teachers, leaders and other school staff perform – working with young people and inspiring them to learn – thus continue to be powerful sources of intrinsic motivation.

At the same time, a substantial number of teachers report that extrinsic characteristics, including career prospects (61%), job security (71%) and the ability to reconcile their work schedule and private life (66%) also mattered for their decision to join teaching (OECD, 2019, p. 123[1]). This is consistent with evidence that the attractiveness of careers, salaries and working conditions in schools – compared to those in alternative professions – affects the supply of school-level professionals, the propensity of young people to enter initial teacher preparation and the retention of early-career staff. Furthermore, working conditions, salaries and administrative workload rank at the top of practicing teachers' concerns in many OECD systems (OECD, 2019, p. 110[1]). These results underline the importance of providing a working environment that allows teachers to focus on their instruction. They also suggest that inspiring young people to learn might only be a source of continuing motivation if teachers can pursue their work under conditions that make it intellectually stimulating and enjoyable.

Intrinsic and extrinsic motivations are thus closely intertwined and school systems need to consider both when seeking to raise the attractiveness of a career in schools, to motivate school staff and to enable them to support student learning. With this in mind, this chapter analyses how entry requirements, career structures, compensation and working conditions can help to attract, retain and motivate effective staff working in schools and specifically teachers and leaders. It explores how the horizontal and vertical structure of teachers' careers can provide opportunities for professional growth within the classroom and offer

clear pathways to positions of educational leadership. The chapter also considers how national and sub-national policies can shape working conditions in ways that enable teachers and leaders to employ their skills effectively, as well as the role that autonomy and teachers' voice play in strengthening the profession.

Throughout its analysis, the chapter emphasises implementation challenges and considers under which conditions employment reforms are most likely to "reach the classroom" and have the desired effect on staff and the professional capacity in schools. The chapter concludes with a set of ideas that policy makers may consider as they develop responses for their particular contexts, challenges and goals.

2.1. Entry requirements for teachers and school leaders

Attracting, selecting and retaining effective school staff is critical for the success of education systems. Entry requirements regulate both the path to initial qualifications (e.g. the admission to initial teacher education or alternative pathways into the teaching career), as well as the conditions that school staff need to fulfil to assume and remain in their positions. They can therefore have a profound impact on both the quality and the quantity of those pursuing a career in schools. In addition, by signalling the level of knowledge and skills expected of school staff, entry requirements contribute to shaping the social status of their roles. Given the critical influence that entry requirements have on the profession as a whole, professional bodies, such as Ireland's Teaching Council and the Teaching Council of Aotearoa New Zealand, sometimes take a leading role in their definition (OECD, 2013[3]).

Considering the differences in school systems' recruitment needs and labour markets, there is considerable cross-country variation in entry requirements and debate over the desirable level of selectivity, the appropriate criteria, and the point at which high-quality candidates can be most effectively identified. In addition to the attainment of minimum qualification requirements, aspiring teachers undergo a recruitment process for particular positions (see Chapter 3) and – especially in the case of school leaders – typically have to demonstrate further training and experience. While many OECD countries allow graduates of initial teacher education to start teaching directly after gaining their qualification, they may also need to pass additional hurdles once they have assumed their role, such as probation periods or certification processes that require them to demonstrate their competence after a given time on the job or periodically throughout their career.

2.1.1. Setting high or low entry requirements for the teaching profession

Policy makers have pursued different strategies to ensure that teachers of the highest calibre enter and remain in the classroom. Notably, school systems performing highly in the OECD Programme for International Student Assessment (PISA) have very different approaches to the selection of candidates for the teaching profession (OECD, 2019[4]). While Korea and Chinese Taipei, for example, set competitive examinations at both the start and the end of initial teacher education, other high-performing countries, including Australia, England (United Kingdom), Estonia, Norway, Singapore and Slovenia make no use of competitive examinations at either point (OECD, 2018, p. 46[5]).

Similar variation can be seen not only in the mechanism, but also the timing of selection. While some systems have chosen to screen candidates early on, using rigorous admission criteria for initial teacher education or qualification requirements for beginning teachers, others defer the selection process by reducing barriers to entry and instead evaluating

teachers for retention based on their proven effectiveness on the job (Staiger and Rockoff, 2010[6]). Each of these two models has its benefits and drawbacks and there are long-standing debates over which entry requirements are best suited to raise the quality of teachers.

Concerns about the academic skills of prospective teacher candidates recurrently feature in policy discussions around education quality and were evident in a number of OECD review countries, including Chile, Colombia and Portugal but also other systems such as Norway (Liebowitz et al., 2018[7]; Radinger et al., 2018[8]; Santiago et al., 2017[9]; Norwegian Ministry of Education and Research, Oslo, 2017[10]). Indeed, PISA 2015 data find that 15-year-olds who intend to work as teachers have, on average, lower scale scores in maths (16 points) and reading (12 points) (OECD, 2018[5]), while some high-performing school systems, such as Korea, Finland, Singapore and Hong Kong are said to draw their future teachers from the upper deciles of the achievement distribution (Auguste, Kihn and Miller, 2010[11]; Barber and Mourshed, 2007[12]).

At the same time, evidence from the OECD Programme for the International Assessment of Adult Competencies (PIAAC) 2013 Survey of Adult Skills and the OECD Adult Literacy and Life Skills (ALL) assessment suggests that – while the distribution of teachers' skill profiles varies substantially across countries and is positively related to student outcomes – teachers' skill profiles are usually above the country-wide average and compare favourably to those of other highly educated workers in many countries (Hanushek, Piopiunik and Wiederhold, 2019[13]; Golsteyn, Vermeulen and de Wolf, 2016[14]).

Nevertheless, concerns about the selection of teaching candidates have motivated some countries to raise their admission standards for initial teacher education. In Denmark, for example, concerns about the quality of candidates and high dropout rates (which were as high as 41% in 2005) led to a reform of the allocation of study places, which was previously based solely on students' performance in upper secondary education. The new admissions process continues to allow students with the highest marks to enrol directly but requires all other candidates to sit an examination and take part in an interview to gain admission. Early reports from 2014 suggested that the reform had led to a slight decrease in dropout rates (Nusche et al., 2016, p. 144[15]).

Others have questioned the use of more rigorous selection processes at the start of initial teacher education and high barriers to entering the profession, pointing to the difficulty of assessing teachers' effectiveness prior to their entry into the classroom (Staiger and Rockoff, 2010[6]). Introducing additional hurdles, they argue, risks to screen out potential high-quality teachers based on a narrow set of criteria that are only modestly associated with future performance (Kane, Rockoff and Staiger, 2008[16]; Boyd et al., 2008[17]). Cross-sectional evidence from US states also suggests that barriers for certification, such as state examinations or course requirements, can depress the overall supply of teachers (Hanushek and Pace, 1995[18]) and may discourage high-potential candidates with diverse backgrounds from entering the teaching profession (Vegas and Ganimian, 2013[19]), which can be a concern for systems facing acute teacher shortages.

By contrast, reducing the barriers that teachers need to take prior to entering the classroom may not only help alleviate issues of teacher shortages, but also give schools and/or education authorities the possibility to assess whether a teacher is adequately carrying out their roles and responsibilities to satisfactory standards based on their actual practice. At the same time, where entry requirements for initial preparation and into the profession are low, there is the risk that low-performing teachers may enter and remain in the classroom

unless there are effective processes for identifying and supporting or – in the worst case – dismissing them. Some countries have sought to address this dilemma by combining moderate entry requirements with a probationary period, re-certification requirements or high-stakes appraisals. This introduces a high bar for retention decisions after a few years of work experience, rather than at the point of initial certification.

In the Czech Republic, for example, there were plans at the time of the OECD review to complement the screening of candidates at the start of initial teacher education with an assessment after their first year of practice to determine whether teachers can remain in the profession (Shewbridge et al., 2016, p. 150[20]). At the time of writing, a planned amendment to the Pedagogical Workers Act (which regulates the profession in the country) was proposing an induction period of two years. A new career structure in Chile introduced a similar hurdle that teachers must take four to eight years after entering the profession (see Table 2.1) (Santiago et al., 2017, p. 253[9]). Raising the extent of practical experience as an integral part early on in teacher education programmes is another option to ensure initial qualifications meaningfully reflect teachers' practical skills in the classroom while at the same time giving student teachers an opportunity to consider their motivation and career choice based on a realistic impression of the profession.

2.1.2. Differences in qualification requirements across levels and sectors

Required qualifications may differ for teachers across levels of education, across different sectors, and even among teachers working in the same school. This partly reflects the fact that not all teachers of a school perform the same work and that their qualifications may evolve in line with changing task profiles and responsibilities over the course of their career. For instance, qualification requirements in vocational education and training typically differ from those in general education, given the specific nature of practical courses. In the Flemish Community of Belgium, Chile, the Czech Republic and Estonia, vocational trainers do not require standard teaching qualifications, but instead professional experience, sometimes combined with some training or certificate in teaching and pedagogy. Allowing for some diversity in teachers' qualification requirements can also support schools in recruiting staff who bring a diverse mix of skills and expertise (see Chapter 3 on staff recruitment). Furthermore, different qualification requirements may exist side by side during transition periods following reforms to raise qualification levels.

However, generalised differences in qualification requirements for teachers at different levels of education (e.g. for primary versus secondary education) are rarely justified by the nature of their work and can have a number of undesirable consequences. In some cases, discrepancies in qualification requirements across levels have harmed both the status and supply of highly qualified graduates to teach at lower levels of education and led to resource imbalances that are at odds with the widely recognised benefits of investing in the early years (Woessmann, 2008[21]; Cunha et al., 2006[22]).

Differences in degree requirements across levels of education remain widespread in OECD countries. Austria, Denmark, Hungary, Luxembourg, Poland, Spain and Switzerland, for example, require higher degrees to teach in general lower and/or upper secondary schools than at the primary level (OECD, 2019, p. 392[23]). These differences are even more pronounced for teachers at the pre-primary level. Even though a bachelor's degree has become the minimum qualification in 27 of the 37 OECD and partner countries (2017, p. 43[24]), the Slovak Republic, for example, requires them to have obtained as little as an upper secondary qualifications (in contrast to qualifications at the master's level for teachers at the other levels of education) (Santiago et al., 2016[25]).

Generalised differences in teaching requirements can also make it difficult to respond to changes in demand by employing teachers flexibly across levels or sectors. For example, in many systems, including several OECD review countries like the Czech Republic, special education teachers working in separate schools have a different type of certification than those in mainstream education. This has reportedly created difficulties or even undermined efforts to move towards the greater inclusion of students with special needs since their teachers would need to be re-certified to work in mainstream settings (OECD, 2018, p. 275[26]; Shewbridge et al., 2016, p. 75[20]). Likewise, in school systems where students are tracked into different programmes, distinct professional requirements can lead to variations in teaching quality across tracks, thus amplifying the effects of student segregation and contributing to inequities (OECD, 2018[5]).

2.1.3. Entry requirements and pathways into school leadership

Defining minimum qualifications and entry requirements for school leaders not only serves to ensure that minimum standards are met – it also affects their professional status and may help in attracting school leader candidates of the highest calibre. The majority of principals in OECD systems have a background as teachers and applicants for school leadership positions are commonly required to fulfil minimum requirements pertaining to their teaching qualifications and experience (Pont, Nusche and Moorman, 2008[27]). These criteria underline school leaders' pedagogical leadership role, which requires an intimate understanding of teaching practices and experience in applying it. The minimum teaching experience required to become a school leader does not vary widely among OECD review countries, ranging from five years in Austria, Portugal, Kazakhstan and the Slovak Republic or six years in Chile and Colombia to nine years in Uruguay (see Chapter 4). Nevertheless, there is a growing awareness that a successful teaching record alone is not sufficient to ensure that school leaders can fulfil their role successfully.

Research increasingly recognises the positive effect that well-prepared school leaders can have on their students' learning outcomes (see Chapter 1) and a growing number of school systems are conceiving of school leadership as a specialist occupation that requires rigorous preparation and distinct entry requirements. In some countries, leadership candidates are therefore required to demonstrate experience in managerial positions or to undergo specific leadership training to prepare them for their new responsibilities. Other OECD review countries do not require school leaders to demonstrate any training beyond their initial teacher education or mandate their participation in leadership training only once they are appointed to their positions. A more detailed description of school leaders' recruitment is provided in Chapter 3; the preparation of school leaders is discussed in Chapter 4.

2.2. Career structures in schools

Career structures can be thought of as a set or sequence of recognised professional positions with associated tasks and responsibilities, as well as the rules that govern individuals' progression across these positions. The traditional teaching career has often been described as "flat" and as providing few opportunities for advancement or diversification (OECD, 2005[28]; Bacharach, Conley and Shedd, 1986[29]; Lortie, 1975[30]). It is therefore not inconceivable for many teachers to perform the same kinds of tasks and have the same responsibilities from the first to the last day of their career. Likewise, in many systems, the only way for teachers to meaningfully advance their careers is to leave the classroom and take up roles in school leadership or the education administration. This lack of opportunities for promotion and specialisation risks to lessen teachers' motivation, make the profession

less attractive and create mismatches between teachers' and school leaders' competencies and the tasks they perform.

Well-designed career structures have the potential to enhance the individual and collective professional capacity of teachers and school leaders. They provide a means to recognise good performance, to increase long-term motivation and retention, and to assign staff to roles and responsibilities that are commensurate with their evolving capabilities and thereby use their full potential. There are reasons to believe that these functions of an articulated career structure are particularly important in the teaching profession, given that teachers tend to receive little external recognition. In the absence of feedback through formal evaluations or tangible results of their work, teachers are often expected to be highly self-motivated and thrive on indirect recognition, for example through their students' success. There are different ways in which the articulation of vertical career paths and their horizontal diversification could help to overcome these challenges.

2.2.1. The structure of teachers' careers

Teachers' career structures can be differentiated both vertically and horizontally. Along the vertical dimension, teachers' careers may take the form of a ladder, structured around a succession of formal positions or roles with distinct task profiles and progressively increasing responsibilities within the classroom. These vertical career stages are organised hierarchically, building on one another and requiring increasing levels of experience or skill. They are also typically – although not necessarily – associated with increasing compensation. Along the horizontal dimension, career structures may provide teachers with opportunities to focus on and assume responsibilities in a specific area of expertise inside or outside the classroom. Rather than the advancement in a hierarchy or an expansion of responsibilities, these lateral career movements often involve the specialisation in a particular aspect of the teaching profession. Some career structures combine both vertical and horizontal dimensions, offering multiple pathways of advancement and more individualised career trajectories.

Vertical progression in the teaching career

The teaching profession has traditionally been characterised by single-stage career structures that offer few opportunities for teachers to advance their careers within the classroom. It should be noted that single-stage career structures do not necessarily preclude teachers' professional growth and recognition. In Portugal, for example, teachers working under a new service code introduced in 2002 can progress across ten salary increments, conditional on school-based evaluations and an external assessment for steps 2 and 4 (Liebowitz et al., 2018, p. 197[7]). Yet, single-stage career structures offer limited scope to recognise teachers' growing experience and effectiveness by increasing their professional responsibilities. Teachers seeking to assume greater responsibilities within these contexts may be required to leave the classroom and take on more managerial tasks, for example as school leaders. This process can be to the detriment of student learning since it risks depriving them of their most effective teachers. At the same time, teachers with the most advanced pedagogical skills may not make for the most effective school leaders.

Well-defined multi-stage career structures promise to redress some of these issues by providing teachers with opportunities to advance their careers within the classroom. This can enable teachers to use their expertise more effectively by assigning them responsibilities that are commensurate with their skills. For instance, highly effective teachers are better able to cope with larger class sizes and are more efficient in their lesson

preparation, which could allow them to take on additional teaching hours, students or classes. In addition, experienced teachers may be able to coach and mentor their less experienced colleagues (Jensen et al., 2012[31]).

Differentiated task profiles in multi-stage career structures can also provide education authorities, professional bodies or school principals with a means to publicly recognise and reward teachers' skills and professional growth (Nusche et al., 2016, p. 173[32]). They can therefore play a distinct role in teachers' long-term motivation, even in the absence of end-of-year bonuses or other incentives that are more common in non-teaching professions (Crehan, 2016[33]; Natale et al., 2013[34]).

A little less than half of OECD review countries provide their teachers with multi-stage vertical career structures that offer opportunities for promotion based on a succession of formal positions with distinct task profiles in the classroom (see Table 2.1 below). Distinct from seniority- or performance-based salary increments, these career stages are characterised by progressively increasing responsibilities and expectations. While vertical career advancement is often voluntary and tied to centrally or locally administered certification procedures, some countries require teachers to apply for higher career stages after a given amount of time, using these hurdles as an implicit means to identify teachers with performance concerns.

Despite their importance, multi-stage career structures are not the only way to provide public recognition for teachers' increasing pedagogical competencies. In the Slovak Republic, for example, an annual national teacher's day provides an occasion to acknowledge, reward and celebrate successful teachers (Santiago et al., 2016[25]). Teacher awards, such as the *Premio Compartir* in Colombia are another means to motivate and highlight the achievements of outstanding educators (Radinger et al., 2018, p. 278[8]). In the United States, the National Teacher of the Year Program serves a similar function since 1952 by bringing together State Teachers of the Year and publically recognising their contributions to the education system. Likewise, in Kazakhstan, teachers who have demonstrated exceptional performance can be selected at annual education conferences to receive a prize (The Best Teacher Award) and financial reward (OECD/The World Bank, 2015, p. 92[35]).

Another way to reward teachers by non-monetary means is to offer them time off to engage in further study or fund their participation in part-time continuing education programmes. In Colombia, for example, the government provides scholarships for teachers to take part in an integrated master's degree programme that accompanies teachers in developing an improvement plan for classroom practices in their school (Sánchez, 2018[36]). Chapter 4 discusses some of these complementary means of recognition in more detail.

Table 2.1. Vertical career structures for teachers (ISCED 1-3), 2018

OECD review countries, public schools

Country	Type of structure (No. of stages)	Criteria for stage advancement					Process for stage advancement		Duration of appointment to a career stage	
		Q	C	Ex	P	PD	E	Ce	OE	FT
Austria	Single-stage									
Belgium (Fl.)	Single-stage									
Belgium (Fr.)	Single-stage									
Chile (1)	Single-stage									
Colombia	Single-stage									
Czech Republic	Multi-stage (6)	✓	✓	✓			✓		✓	
Denmark	Single-stage									
Estonia	Multi-stage (4: general, 3: vocational)		✓					✓	✓	✓
Iceland	Single-stage									
Kazakhstan	Multi-stage (5)		✓	✓				✓		✓
Lithuania	Multi-stage (4)	✓	✓	✓		✓		✓	✓	
Luxembourg	Single-stage									
Mexico	Multi-stage		✓	✓	✓		✓		✓	
Portugal	Single-stage									
Slovak Republic	Multi-stage (4)	✓	✓	✓		✓	✓		✓	
Slovenia	Multi-stage (4)	✓		✓	✓	✓	✓		✓	
Spain	Single-stage									
Sweden	Multi-stage (2)		✓	✓	✓		✓		✓	✓
Turkey	Single-stage									
Uruguay	Single-stage									

Notes: Teacher career stages refer to a structured succession of formal positions with distinct task profiles and progressive responsibilities (as distinct from salary increments), while typically maintaining classroom teaching responsibilities. The duration of appointment to a career stage can also refer to the length of validity of a certification.
Q: Qualifications, C: Competencies, Ex: Experience, P: Performance, PD: Professional Development, E: Evaluation, Ce: Certification, OE: Open-ended, FT: Fixed-term.
Czech Republic: Principal evaluation; Lithuania: Certification (voluntary); Mexico: Evaluation by the Teachers Professional Service (*Servicio Profesional Docente*); Slovak Republic: Evaluation by examination board chaired by school principal (stage 2), Certification (stages 3/4); Slovenia: Evaluation by school leader, school teacher assembly and ministry; Sweden: School leader evaluation and central approval; Estonia: Open-ended for stages 1/2 in general education, 5 years for stages 3/4 in general education, 7 years for all stages in VET; Kazakhstan: 5 years (all stages); Sweden: Fixed term or open-ended (local authority discretion).
1. Chile introduced a new career structure in 2016 that entails progression through five different stages. While teachers at the advanced stage have access to functions such as mentor teacher and team leader, and teachers in the voluntary stages of expert teacher have preferential access to leadership and guidance roles, different stages are not formally linked to new roles and responsibilities.
Sources: Based on Country Background Reports and Country Review Reports (http://www.oecd.org/education/school/school-resources-review-reports-participating-countries.htm).

Articulating stages of vertical career progression

When designing multi-stage career structures, policy makers need to make a series of decisions concerning the number of stages, their associated roles and responsibilities, as well as the links between the career structure, professional standards and remuneration. Among the OECD review countries, vertically differentiated career structures comprise between two and six distinct stages. In many cases, the first career stages are reserved for novice teachers. They may correspond to teachers' probation period or their enrolment in

induction programmes before attaining fully qualified teacher status. The first steps in a teacher's career can also be associated with a reduced teaching load and additional support by mentors.

Reaching higher stages in the career ladder tends to be associated with increased responsibilities and elevated expectations. In Lithuania, for example, teachers in more senior positions ("methodologists" and "teacher experts") are expected to contribute to the improvement of the teaching profession more broadly and to develop and spread good practice both within and beyond their schools. This can include such diverse tasks as co-authoring text books, evaluating, supporting and guiding beginning teachers, or contributing to local, regional and national pedagogical events (Shewbridge et al., 2016, p. 132[37]). The Estonian career structure, which is described in Box 2.1, also provides teachers with multiple levels of professional advancement within the classroom (Santiago et al., 2016[38]).

Box 2.1. Multi-stage structure of the teaching career in Estonia

In 2013, Estonia introduced a new vertical career structure alongside a reformed system of teacher professional qualifications. Its main aim is to serve as a reference for teachers' competency development and it comprises four distinct stages, reflecting different levels of professional skills and experience. Unlike many other multi-stage career structures, the stages are not formally linked to salaries and access to higher stages is voluntary. The career stage Levels 6 and 7.1 are awarded indefinitely, while Levels 7.2 and 8 are awarded for a five-year period after which the teacher must reapply.

- **Teacher (Level 6)**: Applies only to pre-primary teachers upon entrance into the teaching profession, following the completion of an initial teacher education programme (at bachelor's degree level) or following the recognition of professional qualifications for this level by the teacher professional body.
- **Teacher (Level 7.1)**: Awarded upon entrance into the teaching profession, following the completion of an initial teacher education programme (at master's degree level) or following the recognition of professional qualifications for this level by the teacher professional body.
- **Senior teacher (Level 7.2)**: Awarded to teachers who, in addition to their regular teaching activities, support the development of the school and of other teachers and are involved in methodological work at the school level.
- **Master teacher (Level 8)**: Awarded to teachers who, in addition to their regular teaching activities, participate in development and creative activities in and outside their school and closely co-operate with a higher education institution.

The Estonian Qualifications Authority has developed professional standards that define the competencies associated with each stage of the career structure. A teacher professional organisation (the Estonian Association of Teachers) is responsible for the certification process that determines teachers' advancement across career stages. Twice a year, teachers can apply for a new certification. A three-member committee oversees the two-stage application process, which involves an evaluation of the candidate's application materials and an interview.

Source: Santiago, P., A. Levitas, P. Radó, C. Shewbridge (2016), *OECD Reviews of School Resources: Estonia 2016*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264251731-en.

Aligning teachers' career stages with professional standards

Ideally, each stage of a teacher's career should be associated with a clear set of progressively increasing responsibilities and competencies. One way of doing so is to link them to differentiated teaching standards that specify what is expected of teachers at different stages of their career (Hooge, 2016[39]). These standards can not only enhance professionalism in schools and foster a shared understanding of good teaching, they can also provide a basis for certification procedures or assist school leaders or education authorities in their promotion decisions and the appraisal of teachers at different career stages. They also give teachers a clear sense of the steps they can take to advance their careers, especially if these standards are aligned with opportunities for professional development and direct teachers to the most relevant course offerings.

While the link between teaching standards and promotions is not always explicit, multiple OECD review countries have established direct connections between competency frameworks and teachers' career structures. Estonia, for example, has developed professional standards specifying the skills, knowledge and attitudes teachers are expected to demonstrate at each stage of their career in order to facilitate their linkage to appraisal procedures and career advancement.

In other cases, such as the Flemish Community of Belgium, differentiated professional standards exist, but they are not linked to a corresponding vertically differentiated career structure. First established in 1998 and updated in 2007, the Flemish Community provides teachers with a list of basic teacher competencies, describing the knowledge, skills and attitudes that graduates from initial teacher education need to acquire. In addition, a set of professional profiles is aimed to guide the development of in-service teachers, describing the knowledge, skills and attitudes expected of them. Both the basic competencies and the professional profiles are adapted for pre-primary, primary and secondary education and cover specific teacher functions such as educator, content expert, organiser, innovator and researcher, partner of parents, member of a school team and member of the educational community (Nusche et al., 2015, p. 148[40]).

Although the Flemish Community's teacher standards thus provide a strong basis to underpin teachers' professional advancement, the lack of a multi-stage career structure means that their full potential is not exploited. This may explain why the OECD review team observed that the standards were not widely known in schools and that they were not systematically used to plan the professional development of teachers or guide their appraisal (Nusche et al., 2015, pp. 148, 164[40]).

Criteria and process for career advancement

Teachers can advance their positions in multilevel career structures based on a variety of criteria and on the basis of different procedures. Experience or seniority – while rarely sufficient – is often a necessary condition for teachers' vertical career progression**.** In Lithuania, for example, "senior teachers" are required to have at least four years of teaching experience, "teacher methodologists" need five years, and "teacher experts" need six years (Shewbridge et al., 2016, p. 126[37]). Similarly, among ten high-performing countries and economies participating in PISA 2015, six out of ten placed a moderate or high importance on teachers' length of service when deciding on their career advancement (OECD, 2018, pp. 61, Figure 2.8[5]). Beyond this, promotion criteria vary considerably and may include appraisal or evaluations results, demonstrated pedagogical competency and qualifications or the completion of professional development. Among the OECD review countries,

teachers' competency was the most frequently employed criterion for promotion decisions after experience (see Table 2.1).

For vertical career structures to effectively motivate and reward professional growth, teachers' access to higher career stages should be voluntary and meritocratic. Standardised certification or registration systems can be one such way to regulate teachers' career advancement and a number of OECD review countries, such as Estonia, Kazakhstan and the Slovak Republic, have introduced certification procedures to confirm teachers' competence for a given career stage (see Box 2.1 and Table 2.1). Teachers are usually certified (permanently or provisionally) upon completing their initial teacher education and may choose to apply for advanced certifications confirming their readiness to assume additional responsibilities or roles. To ensure fairness and consistency, certification procedures typically involve external evaluators, a national teaching agency or a teacher council.

A certification process can offer a transparent means to regulate teachers' vertical career advancement based on high standards of performance, provide public assurance with regard to teachers' standards of practice, and inform teachers' further professional development. To fulfil these functions, certification procedures need to focus on and effectively assess teachers' ability to perform their pedagogical responsibilities at the level corresponding to a given career stage. Lithuania has recently reformed its certification framework with this objective in mind. While the country's old framework only specified a series of formal criteria (such as having undertaken professional development in information and communication technology [ICT] and special educational needs [SEN]) that are at best indirectly related to classroom performance, the revised framework includes well-defined competency requirements (Shewbridge et al., 2016, p. 126[37]).

Concerns about the relevance of certification procedures as well as their resource intensity were also raised in the OECD review of the Slovak Republic. Eligibility for higher stages in the Slovak Republic's teacher career primarily depends on the acquisition of qualifications and professional development credits, for example, received for submitting and defending an academic thesis. Despite being highly resource intensive for teachers, this process does not concentrate on their core work and whether the production of a thesis will improve student learning is unclear (Santiago et al., 2016, p. 188 f.[25]).

Duration of appointments

Teachers' promotions to a given career stage may be permanent or subject to mandatory renewal. In Lithuania and the Slovak Republic, for example, certifications for a given stage are valid for the rest of a teacher's career. This raises a number of concerns since it may reduce teachers' incentives to continuously update their knowledge and skills. Other systems, like Estonia, require teachers at higher career stages to undergo periodic re-evaluations to confirm their competency. Well-designed re-certification procedures ensure that teachers continue performing at the level that is expected of them at a given career stage and allow school leaders to detect and address consistent under-performance or professional development needs. At the same time, re-certification requirements can be a source of stress for teachers and, depending on their intensity, create a significant administrative and resource burden.

Among the OECD review countries, only a few require teachers to regularly undergo re-certification procedures (see Table 2.1). Countries with re-certification processes in place have organised them in different ways, sometimes involving as little as a simple attestation by a school-based committee that the teacher is continuing to meet the agreed

standards of practice (this may or may not include external members). While the validity of certifications is typically around five years in OECD review countries, their duration varies – sometimes even within countries. In Australia, for example, teachers are required to renew their registrations in intervals of up to five years, depending on which jurisdiction they are employed in (Shewbridge et al., 2016, p. 141[37]).

Horizontal diversification in the teaching career

As discussed in Chapter 1, the tasks and responsibilities that teachers are expected to assume beyond traditional classroom instruction are increasingly complex and diverse. Teachers naturally enjoy and excel in some roles more than in others. It is therefore important to acknowledge and support their capacity for leadership in some areas, just as it is to recognise their need for further development in others. Many school systems have done so by creating greater horizontal differentiation in teachers' careers and by establishing specialist roles that allow them to deepen their knowledge and apply it in a particular aspect of the teaching profession. Other than the hierarchically organised steps in a vertical career ladders, these specialist roles may be seen as a lateral career move and are frequently compensated in the form of reduced teaching hours, rather than additional pay.

Providing teachers with systematic opportunities to specialise and assume greater responsibilities in a specific part of their profession can have a range of benefits. First, allowing teachers to focus on the area of their work that they are most productive in can improve the allocation of tasks and result in a more efficient use of teachers' time, knowledge and skills. Second, it provides teachers with increased autonomy to shape their career based on their interests, which constitutes an important source of long-term motivation (Crehan, 2016[33]). Finally, besides changes to the staffing mix in schools, the creation of new roles may be an effective response to new needs or policies that call for schools to build professional capacity and expertise in a specific area (see Chapters 1 and 3).

Several OECD review countries have increased the horizontal diversification in teachers' career structures to pursue one or more of these goals. In Chile, for example, a national initiative to foster a positive school environment was supported by creating the role of school climate co-ordinators (*encargado de convivencia escolar*) responsible for creating an action plan and implementing related measures at the school level. Although the creation of this role was aimed at implementing a specific policy, it also offered teachers new opportunities to apply themselves (Santiago et al., 2017[9]). Similar roles have been created in Colombia (*orientador*) and Uruguay (*profesor orientador pedagógico*) to pursue such goals as to strengthen the co-ordination between staff members, to liaise with families and communities and to foster a good school climate (Radinger et al., 2018[8]; Santiago et al., 2016, p. 168[41]).

Most commonly, horizontal career pathways have been strengthened by introducing specialist roles, such as teacher mentors, ICT specialists or co-ordinators of school projects and professional development. In 2015, for example, Austria's new service code introduced several specialist functions (*Fachkarrieren*) that allow teachers with specific knowledge and skills to take on additional responsibilities without having to move to administrative and leadership roles. These specialist functions include mentors of new teachers or student teachers, learning and career counsellors, "learning designers" as well as special needs and remedial pedagogues. Some of these positions require substantial training and are tied to extra allowances (Nusche et al., 2016, p. 159[32]). In Uruguay, teachers are provided with

multiple remunerated opportunities for horizontal specialisation, for example as pedagogical counsellors or co-ordinators, and bibliographic or technology counsellors (Santiago et al., 2016, p. 229[41]).

In both Austria and Uruguay, teachers have limited opportunities for vertical career advancement and while the opportunities for horizontal specialisation compensate for some of these shortcomings, other systems have successfully combined both vertical and horizontal career pathways. Singapore's career structure is a good example for this, since it allows teachers to advance their capabilities through vertical progression, while allowing them to specialise in a particular role through horizontal diversification. It offers three parallel streams – the teaching track, a leadership track, and a senior specialist track, each comprising at least four stages of career advancement, culminating in the roles of Principal Master Teacher, Director-General of Education and Chief Specialist, respectively (Crehan, 2016, p. 88[33]). The Slovak Republic's teaching career (Box 2.2) is also differentiated vertically, through a multi-step career structure, as well as horizontally, through a range of specialised career positions (Santiago et al., 2016, p. 169 ff.[25]).

Box 2.2. Vertical and horizontal career progression in the Slovak Republic

Vertical career structure

The Slovak Republic's career structure allows teachers to progress across four stages based on their growing professional competencies, their experience and the accumulation of credits through continuing professional development (CPD):

- **Beginning teacher**: Teachers start their career as "beginning teachers" and participate in mentoring programmes and adaptation courses under the supervision of a mentor teacher. During this time, the only specialised position available to them is that of "class teacher" (see below). Within two years, they must pass a school-level evaluation to attain "independent teacher" status.
- **Independent teacher**: Teachers at this stage are permitted to teach independently and assume any of the specialised positions described below, except that of "mentor teacher". To progress to the next stage, teachers must pass a first certification exam or hold a doctoral degree in their field of instruction. Teachers become eligible to take the certification exam by accumulating 60 professional development credits or by accumulating 30 credits and completing a preparatory training programme.
- **Teacher with first certification**: Teachers at this stage are permitted to perform any specialised activity in the horizontal career structure. They are also eligible to become teacher leaders, professional development trainers, and sit on exam committees for the first certification. Teachers can take a second certification exam after accumulating additional professional development credits.
- **Teacher with second certification**: After obtaining the second certification, teachers are eligible to sponsor professional development programmes, serve on exam committees for the second certification, become members of national and international expert committees, and conduct research activities to improve education practices in the school system.

Horizontal career structure

A range of specialised positions provide opportunities for horizontal differentiation in the teaching career. These positions are not hierarchically organised but allow teachers to develop areas of expertise and engage more deeply with specific aspects of their job. School leaders decide on the definition of and assignment to career positions in their school. These typically include:

- **Class teacher**: Assumes co-ordination and communication responsibilities for one class. This involves guidance, maintaining pedagogical documentation, and communicating with parents.
- **Mentor teacher**: Mentors beginning teachers during their "adaptation" period. This can involve observing their classroom interactions, modelling effective teaching approaches, and providing advice on pedagogy, assessment and administration.
- **Educational advisor**: Provides consulting services, including methodological assistance.
- **Head of subject committee (or study area), Head of methodology association (or study programme)**: Takes responsibility for the school's pedagogical work on a given subject (or study area) or its pedagogy more generally, with involvement in projects, advisory and evaluation work.
- **Career advisor**: Provides students with career guidance and counselling.
- **ICT co-ordinator**: Co-ordinates use of ICT in the teaching and learning process.
- **Co-ordinator**: Takes responsibility for a specific area of work within the school, such as that with special needs children or children from a socially disadvantaged background.

Source: Santiago, P., G. Halász, R. Levačić, C. Shewbridge (2016), *OECD Reviews of School Resources: Slovak Republic 2015*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264247567-en.

In addition to horizontal mobility within schools, teachers' careers can provide them with systematic opportunities to extend their reach beyond the classroom and the individual school, and assume responsibilities at the system level. Providing such opportunities on a temporary basis (e.g. in the form of career breaks or secondments) can help to foster knowledge sharing between schools and local or central authorities without requiring teachers to leave their careers in the classroom behind (see Chapters 3 and 4).

In Denmark, for example, teachers have the opportunity to join a corps of 80 learning consultants to analyse the challenges of struggling schools and contribute to their development plans, their strategy for change management, and indicators for monitoring and evaluation. Learning consultants are typically appointed for a period of two years, after which teachers return to their schools. Learning consultants are trained for their role and meet on a monthly basis to learn about new methods and evidence and to reflect on their experiences and challenges. The role is therefore an attractive way for teachers, leaders and administrators to gain experience, learn from one another and spread their knowledge across the system (Nusche et al., 2016, p. 155[15]). As discussed in Chapter 4, teachers may also have opportunities to take on coaching and mentoring roles across schools, which can offer similar benefits.

2.2.2. The structure of school leaders' careers

The demands placed on school leaders have intensified and broadened over time (Pont, Nusche and Moorman, 2008[27]). Increasing accountability demands paired with local or collaborative decision making and an emphasis on both management and leadership may have contributed to the expansion of school leaders' administrative and pedagogical responsibilities. Despite the growing awareness of school leaders' impact on schools' educational success, a number of OECD review countries, including Austria, the Czech Republic, Chile and the Slovak Republic have difficulty in making the career attractive for high-calibre candidates (Santiago et al., 2017, p. 196[9]; Shewbridge et al., 2016, p. 180[20]).

This has resulted in ageing or demographically imbalanced school leader populations or concerns over the ability to fill vacancies, especially in hard-to-staff schools as highlighted in Chapter 3. Ensuring the attractiveness of the school leader role is thus of critical importance and the structure of school leaders' careers – next to their remuneration and working conditions – can contribute to this goal by effectively regulating the entry into the profession, recognising school leaders' distinct professional status and ensuring that school leadership offers perspectives for professional growth.

Recognition of school leaders' professional status

School leadership roles involve responsibilities and require competencies that differ markedly from those of teachers. Nevertheless, the distinct features of school leadership are not always reflected in their professional status. The majority of OECD review countries do not provide a separate career structure for school leaders and either treat school leadership as the final stage of the teaching career ladder or a mere extension of the teachers' role that they can assume alongside or while temporarily replacing their teaching duties. Acknowledging the distinct responsibilities of leadership positions in schools, including those of deputy leaders, by providing them with a distinct career structure can help communicate the importance of administrative and pedagogical leadership, raise school leaders' professional status and attract potential candidates.

Portugal is an example of a system in which the role of school leaders is not clearly distinguished by a separate career structure or salary scale and where school leadership is not conceived of as a distinct profession. The OECD review team noted that leaders in Portugal placed little emphasis on instructional leadership or improvement and rarely engaged in activities like classroom instruction or the promotion of new teaching practices. Some of this stems from school leaders' limited preparation and access to high-quality continuing development, which the review concluded might be strengthened if their professional status was more clearly recognised (Liebowitz et al., 2018, p. 201[7]).

The problem of insufficient professional recognition for school leadership roles often extends beyond principal-ship since many systems do not acknowledge the distinct competencies, preparation and support required for middle management positions and other members of school leadership teams (see Chapter 4). In Austria, for example, most schools do not have a permanent deputy principal position. Instead, school principals rely on the assistance of teachers who effectively function as administrators in all but their official title (Nusche et al., 2016, pp. 62, 154[32]).

Opportunities for advancement within and beyond school leadership

As for teachers, a lack of opportunities for promotion within the school leader career can diminish the attractiveness of school leadership roles and reduce the long-term motivation and retention of current principals. While many school leaders (and teachers) have opportunities to apply for positions within the education administration (e.g. in municipal education authorities), multi-level career structures that allow for professional growth within the profession are not widespread and few countries have developed robust centrally governed frameworks for leaders' career advancement that are linked to appraisal procedures (OECD, 2013, p. 547[3]).

The problems associated with single-stage career structures can be exacerbated by the increasing use of fixed-term contracts or a maximum time of service for school leaders (Pont, Nusche and Moorman, 2008, p. 178[27]). In Portugal, for example, principals can serve two terms (four years each) within the same position, after which they either need to find a position at a different school or return to the classroom (Liebowitz et al., 2018, p. 175[7]). Uncertainty about employment opportunities beyond a given leadership position can make the recruitment of qualified candidates more difficult. It can also be a significant source of stress, not least because a return to teaching is sometimes considered an undesirable or problematic move for leaders (Pont, Nusche and Moorman, 2008[27]). This makes the need for a clear career path particularly salient.

Although it remains the exception, rather than the rule, OECD countries as diverse as Australia, Canada, France, Israel, Korea, Mexico and Norway have developed multi-stage career structures for school leaders, including clearly defined opportunities for professional advancement (OECD, 2013, pp. 578, Table 7.A.2[3]). The potential benefits of these multi-stage careers structures are evident. They can create incentives for high performance, reward continuous improvement and render the profession more attractive to teachers, especially in countries facing recruitment issues. To facilitate the selection of qualified candidates, ensure that principals are well-prepared for their roles and provide a framework for their appraisal, multilevel career structures for school leaders should be underpinned by a set of standards developed jointly with the profession.

Multi-stage career structures for school leaders can extend both ways from the principal's role and include both middle leadership positions and system leadership positions extending beyond principal-ship. Formally linking intermediate leadership positions to the principal career path can increase a schools' leadership capacity, provide the basis for more distributed forms of leadership, and create a pipeline for future school leaders. Since most school leaders in OECD countries begin their professional careers as teachers, integrating middle leadership roles in well-articulated career structures can provide teachers with an opportunity to prepare for school leadership and to get a sense of their suitability for the role while at the same time providing schools with an opportunity to identify promising candidates for promotion. For more information on the preparation and development of school leaders, see Chapter 4.

In some countries, principals' career pathways do not only provide an attractive perspective for teachers who are motivated to assume leadership responsibilities but also include opportunities for system leadership that extend beyond the conventional school leader role. Encouraging the most effective leaders to take on system leadership roles can be an effective way to harness their experience and capacity to contribute to the improvement of the education system as a whole. This may involve serving as a change agent within the system, identifying best practices and transferring them to support improvement in other schools; brokering partnerships or networks across local communities and agencies; and

mentoring other leaders or partnering with schools that face acute difficulties (OECD, 2013[42]; Hopkins, Nusche and Pont, 2008[43]).

At the same time, the progression to system-level roles risks to deprive schools of their most effective leaders, as is the case for teachers' pathways to principal-ship. This need not be the case though, and are many ways in which school leaders can contribute to system-level leadership and quality assurance on a temporary basis or alongside their regular work as school leaders, as long as they are provided with the necessary resources and support.

In many countries, informal leadership positions developed at the school level play an important role in building a system's leadership capacity and responding to local needs. Some countries have gone beyond this and complemented them with a more formalised system of middle leadership roles associated with clear standards and processes for the selection and development of candidates (Hopkins, Nusche and Pont, 2008, p. 24[43]). In Singapore, for example, teachers can enter a separate leadership track that includes a succession of roles ranging from subject and department heads to principal-ship. In addition, the career path extends beyond the principal's role to provide motivated and highly effective candidates an opportunity to advance to system leadership positions, such as cluster superintendent, deputy director and director-general (Crehan, 2016, p. 88[33]).

2.2.3. Implementing career structure reforms

Reforming teachers' and school leaders' career structures can pose a series of implementation challenges when it comes to building political consensus, involving stakeholders, aligning expectations, managing the transition between old and new systems, developing capacity, and creating broad ownership of the new system.

The difficulty of this process has recently been demonstrated in Colombia, where efforts to create greater differentiation in teachers' careers were short-lived and abandoned after only two years in 2017, following opposition by the country's largest teacher union. The government had introduced additional specialised roles to contribute to school development and student learning in the form of teacher support leaders (*docente lider de apoyo*) (Radinger et al., 2018, p. 250[8]). However, a lack of clarity around what the new role would entailed, concerns that the new position would create divisions among teachers, and perceived association of the role with other changes to teachers' working conditions (such as working time) contributed to its failure to take root. Similarly, in the Czech Republic, plans for reforming the career structure as part of the country's Strategy for Education Policy until 2020 ("Strategy 2020") could not be implemented due to teachers' resistance (more on this below).

A further recent example of teacher career reform is the French Community of Belgium's Pact for Excellence in Teaching (*Pacte pour un enseignement d'excellence*). This wider reform package adopted in 2017 envisages the vertical expansion of the career structure. An important element of the reform's implementation has been to involve stakeholders from the outset and clearly communicate its goals to build support. In order to engage stakeholders in the reform's design, it was preceded by a participatory consultative process involving teachers, school leaders, parents and students alongside the economic, social and cultural sectors between 2015 and mid-2016 (OECD, 2017[44]).

The Pact for Excellence envisages a new career structure to be progressively implemented between 2020 and 2022, introducing a third career stage for experienced teachers (*enseignants expérimentés*) in addition to the existing two career stages (temporary and

permanent teachers). Teachers who reach the "experienced" stage of their careers will be expected to assume additional responsibilities in exchange for a reduced teaching load, such as pedagogical co-ordination, managing relationships with external partners or mentoring beginning teachers. As such, the new positions are also intended to facilitate distributed leadership and enable principals to delegate certain aspects of their work to experienced teachers (Fédération Wallonie-Bruxelles, 2017[45]).

The introduction of new formal positions associated with additional responsibilities and remuneration can create uncertainty among teachers and be perceived as threatening to the profession's egalitarian norms, especially in countries with a history of single-stage career structures. Creating new specialised roles in schools also requires teachers, principals and possibly other school staff to rethink their responsibilities and adapt their tasks to benefit from the new arrangements. In some cases, the creation of new formal roles for teachers can build on existing practices by institutionalising previously informal arrangements that have proven to be successful for schools' operation and whose scope teachers are already familiar with.

In other cases, designing and evaluating pilot projects can allay some of the concerns around new teacher roles and build consensus before reforms are finalised and fully rolled out. Norway, for example, launched a two-year pilot starting in 2015, which involved training 205 teachers as specialists in mathematics and Norwegian. In an effort to diversify teachers' career pathways, the specialists were given responsibility for their colleagues' professional learning and keeping them up to date with respect to subject didactics, teaching practices, and classroom management (Norwegian Ministry of Education and Research, 2018[46]). The pilot's evaluation concluded that the specialist role constituted an attractive career path for teachers, but that the role still needed to be more deeply anchored in the profession and each school's development plan for specialists to become an effective resource for their colleagues and their schools' improvement (Seland et al., 2017[47]). The pilot has since been extended by another two years and expanded to include other subjects.

Moving from a single-stage career to a multi-stage structure or modifying the number of steps on the teaching career ladder also requires policy makers to manage the transition process. This may involve re-assigning teachers to positions that correspond most closely to their current roles and responsibilities or devising a system to accredit teachers for newly introduced senior roles. Determining the standards for teachers' initial assignment to a career stage and/or for their subsequent promotion requires striking a delicate balance. Setting the bar too low can diminish the career structure's credibility and have significant fiscal consequences if too many teachers are promoted. Likewise, setting the bar too high may lead to frustration and reduce the career structure's motivating effect (Crehan, 2016, p. 102[33]). Some of these risks can be minimised by carefully piloting the assignment system and adjusting its standards accordingly to ensure that expectations are high but realistic.

The link between career steps and salaries is another challenge in the design and implementation of teachers' and school leaders' career structures. Although multi-stage career structures are usually connected to progressive compensation, this is not necessarily the case (European Commission/EACEA/Eurydice, 2016[48]). In Estonia, for example, the four-stage career structure for teachers is not formally linked to salary levels and serves primarily as a reference for teachers' development and a means to formally recognise their competencies. Yet, the OECD review of Estonia revealed some challenges associated with this practice. Notably, in the absence of financial incentives, most teachers in the country showed little interest in attaining certifications to access the levels that corresponded to

their competencies. Among those teachers who were informed about the career structure at all, few engaged in continuing professional development (CPD) to advance their careers. As a consequence, teachers' position in the career structure sent a relatively weak signal of their skills and had not penetrated schools' teacher management practices, e.g. the distribution of roles and tasks (Santiago et al., 2016, p. 212[38]).

However, particularly since most career structures are linked to compensation, reforming their design can have significant fiscal consequences. Projecting the new career structure's long-term resource needs and ensuring sufficient available resources are therefore critical to ensure the reform's fiscal sustainability. In the Czech Republic, for example, the national Strategy 2020 had proposed implementing a multi-stage career structure combining performance assessment, career advancement based on standards, strengthened CPD and improved pay. Concerns that the reform's funding would be insufficient to bring about sustained improvements, however, led to resistance among part of the teaching profession and to the reform not being implemented as planned (European Union, 2018, p. 64[49]).

2.3. Compensation and benefits of school staff

Effective compensation systems in schools need to meet multiple challenges at once. With limited resources, they need to attract high-quality candidates with the right skills, while at the same time retaining effective staff once they have taken up their job and motivating them to show high performance throughout their career. The fact that teachers continue to earn less than similarly educated workers in many OECD review countries is frequently discussed as an obstacle to the recruitment of high-performing teachers or those with specific profiles. Likewise, the design of salary scales and the basis for pay differentiation and advancement over the course of teachers' careers can be critical to retain effective teachers and to motivate them to grow professionally.

While compensation and benefits are therefore rightly seen as important policy levers to make a career in schools attractive, there is no one-size-fits-all solution to the design of effective salary scales. Instead, policy makers' decisions depend on the specific challenges their country seeks to address as well as their local labour markets. While a failure to attract graduates to the profession might call for higher starting salaries, high attrition rates among mid-career teachers may indicate the need for a more attractive progression of earnings. Likewise, broader economic developments, such as the level of private sector wages or unemployment rates, can affect whether, and up to what point, higher starting salaries can be an effective means to attracting high-performing teachers and what forms of salary progression are best suited to recognise, amplify and preserve teachers' profound impact on student learning and development.

2.3.1. The level of teachers' salaries

Following a period of real term growth in teachers' salaries in most OECD countries and economies, the financial and economic crisis of 2008 prompted many teachers' salaries to be frozen or cut between 2009 and 2013, before rising again (OECD, 2018, p. 366[50]). According to OECD estimates, teachers' salaries are lower than those of similarly educated workers in almost all countries and economies with available information, although they tend to increase with the level of education taught. In 2017, pre-primary teachers' average salaries amounted to 78% of the full-time earnings of tertiary-educated adults between the ages of 25 and 64, while primary teachers earned 84% of this benchmark, lower secondary teachers 88%, and upper secondary teachers 93% (OECD, 2019, pp. 411, Table D3.2a[23]).

Evidence from the United States suggests that some of this variation in relative earnings across levels of education may reflect differences in teachers' working hours (West, 2014[51]). Part of it is also explained by differences in teachers' minimum required or most prevalent qualifications. In 2013, 10 of 35 OECD and partner countries with available data required teachers in pre-primary education to have earned an upper-secondary or short-cycle tertiary qualification while all but one required upper secondary teachers to hold at least a bachelor's degree to teach general subjects. In five systems, the initial education for upper secondary teachers was at the master's level, compared to the bachelor's level for lower secondary teachers (including the French Community of Belgium, Denmark and the Netherlands). In six systems (including Austria, Luxembourg, Portugal and Spain), the same discrepancy could be observed between the initial education of lower secondary and primary teachers (OECD, 2014, pp. 502, Tables D6.1.a, b, c and d[52]).

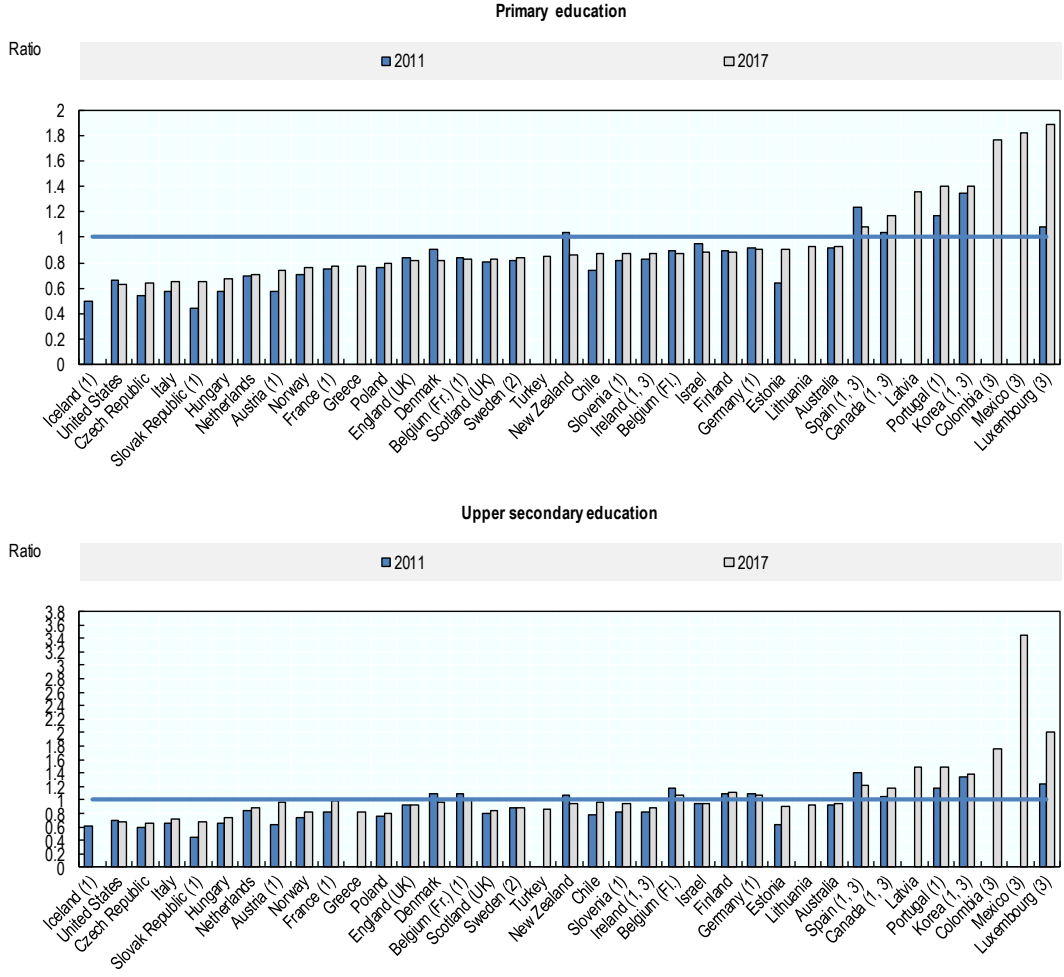
Significant salary discrepancies for similarly qualified teachers at different levels of education can make it harder to attract high-potential candidates to teach, for example, in primary or lower secondary schools. Efforts to raise qualification requirements for lower levels of education or encourage teachers to advance their professional qualifications over the course of their careers have therefore frequently been tied to commensurate adjustments to their salaries (see the discussion of entry requirements above).

Across OECD review countries, teachers' relative earnings varied widely, as can be seen in Figure 2.1. While teachers in primary to upper secondary education earned significantly more than other tertiary-educated adults in some countries, including Portugal (1.4-1.5), Luxembourg (1.9-2.0) and Mexico (1.8-3.4), they earned two thirds or less at some levels of education in countries including the Slovak Republic (0.5-0.7) and the Czech Republic (0.6-0.7) (OECD, 2019[23]). Although teachers' salaries have risen compared to those of tertiary-educated adults on average across countries and economies with available data between 2011 and 2017, salaries have become less competitive in some systems.

In Estonia, for example, teachers' salaries from the primary to the upper secondary level have almost caught up with those of other tertiary-educated workers, while those of Portuguese teachers have risen further above an already competitive level. Likewise, Austria, Chile and the Slovak Republic have narrowed the gap by eight percentage points or more at the secondary level. By contrast, over the same period, teachers' salaries have become less competitive compared to the average tertiary-educated worker in Denmark, New Zealand and Spain (see Figure 2.1).

Individuals decide to become teachers for a wide range of reasons and the factors that matter for their entry into the profession may not be the same as those that convince them to remain on the job in the long run (Hanushek, Kain and Rivkin, 2002[53]). Although little is known about which factors matter the most for people's decision to join the profession and why (Dolton, 2006[54]), surveys of teachers, administrative data as well as qualitative evidence from OECD reviews suggest that non-pecuniary factors are an important part of what makes the teaching profession attractive (OECD, 2018[5]; OECD, 2005[28]).

Figure 2.1. Teachers' salaries relative to earnings of tertiary-educated workers, 2011-17



Notes: Unless otherwise noted, the ratio is based on the annual average salaries (including bonuses and allowances) of teachers aged 25-64 in public institutions relative to the wages of full-time, full-year workers with tertiary education aged 25-64. The years of reference are 2011 and 2017 or the closest available. Countries and economies are ranked in ascending order by ratio in primary education 2017.

1. 2011 values based on ratio of statutory salary after 15 years of experience and minimum training to earnings for full-time, full-year workers with tertiary education aged 25-64.
2. Salaries for 2011 not including bonus and allowances.
3. 2017 values based on ratio of statutory salary after 15 years of experience and minimum training to earnings for full-time, full-year workers with tertiary education aged 25-64.

Sources: OECD (2019) *Education at a Glance 2019: OECD Indicators,* OECD Publishing, Paris, https://doi.org/10.1787/f8d7880d-en, Tables D3.2a and D3.2b (web only); OECD (2013) *Education at a Glance 2013: OECD Indicators*, OECD Publishing, Paris, https://doi.org/10.1787/eag-2013-en, Table D3.2.

StatLink https://doi.org/10.1787/888934026297

In TALIS 2018, the great majority of in-service teachers across the OECD reported that their decision to become a teacher was motivated by a strong commitment to public service and the social impact of the profession (OECD, 2019, p. 123[1]). Nevertheless, the attractiveness of teachers' salaries compared to those of alternative professions does affect the supply of teachers, the propensity of young people to enrol in teacher education programmes and the retention of early-career teachers (Dolton, 2006[54]; Santiago, 2002[55]).

Attracting sufficient qualified teachers is a pressing concern in some OECD countries, particularly those with rising student enrolments or a large share of teachers approaching retirement age. On average across OECD countries, 29% of 15-year-old students were enrolled in schools whose principal considered a lack of teaching staff to hinder instruction at least to some extent as surveyed for PISA 2015 (OECD, 2016, pp. 397, Table II.6.14[56]). In 2018, 21% of lower secondary school principals surveyed for TALIS reported that teacher shortages hindered their schools' capacity to provide quality instruction "quite a bit" or "a lot" (OECD, 2019, pp. 109, Table I.3.63[1]). As discussed in Chapter 3, these teacher shortages can be subject to significant regional variation and tend to be more pronounced in disadvantaged schools and for subjects requiring technical skills that are in high demand outside of schools.

Comparatively low salaries are frequently regarded as one of the factors contributing to teacher shortages and a lack of qualified candidates. Across OECD countries, 15-year-old students in countries with higher teacher salaries are more likely to expect going into a teaching career (OECD, 2018, p. 142[5]) and several countries in which teachers' salaries were significantly lower than those of similarly educated workers have considered reducing this gap to attract more high-calibre candidates to the profession. In the Czech Republic, for example, low salaries and poor working conditions have been identified as drivers of the career's low social status and attractiveness. Following an initial increase in teachers' salaries by 22% in real terms between 2009 and 2014, the government has therefore made it a priority to continue raising salaries as part of its Strategy 2020 (Shewbridge et al., 2016, p. 142[20]).

Uncompetitive salaries may not only limit the ability of school systems to attract high-quality graduates – they also affect practicing teachers. Across the OECD, 64% of lower secondary teachers considered improving salaries to be a spending priority of high importance, although the proportion was significantly higher in countries with low statutory teaching salaries (OECD, 2019, pp. 112, Figure I.3.17[1]). The OECD review team has observed some of the consequences that low salaries can have on the profession in countries like Uruguay, where low salaries were suspected to contribute to a lack of motivation, the frequent accumulation of excessive teaching hours and teachers holding multiple jobs at once. To address these shortcomings, Uruguay has raised the salaries of public school teachers at a higher rate than those in the general economy since 2003 (following an economic recession in the late 1990s and early 2000s) (Santiago et al., 2016, p. 235[41]).

Occasionally, the competitiveness of teachers' salaries has been considered important not only to ensure the sector's general attractiveness, but also its appeal to graduates with specific characteristics that are underrepresented in the profession. Data from PISA 2015, for example, show that 15-year-old students' expectations to become teachers were more gender-balanced in countries with higher teachers' salaries (OECD, 2018, pp. 142, Table 4.10[5]). This was corroborated by the OECD reviews, for example for the Slovak Republic, where low salaries have been associated with a highly feminised workforce (Santiago et al., 2016, p. 132[25]).

A higher wage elasticity of male graduates' decision to teach may reflect their higher opportunity costs of becoming a teacher, but it may also reflect the complex and potentially reciprocal relationships between the profession's gender composition, its social status and remuneration. Conversely, as labour market opportunities for women expand, school systems may struggle to continue attracting the most talented women to the teaching profession at current salary levels. This phenomenon has been documented in the United States since the 1960s (Corcoran, Evans and Schwab, 2004[57]) and in many Latin American countries over recent decades (Elacqua et al., 2018[58]).

Teacher shortages are often concentrated in specific subject areas and many schools have difficulty in recruiting teachers with skills who could command higher salaries in the general labour market. Policy makers and academics have therefore considered differentiating teachers' salaries based on their training or subject areas to reflect their opportunity costs of pursuing a teaching career (Kershaw and McKean, 1962[59]). In the United States, as in most countries, the principle of uniform salary scales has imposed limits on subject-based pay differentiation, although some school districts facing dramatic teacher shortages in sciences or mathematics have occasionally exempted schools from these rules (Murnane, Singer and Willett, 1989[60]).

Some evidence suggests that teachers' salaries (and the opportunity cost of foregone wages from a career outside of teaching) affect their likelihood of leaving the profession (Falch, 2011[61]), particularly in the early years of their careers (Hendricks, 2014[62]; Murnane, Singer and Willett, 1989[60]). Competitive salaries may therefore also support schools in retaining high-performing teachers in the profession. High rates of teacher turnover can adversely affect student achievement and place a significant burden in terms of time and resources on those responsible for recruitment and induction. A high fluctuation of teachers is a particularly pressing concern in many disadvantaged schools where students may be taught by a succession of novice teachers who are yet to make their most significant gains in effectiveness (Ronfeldt, Loeb and Wyckoff, 2013[63]).

It is not clear whether higher salaries would enable schools to retain high-performing teachers at a higher rate than low-performing ones and teachers who leave the profession early tend to perform lower than those who stay. Yet, reducing excessive staff fluctuation may have benefits independent of its effect on the average quality of teachers. This is because student achievement tends to suffer from high turnover rates regardless, particularly due to the loss of experience and productivity caused by the forced reallocation of incumbent teachers across school years (Hanushek, Rivkin and Schiman, 2016[64]).

Other aspects associated with teachers' remuneration should also be taken into account when assessing its competitiveness. In many OECD review countries, for example, teachers are civil servants and have a high level of job security or access to benefits like pension programmes, tax exemptions, family allowances and annual leave that workers in comparable private sector positions do not. The competitiveness of teachers' salaries should therefore be assessed against a relevant comparison group, bearing in mind both financial and non-financial benefits.

2.3.2. Differentiation and progression of teachers' salaries

Although the level of teachers' salaries matters to attract a sufficient number of high-performing graduates to the profession, cross-national evidence on the relationship between teachers' compensation and system-wide performance is limited. Most countries that perform highly in PISA pay their teachers above their per capita GDP, but the same is true for some low-performing countries (OECD, 2018, p. 60[5]). Policy makers need to consider not only the competitiveness of teachers' lifetime earnings, but also how their compensation is distributed over the course of the career and the factors that determine the salary progression. Higher starting salaries, for example, may need to be weighed against the benefits of greater pay rises over the course of the career.

The range of teachers' pay scales and their slope (i.e. the rate at which salaries increase over the course of a teacher's career) vary significantly across OECD countries with available data (OECD, 2019[23]). On average, lower secondary teachers entering the profession with minimum qualifications earned a Purchasing Power Parity (PPP)-adjusted statutory salary of USD 34 094 (US dollars) in 2018, rising to USD 47 675 with 15 years of experience, and up to USD 62 930 for teachers with maximum qualifications at the top of the salary scale, implying a potential salary progression of up to 85% over the course of a career (see Figure 2.2).

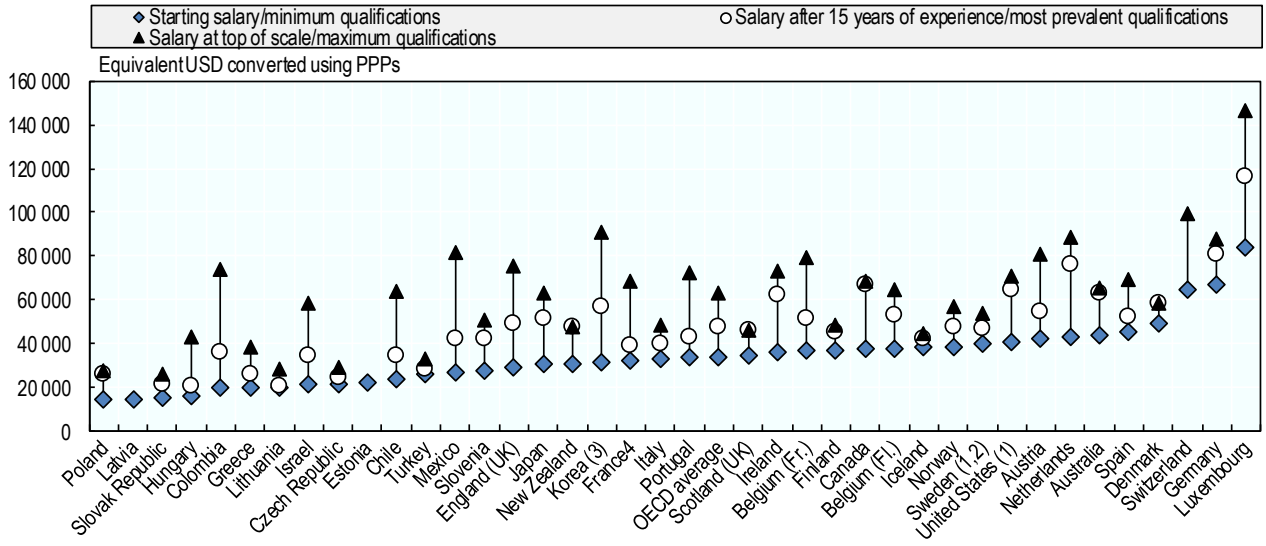
In a number of countries, teachers earn comparatively little as they start their career but experience a stronger salary progression as they gain further qualifications or seniority. In Chile, Hungary, Israel, England (United Kingdom) and Korea, for example, top-end salaries can exceed those of beginning teachers with minimum qualifications by more than 150%. In Colombia and Mexico, salaries at the top of the scale are more than three times as high as starting salaries. By contrast, the salary scales in countries like Denmark, Germany and Switzerland, which offer some of the highest starting salaries, are comparatively compressed.

Multiple OECD review countries have sought to address challenges specific to their respective teacher labour markets by adjusting the slope of their salary scale, which involves a number of trade-offs. Broadly speaking, compressing the salary scale can free up resources to increase teachers' starting salaries at the expense of more experienced teachers, while increasing its slope can create space to provide higher salaries at the top end of the scale.

In light of local labour market conditions and different challenges related to the supply and demand for teachers, the former strategy usually aims to attract more students to the profession and to reduce turnover in the early years of the teaching career, while the latter may serve to retain and motivate more experienced teachers or offer a wider scope for salary differentiation among teachers. Although adjustments in the slope of salary scales and shifts in resources towards their lower or upper end can be budget neutral in theory, fiscal consequences can be hard to predict and they may involve significant transition costs over the course of implementation.

Figure 2.2. Teachers' salary progression (ISCED 2), 2018

Annual statutory salaries of teachers in public institutions, in equivalent USD converted using PPPs



Notes: Countries and economies are ranked in ascending order of starting salaries of teachers with minimum qualifications. In some countries, teachers with minimum qualifications may represent a small proportion of beginning teachers. On 25 May 2018, the OECD Council invited Colombia to become a Member. While Colombia is included in the OECD average reported in this figure, at the time of its preparation, Colombia was in the process of completing its domestic procedures for ratification and the deposit of Colombia's instrument of accession to the OECD Convention was pending.
1. Actual base salaries.
2. Salaries at top of scale and minimum qualifications, instead of maximum qualifications.
3. Salaries at top of scale and most prevalent qualifications, instead of maximum qualifications.
4. Includes the average of fixed bonuses for overtime hours.
Source: OECD (2019) *Education at a Glance 2019: OECD Indicators,* OECD Publishing, Paris https://doi.org/10.1787/f8d7880d-en, Tables D3.1a, D3.1c and D3.6.

StatLink https://doi.org/10.1787/888934026316

In 2015, Austria implemented a new teacher service code which has been mandatory for all teachers entering the profession since 2019/20. It implied a compression of the salary scale, which provided more attractive starting salaries while reducing top-end salaries, keeping the expected lifetime earnings of teachers roughly equal. The changes have been accompanied by raised qualification requirements for new teachers in provincial schools and an increased teaching load in federal schools[1].

It is expected that flattening the salary structure in Austria (whose slope had been considerably steeper than the OECD average) may lead to an increase in spending in the medium term until the more highly paid senior teachers who have a right to continue serving under the old salary system will retire. Part of this effect may be offset by longer teaching hours and the new service code's overtime regulations (Nusche et al., 2016, pp. 78, 158[32]). Fewer teachers than anticipated chose to enrol under the new service code while its adoption was voluntary during a transition period, between 2015/16 and 2018/19 (Rechnungshof Österreich, 2016[65]).

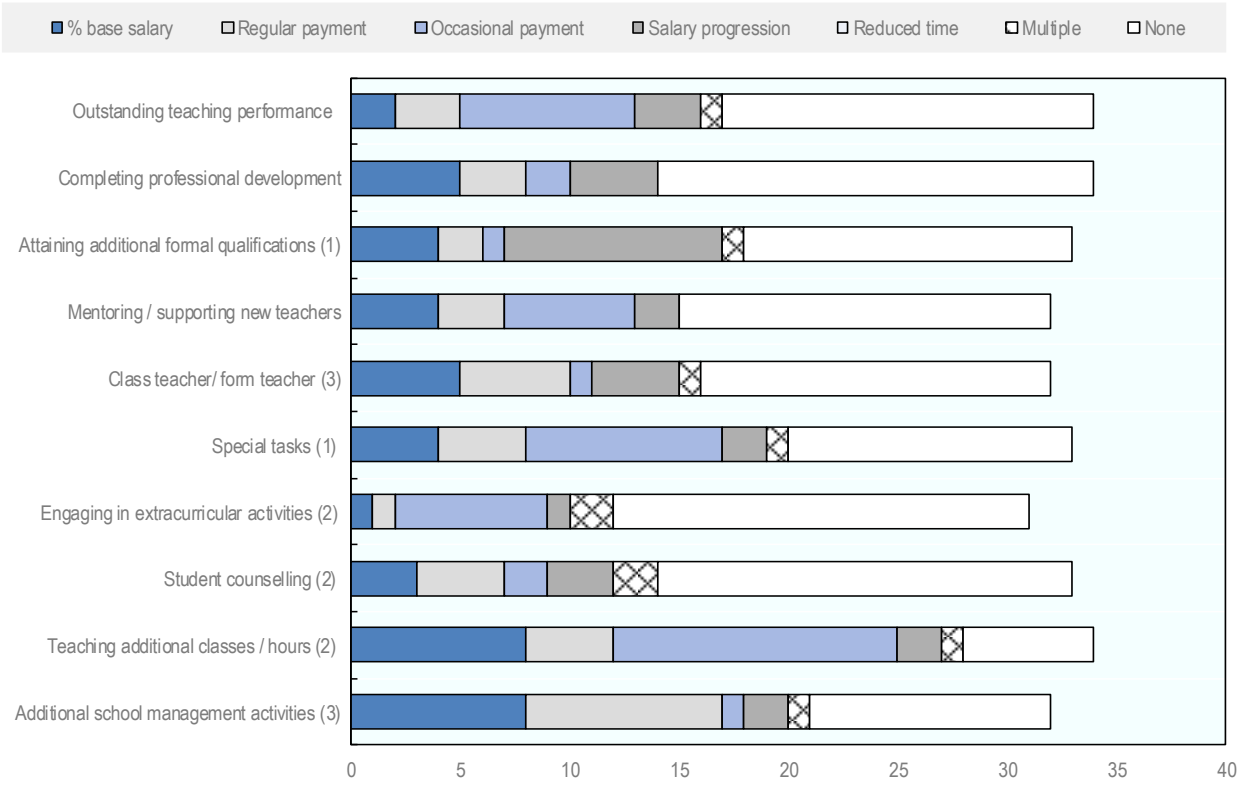
Many OECD review systems are faced with the dual challenge of providing competitive starting salaries to attract high-calibre graduates to the teaching profession while also seeking to retain, motivate and recognise experienced, high-quality teachers through progressive salary increases. In addition, many systems aim to diversify the profession and recognise the importance of incentivising teachers to continuously develop their skills and assume responsibilities that are commensurate with their growing capacity. In light of these complex and diverse objectives, policy makers have moved beyond the starting point and slope of salary scales to consider the various ways in which differentiation and salary progression can be linked to teachers' experience, performance and responsibilities.

The practices among high-performing countries in PISA vary greatly with respect to the factors used to determine teachers' career and salary progression (i.e. the relative weight assigned to appraisal, additional responsibilities, professional development and seniority (OECD, 2018, p. 61 f.[5]). In many school systems, teachers are compensated based on some version of a step and lane structure where salary increases are based either on lateral movements along the steps of a lane (often based on seniority) or vertical movements across lanes (frequently conditional on the attainment of additional educational credentials). Under these traditional models, teachers' salary progression occurs relatively automatically or based on factors like credentials that are only indirectly related to their performance in the classroom, which provides transparency about salary progression.

To promote quality teaching, some countries have sought to strengthen the link between teachers' compensation and their performance or responsibilities. Figure 2.3 illustrates some of the salary differentiations and rewards that teachers are eligible for in OECD countries and which are discussed in the following sections. School-based monetary incentives that are designed to steer the distribution of teachers and attract them to challenging contexts or high-demand areas are discussed in Chapter 3.

Figure 2.3. Criteria for awarding additional compensation to teachers (ISCED 1-3), 2018

Number of OECD countries



Notes: Data refers to teachers in public institutions. On 25 May 2018, the OECD Council invited Colombia to become a Member. While Colombia is included among OECD countries in this figure, at the time of its preparation, Colombia was in the process of completing its domestic procedures for ratification and the deposit of Colombia's instrument of accession to the OECD Convention was pending.
1. Refers to lower secondary and primary.
2. Refers to lower and upper secondary.
3. Refers to lower secondary
Source: OECD (2019), *Education at a Glance 2019: OECD Indicators*, OECD Publishing, Paris, https://doi.org/10.1787/f8d7880d-en, Table D3.7. (web only).

StatLink https://doi.org/10.1787/888934026335

Education-based progression of teachers' compensation

As for any profession, the demands placed on teachers change over time, due to evolving student needs, technological change and the continuous refinement of pedagogical knowledge. To help the teaching profession keep up with these demands (not least in light of the ageing teacher population), many countries place an increasing emphasis on teachers' continuing professional development (CPD) and encourage them to attain additional qualifications throughout their career. In Singapore, for example, teachers are encouraged to pursue master's or PhD degrees mid-career to gain new insights by situating their practical experience within a more theoretical research context (Schleicher, 2018, pp. 84, 123[66]).

There are many ways in which governments can encourage teachers' continuous professional growth and the development of their pedagogical skills (for a more detailed discussion, see Chapter 4). Engaging in additional training can constitute a significant investment of teachers' time and financial resources. Additional payments are therefore one way in which countries have sought to compensate and incentivise teachers to undergo different forms of additional training. As can be seen in Figure 2.3, this practice is relatively widespread in OECD countries.

More than half of OECD countries and economies with available data report that teachers in primary to upper secondary school receive some form of compensation for attaining further formal qualifications (e.g. degrees that exceed the countries' minimum requirements or qualifications in additional subjects) (OECD, 2019[23]). The evidence on the predictive power of educational credentials when estimating teachers' effectiveness at the point of hiring is mixed (Staiger and Rockoff, 2010[6]; Rockoff et al., 2011[67]; Jacob et al., 2018[68]), but education-based differentiations in teachers' salaries can also serve as an incentive for teachers to update and enhance their skills mid-career.

In 10 of 33 countries (including the French Community of Belgium, Chile, Iceland and Luxembourg), further qualifications are rewarded in the form of salary progressions, i.e. an advancement to higher lanes or step increments within the salary grid. Another eight countries reward further qualifications through regular payments (e.g. the Flemish Community of Belgium), occasional payments (e.g. Denmark) or with a percentage of teachers' base salary (e.g. Colombia, Israel, the Slovak Republic and Slovenia) (OECD, 2019[23]).

The widespread linkage of teachers' statutory salaries and their qualifications is corroborated by OECD data, which shows that – in countries where the most prevalent teacher qualification exceeds the minimum entry requirements at a given level – more highly qualified teachers earn at least 10% more than those with minimum qualifications. (OECD, 2018, p. 362 f.[50]).[2]

Although less common among OECD countries, some systems also provide monetary incentives for teachers to engage in continuing professional development (CPD). Fourteen of 34 OECD countries and economies with available information reported to financially reward teachers' pursuit of CPD in one way or another (OECD, 2019[23]). As described in Chapter 4, Table 4.3, for example, teachers in the Slovak Republic are eligible for a salary allowance if they engage in professional development activities and teachers in Spain can receive a salary bonus for completing 100 certified training hours. These rewards have tended to focus on traditional forms of CPD, rather than less formalised, school-based and teacher-led types of professional learning.

Another concern around linking course credits directly to financial rewards is that teachers' participation might become disconnected from their professional improvement and insufficiently guided by individual development needs. The Slovak Republic has sought to address this through a change in policy. Until 2012, school leaders in the country were legally obliged to provide bonus payments to all teachers who obtained the required amount of professional development credits. Since then, however, schools have been asked to establish internal school regulations specifying the conditions under which credit salary rises are approved. If a training is not considered relevant for the teacher's or school's development, it might therefore no longer count towards salary raises (Shewbridge et al., 2014, p. 69[69]).

Task-based differentiation in teachers' compensation

Many countries recognise and financially reward teachers who fulfil tasks that go beyond core teaching-related activities such as lesson planning, marking students' work, general administrative work, communicating with parents, supervising students or working with colleagues (see Figure 2.3). These tasks can include supporting new teachers as part of mentoring and induction programmes, acting as a class teacher, counselling students (e.g. providing career guidance or delinquency prevention) or taking over managerial roles such as serving as the head of a department. Teachers may assume such remunerated responsibilities on an ad hoc basis or as part of formal positions integrated into their career structure (see sections on career structures above).

Teachers who participate in some types of management activity on top of their teaching duties are compensated in more than two thirds of the OECD countries and economies with available data (OECD, 2019[23]). These benefits may accrue indirectly in the form of reduced teaching hours (for upper secondary teachers in the Slovak Republic), or, more commonly, take the form of occasional or regular (often annual) additional payments, as in Austria, England (United Kingdom), France, Ireland, Italy, Japan, Korea, Norway, the Slovak Republic and Spain (Figure 2.3). In Denmark, teachers who take on managerial responsibilities benefit from both reduced teaching time and a regular payment.

In many OECD countries, teachers are also compensated for taking on more classes or hours than required by their full-time contract (e.g. in the form of overtime payments) or for performing special tasks, such as training student teachers. By contrast, only about a third of OECD countries and economies with available data report compensating teachers with payments or a proportional increase in their base salary for their engagement in the organisation of extracurricular activities (examples include Chile, the Czech Republic, Estonia, Iceland, Israel, the Slovak Republic and Spain) or student counselling activities (examples include Austria, Chile, the Czech Republic, Estonia, Iceland, Israel, Lithuania, the Slovak Republic and Spain) (Figure 2.3) (OECD, 2019[23]).

The financial compensation of additional tasks and responsibilities can provide recognition for teachers' efforts on relatively objective grounds and incentivise contributions that may benefit the school community as a whole. At the same time, task-based rewards offer no direct rewards for highly skilled educators or those who improve their performance in the classroom while risking to diverting the efforts of ambitious teachers away from teaching (Conley and Odden, 1995[70]). Other forms of differentiated pay, which are discussed in the following, have sought to bridge this gap and more explicitly link compensation to staff effectiveness and student achievement.

Performance-based differentiation in teachers' compensation

The idea of performance-based compensation for teachers (sometimes referred to as "merit pay") has a long history in countries like the United States, where school districts have experimented with merit pay programmes throughout the 20th century, although many of them were short-lived and have since been replaced by uniform salary scales (Murnane and Cohen, 1986[71]). In theory, performance-based compensation is meant to motivate teachers to improve their practice and raise students' achievement by rewarding effective teaching.

Common criticisms of merit pay programmes, however, point to the difficulty of measuring performance at the level of individual teachers and to potentially perverse effects such as a narrowing of the curriculum or lower teacher efforts on tasks that are not explicitly rewarded by the programme. Some also fear that an excessive reliance on extrinsic

incentives might undermine teachers' intrinsic motivation to do well (Christian, Jacobsen and Andersen, 2013[72]; Bénabou and Tirole, 2003[73]; Frey, 1997[74]) or that competition among teachers may reduce co-operation, both of which could be in detriment to school's collective professional capacity and improvement in the long run.

Performance-related pay schemes can take different forms, distinguished most importantly by the mechanism through which teachers' pay is linked to their appraisal. Some systems provide a more direct link, e.g. by introducing a variable salary component or end-of-year bonus based on a given year's performance or by linking the speed of teachers' annual salary progression to their performance rather than, or in addition to their seniority. Other systems provide a more indirect link by considering teachers' performance evaluations in decisions on their career progression, which may in turn affect their salaries through a link between salary and career structures (Conley and Odden, 1995[70]).

Whether the link between performance and pay is direct, mediated via career structures or made up of elements of both, policy makers need to address a number of questions related to its design:

- **How large should the incentive be?** (What share of salaries should vary by performance and how large do differentials between high- and low-performing teachers' salaries need to be to incentivise positive behavioural change?)
- **How should teachers' performance be evaluated?** (Should additional compensation be based on principals' evaluations, on student test scores, other pre-defined indicators or a combination of the above?)
- **Which aspects of performance should be evaluated?** (Should non-academic outcomes, such as students' behaviour and well-being be considered or should it be limited to students' subject-specific performance? Should the focus be on absolute or relative gains and should all students' results weighed equally?)
- **Should teachers' evaluations be independent of one another?** (Should performance be measured at the level of the individual or groups of teachers? Should salary increases be based on a quota system limiting the number of teachers who can succeed?)

Many teachers feel like they receive little recognition or reward for high performance on the job. For example, nearly half of all teachers responding to TALIS 2018 reported that there were no incentives for them to engage in professional development (OECD, 2019, pp. 209, Table I.5.36[1]). Likewise, for TALIS 2008, two-thirds of teachers reported receiving no recognition for being innovative or for improving the quality of their teaching and three-quarters of teachers reported that the most effective teachers in their school do not receive the greatest monetary or non-monetary rewards (OECD, 2009, p. 170 f.[75]).

Conversely, teachers in many OECD countries face no significant consequences for persistent under-performance. For TALIS 2008, just one quarter of teachers reported that colleagues in their school would be dismissed based on sustained performance concerns (OECD, 2009, pp. 188, Table 5.9[75]). This reflects the high level of job security that teachers in many systems enjoy once they have reached tenure. However, the inability to dismiss teachers with performance concerns can be just as stifling for schools as the inability to retain the most effective ones.

Of course, many of the tasks that teachers perform can provide a strong intrinsic motivation, especially if they are carried out under conditions that make them intellectually stimulating and enjoyable. A key objective in inspiring high-performing teachers is therefore to

promote their intrinsic motivation and to create conditions that stimulate their self-motivation (as discussed further below). Yet, as in most professions, some aspects of teachers' work, while important to promote student learning, are less inspiring. Providing a measured balance of intrinsic and extrinsic sources of motivation is important to promote and reward high performance across the whole range of teachers' tasks (OECD, 2007[76]).

In recognition of this, OECD countries have experimented with various forms of performance-based differentiation in teachers' compensation. In 2017, half of the OECD countries and economies with available data compensated teachers in primary and secondary education for outstanding performance in one way or another (OECD, 2019[23]). Four countries (Chile, Japan, Turkey and England [United Kingdom]) reported that strong performance could accelerate their teachers' progression within their salary range. More frequently, in a total of 13 schools systems, performance-based rewards took the form of occasional payments (Austria, Denmark, Estonia, Finland, Israel, Italy, Japan, Poland and the Slovak Republic), regular payments (Latvia, Norway and Slovenia) or a proportion of their base salary (the Czech Republic and Mexico) (see Figure 2.3).

Measuring teacher performance

Most performance-related pay systems rely on measuring teachers' effectiveness on the basis of classroom observations, their students' achievement or a combination thereof. A central challenge is the selection of valid indicators that can be measured transparently and reliably, that do not set perverse incentives and whose costs of measurement do not outweigh their expected impact on student performance (see Chapter 4). There are numerous methodological challenges related to the use of student test scores to evaluate teachers' performance and ongoing debates on whether value-added measures can reliably control for the effect of classroom composition on teachers' results (Rothstein, 2014[77]; Koedel and Betts, 2011[78]).

Introducing high-stakes evaluations of teachers based on their students' performance can also elicit unpredicted and potentially harmful responses. Whichever indicators are chosen to reflect students' performance, there is a risk that teachers will focus their efforts on maximising these outputs at the expense of others. This can result in opportunistic behaviour (such as teaching to the test or gaming students' scores), as well as teachers neglecting dimensions of student learning that are less amenable to measurement, or reducing their contributions outside the classroom, e.g. assisting their peers (Ballou and Springer, 2015[79]). While expanding the set of measured performance indicators reduces these perverse incentives, it may increase the cost of the merit pay system beyond justification.

Another concern relates to heterogeneous effects that performance-related incentives may have across the student population. In order to underline the importance of each student's progress and to eliminate factors such as their socio-economic status from teachers' evaluations, many measures of teacher effectiveness are based on students' average gains in performance. This approach provides incentives for teachers to focus on students for whom a marginal increase in attention is likely to produce the greatest gains. These are often assumed to be students in the middle of the performance spectrum, whose support may come at the expense of those who struggle the most.

Some proposed remedies, such as the weighting of performance gains based on students' characteristics, compel policy makers to engage with complex ethical problems (Murnane and Cohen, 1986, p. 13[71]). Alternative indicator-based methods of teacher assessment have been suggested to resolve some of these problems and therefore merit further

investigation. For example, measures of teacher performance that are based on changes in their students' ordinal ranking relative to their peers might remove some incentives to teach to the test or manipulate assessment scales (Barlevy and Neal, 2012[80]).

Given the validity concerns around value-added measures of teacher performance based on student test scores, classroom observations remain central to most performance pay systems. High-quality structured observations are typically performed by principals or senior teachers who have undergone training and certified their ability to generate qualitative and quantitative data following a common, detailed performance-rubric over the course of a prescribed number of observations (Goldring et al., 2015[81]). Observations offer some distinct advantages over test scores by providing information closer to real time, richer and more teacher-specific insights and data for subjects that are not assessed.

Nevertheless, classroom observations can be subject to transparency concerns and similar validity problems as test-based measures since teachers' ratings partly reflect their students' characteristics and the non-random sorting of teachers to classes (see Chapter 3) (Steinberg and Garrett, 2016[82]). This underlines the risks involved in staking important staff management decisions on any single indicator or source of evidence and highlights the importance of identifying and addressing potential biases and unintended consequences, whichever measure of teachers' performance is used (OECD, 2013[3]).

Direct links between performance and compensation

The most straightforward ways of linking teachers' appraisal to their compensation involve payments in the form of merit increments or end-year bonuses based on their measured performance. A 2005 OECD review of teacher policy found performance-related payments to be increasingly common in public schools, although the evidence on the effectiveness of such extra payments was found to be mixed and their implementation to be highly contentious (OECD, 2005, p. 184[28]). In practice, lump-sum and merit-increment systems may complement or substitute each other and both come with advantages and drawbacks. Due to their one-off nature, for example, lump-sum bonuses are more clearly linked to a given year's performance but might provide relatively short-lived incentives. An OECD review of public sector performance pay also found that some systems have favoured bonuses because they are more flexible and do not have a long-term impact on the wage bill or pension liabilities (OECD, 2005, p. 56[83]).

In several systems with locally operated performance pay systems, the OECD review team identified significant challenges related to their transparency and effectiveness, also given available resources at the school level. In the Slovak Republic, for example, teachers can be awarded a personal allowance based on their performance, among other factors. In the absence of a clear framework for appraising the performance of teachers, bonuses were more frequently awarded based on the assumption of additional responsibilities than teachers' effectiveness in the classroom and their impact on student learning. In the light of recent reforms to the Slovak Republic's career structure, the OECD review team concluded that additional monetary performance incentives might become redundant if teachers can advance on a career ladder with associated salary increases based on good performance (Santiago et al., 2016, pp. 193, 202[25]).

Similar challenges were observed in the Czech Republic, where school principals have the discretion to allocate individual allowances and bonuses to reward teachers for high performance or additional work. Yet, neither the level, nor the criteria for the allocation of these personal allowances were legally defined or based on transparent and objective criteria (Shewbridge et al., 2016, p. 137[20]). Providing agents with a clear understanding of

the underlying evaluation criteria and the steps they can take to improve, is therefore a necessary condition for any incentive structure to have its intended effects.

High-quality evaluations of teacher performance pay programmes have mostly been discouraging on whether incentive systems with singular, test-based measures of teacher performance can improve student learning, although there are some instances of reported positive outcomes in the United States (Podgursky and Springer, 2007[84]) and the United Kingdom (Atkinson et al., 2008[85]).

Most studies of programmes from the United States found either no positive impact of teacher merit pay on student achievement (Fryer, 2013[86]; Springer et al., 2010[87]), very small effects (Sojourner, Mykerezi and West, 2014[88]), or mixed effects, subject to estimation specifications (Springer, Ballou and Peng, 2014[89]). Even where positive overall effects have been found, it can be difficult to discern which mechanisms drove the results since performance pay programmes are often comprised of multiple components or form part of larger reform packages (Balch and Springer, 2015[90]). Some more positive results were reported from performance-based compensation systems established under the Teacher Incentive Fund (TIF) and for the District of Columbia Public Schools' IMPACT evaluation system (see Box 2.3).

Box 2.3. Evaluations of performance-based compensation systems in the United States

Starting in 2006, the US Department of Education competitively awarded **Teacher Incentive Fund (TIF)** grants to school districts to fund the development and implementation of performance pay programmes aimed at teachers and principals. Participating districts were required to use measures of student achievement growth and at least two observations of classroom or school practices to evaluate teachers' and principals' effectiveness. Districts were given discretion to design the details of these measures and most of them measured student achievement growth both at the school and at the classroom level when evaluating teachers. In addition – although not all TIF districts successfully implemented these components – recipients had to offer educators bonuses based on their performance that were challenging to earn, substantial in size, and differentiated; they had to offer educators opportunities to earn additional pay for taking on extra roles or responsibilities; and they had to provide professional development to help educators understand the measures on which they were evaluated and improve their performance on those measures (Chiang et al., 2017[91]).

Estimates from randomised control trials in ten participating districts suggest that the programmes funded through the 2010 round of TIF grants led to a small increase in student achievement of 1 to 2 percentile points. Fewer than half of the TIF districts planned to continue paying bonuses beyond the grants' five-year period, mostly due to concerns about their financial sustainability. Nevertheless, most districts planned to retain other components of the programme, such as measures of teacher effectiveness or offering professional development opportunities based on teachers' performance ratings (Chiang et al., 2017[91]).

According to the evaluation, the TIF programmes' effectiveness may have been limited by a range of factors. For example, many teachers were unaware of their eligibility for bonuses or underestimated the amount they could receive. In addition, targeted professional development was limited (amounting to no more than six hours over the school year) and may have failed to enable teachers' use of more effective practices. However, despite their

modest impact on student achievement, a cost-effectiveness comparison with alternative interventions suggests that the TIF pay-for-performance programmes were more efficient than class-size reduction would have been and that they were about as cost-effective as incentives for high-performing teachers to transfer to low-performing schools (Chiang et al., 2017[91]).

Some positive effects were also reported from the **District of Columbia Public Schools' IMPACT evaluation system**, which provided unusually strong positive and negative incentives based on multiple measures of teacher performance (including test scores, but also several structured observational measures). Studies estimate that the threat of dismissal for low-performing teachers increased voluntary attrition by more than 50 percent (Dee and Wyckoff, 2015[92]) and that their replacement by higher-performing teachers raised student achievement in math by a small but significant 0.08 standard deviations (Adnot et al., 2017[93]). The IMPACT evaluation also appears to have improved the performance of low-performing teachers who remained in the system as well as that of high-performing teachers who received significant increases in compensation (Dee and Wyckoff, 2015[92]). These estimates are local though, i.e. they concern only those teachers around the cut-offs for negative or positive consequences and many incentive systems are less effective in motivating those in the middle of the performance spectrum who are unlikely to face consequences either way (OECD, 2005[83]). Some of the factors thought to have contributed to the IMPACT programme's favourable evaluation, compared to other performance pay programmes include its articulation of clear standards for effective instruction, the provision of instructional coaches to help teachers meet those standards, and its multi-faceted measure of teacher performance (Dee and Wyckoff, 2015[92]).

The implementation of systems which establish direct links between teachers' compensation and performance can come up against a range of challenges related to their to effects on teacher collaboration, their fiscal impact and the adequate and transparent measurement of teacher performance. Notably, the potential long-term effects of performance-based compensation schemes must be weighed against the risks and considerable costs that can arise in the course of their implementation. This concerns not only the challenge of achieving teacher buy-in, but also building the necessary capacity among responsible authorities for teacher evaluation, and putting in place monitoring processes to identify and remediate any unintended negative consequences early on.

Given that the implementation of performance-based compensation systems has often been highly contentious and divisive (OECD, 2005[28]), engaging stakeholders during the design and implementation process is critical to successfully manage transitions, e.g. from a seniority-based compensation system to a system that gives greater weight to individual or group-based performance and responsibilities.

It is widely acknowledged that a highly effective way to improve teachers' individual and collective professional capacity is through peer-learning and regular, growth-oriented evaluations carried out by trained supervisors in an atmosphere of mutual trust (OECD, 2013[3]) (see Chapter 4). A central criticism levelled at performance-based pay is that it can undermine these mutually supportive relationships and incentivise teachers to conceal their failings in fear of financial retribution, rather than openly addressing them and seeking help from peers or supervisors. Particularly where the evaluation systems used to determine teachers' salaries are not sharply distinguished from more formative forms of evaluation, the former risk to undermine the latter, which makes it harder for school leaders to provide teachers with the support they need (OECD, 2013[3]; Murnane and Cohen, 1986[71]).

In addition, even if merit-pay systems were based on perfectly reliable measures of teacher performance, perceived unfairness and a lack of transparency remain potential sources of dissatisfaction and demotivation. Most principals who engage in regular classroom observations have a good sense of who their most effective teachers are. Yet, they may struggle to justify this assessment to teachers who are denied a reward and - even more problematically – may fall short of pointing them to a clear path for obtaining it, given the absence of clearly defined behaviours that consistently result in higher teaching performance (Murnane and Cohen, 1986[71]). The positive impact of financial rewards on the most effective teachers may thus be more than offset by its negative impact on those who fail to obtain them and the corroding effect this may have on collegial relationships.

Occasionally, performance-related pay for government employees has been proposed not only to enhance performance, but also to reduce costs, e.g. by replacing automatic seniority-based salary progressions (OECD, 2005, p. 35[83]). However, as discussed above, the experience of Teacher Incentive Fund programmes in the United States has demonstrated that the introduction of high-quality systems for performance evaluation can impose significant costs (Chiang et al., 2017[91]). In light of the high stakes involved, providing reliable multi-dimensional estimates of teacher performance may require the use of sophisticated systems of teacher assessment, including e.g. higher-frequency observations with multiple, carefully trained evaluators (Dee and Wyckoff, 2015[92]).

Another challenge that countries might encounter is the difficulty of predicting the fiscal impact of performance-related remuneration programmes. While the overall spending on teachers' salaries is relatively easy to forecast if they increase in line with seniority, it is considerably harder to predict individual teachers' performance and the outcomes of their evaluations. Although they can be perceived as unfair, quotas and other forms of restrictions to the magnitude and number of performance-related salary increases are common methods to control the fiscal impact of performance pay programmes across the public sector. The use of lump-sum bonus payments, rather than merit increments is another means to control their fiscal impact since they can be managed with greater flexibility and may not add to long-term fixed payroll costs, including pensions (OECD, 2005, p. 56[83]).

Learning from countries' experiences with the implementation of performance-related pay systems as well as isolating and evaluating their effects is difficult, given that their introduction is often accompanied by organisational changes on a larger scale. In public administrations, these have often included the reform of appraisal and goal setting processes, the clarification of tasks, acquisition of skills, creation of improved employee-manager dialogue and, in the case of schools, the reform of teaching standards and career structures. Many of these changes may have a positive impact on performance, independent of the financial incentives that accompany them (OECD, 2005, p. 14[83]).

Group-based performance rewards

Since many aspects of teachers' work depend on or benefit from collaboration among peers, one of the concerns most frequently raised in the context of individual-level performance rewards is that they might foster competition among teachers and undermine mutual support. In order to avoid these dynamics, some countries have therefore introduced incentive structures based on collective rather than individual performance in order to encourage collaboration and collective improvement. Group-based performance rewards also promise to resolve some of the attribution problems associated with traditional performance pay. These arise because many desirable outcomes, such as eliminating bullying or violence in schools, cannot be easily attributed to the work of any individual,

even though teachers arguably play a critical role in their accomplishment and should be encouraged to work towards them.

Colombia is one of the countries that has introduced group-based performance rewards. At the time of the review, schools were eligible to receive a performance bonus tied to a school-level performance index, the Education Quality Synthetic Index (*Índice Sintético de Calidad Educativa*, ISCE), once a year. However, the index' design raised some concerns among the OECD review team since it failed to take schools' socio-economic context and the prior performance of its students into account and therefore penalised disadvantaged schools even though they might provide their students with a high value added (Radinger et al., 2018, pp. 196, 249[8]).

Chile is another country that provides teachers and school leaders with performance-related incentives. Some of these are group-based, like the National System for Performance Evaluation (*Sistema Nacional de Evaluación de Desempeño*, SNED) for teachers or the Collective Performance Allowance (*Asignación de Desempeño Colectivo*) for school leaders, described in Box 2.4 further below (Santiago et al., 2017[9]).

The larger the groups on which collective performance rewards are based, the weaker the incentives they provide for individual behavioural change. Consistent with this, their impact on student achievement has tended to be relatively small in the few existing evaluations (Jackson, Rockoff and Staiger, 2014[94]). Evidence from a group-based teacher incentive programme in New York City (United States) also suggests that group-based incentives may be more effective in some school contexts than in others. While the programme had little overall effect on students' results, schools with a higher degree of teacher cohesion showed slight increases in maths achievement, as one might expect for a culture of team work to incentivise joint production and peer-monitoring to curtail free riding (Goodman and Turner, 2013[95]). As for any other reward system, group-based merit-pay systems should be carefully designed to avoid introducing perverse incentives. For example, an overreliance on group-based performance rewards could be expected to deter high-performing teachers from working in schools with a lower average teacher quality, even though these schools might need benefit the most from their support.

Indirect links between performance and compensation

Linking teachers' individual or collective performance directly to their compensation (e.g. through end-year bonuses or salary increments) is not the only way to financially reward and incentivise effective teaching. In practice, there are many ways in which these links can be established in more indirect ways and embedded within systems for teachers' professional advancement. As discussed above, differentiated career structures – although not necessarily tied to salary scales – tend to reward teachers' vertical advancement on the career ladder with higher compensation.

If designed well, indirect links between teachers' appraisal and their compensation promise to address some of the challenges associated with conventional performance pay. For instance, they can combine extrinsic rewards for high performance (in the form of salary increases) with intrinsic rewards in the form of professional opportunities and responsibilities that grow in line with their knowledge and skills (Conley and Odden, 1995[70]). For these mechanisms to be effective, teachers' career advancement would need to be linked to their demonstrated effectiveness in the classroom, for example through robust certification processes based on rigorous teaching standards.

In addition, rewarding teachers' performance relative to their current career stage has the potential to motivate teachers across a broader spectrum of proficiency and experience to upgrade their skills. Many conventional performance-based pay systems provide bonuses for the highest-achieving staff, which may seem unattainable to the majority of teachers. Providing monetary and career incentives for teachers to gradually advance their knowledge and skills offers both novice and senior teachers realistic goals relative to their respective position on the career ladder and a clear pathway to achieve them. Implementing such systems may require countries to further develop and integrate their frameworks for teaching standards, career structures and salary scales.

Colombia's new teacher career structure, introduced in 2002 and applicable for teachers appointed following its introduction, illustrates how indirect links between appraisal and compensation can be established. In contrast to the seniority-based system in place for teachers appointed prior to 2002, teachers with a given qualification now need to undergo a system of Diagnostic and Formative Evaluation (*Evaluación de Carácter Diagnóstico Formativo*, ECDF) to advance their career and each the next step of the salary scale. While initially based on a written assignment, the evaluation process was reformed in 2015 to more closely measure teachers' effectiveness in the classroom. The process now emphasises peer evaluations based on video observations, and also serves to identify professional development needs and opportunities for teachers (Figueroa. et al., 2018[96]). While the details of the process have been subject to ongoing negotiations and teachers have raised concerns about the evaluation method's reliability, the system signals a clear commitment to strengthening the indirect linkages between teachers' performance and their compensation (Radinger et al., 2018, pp. 241, 249[8]).

Similarly, Chile uses a certification process to regulate teachers' progression across the five stages of their career structure based on competencies specified in the national teaching standards. The certification includes an external component comprising a standardised written assessment and external markers evaluating a professional portfolio, as well as classroom observation. While advancement to the two highest stages of the teaching career (Expert I and Expert II) is voluntary, teachers are expected to move from the first stage (Initial) to the second or third (Early, Advanced) after four to eight years, which also serves as a means to remove underperforming teachers from the profession if they fail the examination more than twice (Santiago et al., 2017, pp. 240, 253[9]).

2.3.3. Compensation and benefits of school leaders

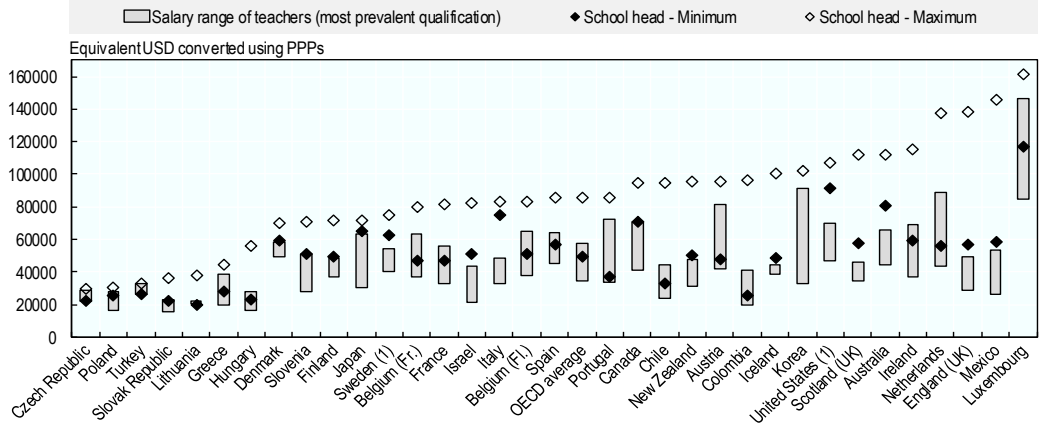
To ensure a sufficient supply of high-quality candidates for school leadership positions, their salaries need to be attractive, not only compared to those of positions with similar levels of responsibility in the public and private sectors, but also compared to those of senior teachers among whom most school leaders are recruited. In nearly all OECD review countries with available data, the maximum salaries for school leaders exceed those of teachers. Nevertheless, the salary ranges for teachers and school leaders overlap in most systems and in a number of them, including Austria, the Czech Republic, Greece and Portugal, neither the bottom, nor the top statutory salaries of school leaders with minimum qualifications are significantly different from those of teachers (see Figure 2.4) (OECD, 2019[23]).

Evidence from OECD reviews suggests that the status and attractiveness of school leadership roles can suffer if their compensation fails to reflect their higher level of responsibility (Nusche et al., 2016, p. 172[32]). In Colombia, for example, where school leaders do not benefit from a separate salary scale, their earnings are frequently inferior to

those of their teachers, despite a significantly heavier workload (Radinger et al., 2018, p. 185[8]). Similarly, school leaders in Uruguay often earn less than their senior teachers, which discourages many of them from applying for leadership positions despite having completed the required initial preparation for the role. As a consequence, the system faces a shortage of school leaders across all levels of education (Santiago et al., 2016[41]).

Furthermore, the low remuneration of school leaders in Uruguay creates incentives for school leaders to take on additional roles to supplement their salary. In some schools visited by the OECD review team, principals and deputy principals worked in private schools, teacher education institutions, or adult education in addition to their leadership role, meaning that they could dedicate less time to the improvement of their schools (Santiago et al., 2016, p. 184[41]). Establishing separate salary scales for school leadership roles can provide a good basis to recognise their distinct responsibilities, rather than treating principal-ship as a mere extension of the teaching career (see further below).

Figure 2.4. Minimum and maximum statutory salaries for teachers and school heads (ISCED 2), 2017



Notes: Countries and economies are ranked in descending order of maximum salaries of school heads. Salaries refer to the annual statutory teachers' and school heads' salaries in public institutions, based on teachers with most prevalent qualifications at a given level of education and school heads with minimum qualifications. On 25 May 2018, the OECD Council invited Colombia to become a Member. While Colombia is included in the OECD average reported in this figure, at the time of its preparation, Colombia was in the process of completing its domestic procedures for ratification and the deposit of Colombia's instrument of accession to the OECD Convention was pending.
1. Actual base salaries.
Source: OECD (2019), *Education at a Glance 2019*: *OECD Indicators*, OECD Publishing, Paris, https://doi.org/10.1787/f8d7880d-en, Tables D3.1b. and D3.10.

StatLink https://doi.org/10.1787/888934026354

Given that school leaders' levels of responsibility, the complexity of their tasks and their administrative burden can vary considerably depending on the school they serve, some countries have sought to adjust their compensation accordingly. The majority of OECD review countries adjust school leaders' salaries based on the size and other characteristics of their school (see Table 2.2 further below). In Chile, for example, school leaders receive a bonus of 25-200% of the basic minimum teacher' salary, depending on their schools' size and socio-economic composition (MINEDUC Centro de Estudios, 2016, p. 132[97]).

Similarly, in Austria, the service bonus that school leaders receive on top of the teacher salary varies based on the size of their schools. At the time of the OECD review in 2015, this allowance ranged from EUR 300 per month in the smallest schools (in schools with fewer than ten full-time equivalent teachers, leadership roles are assumed by teachers in exchange for a bonus and reduced teaching hours) to EUR 1 650 in the largest schools (Nusche et al., 2016, p. 155[32]). Since then, a reform has raised the bonus for the largest school principals to EUR 1 850. Principals of multiple schools receive the cumulative allowance for each school under their leadership.

In many systems, school leaders' salaries are higher at the upper or lower secondary level than at the primary level. This can be the product of larger school sizes at the secondary level or the explicit reflection of education levels in the salary scales of school leaders (or teachers, e.g. where principals' salaries are comprised of a management allowance on top of a teacher salary) (European Commission/EACEA/Eurydice, 2018[98]). Additional school-level factors that might affect the salaries of school principals include the school's leadership structure and the amount of support principals receive through deputy or assistant principals. Particularly in systems that struggle to fill leadership positions for schools in disadvantaged, rural or remote areas, location-based salary adjustments may also be used as a means to address regional inequalities (see Chapter 3). Including such weightings in leaders' salary scales may help that all schools are attractive to and managed by high-performing leaders (Pont, Nusche and Moorman, 2008[27]).

Table 2.2 summarises some of the criteria used to determine school leaders' base salaries and their additional payments in OECD review countries. School-based weights are relatively common and some systems also provide financial incentives for professional development or the completion of further formal qualifications. About a third of the review countries' salary scales include performance-based components to determine school leaders' salaries. School leaders in Sweden, for example, receive an individualised salary based on the regional education director's assessment of their performance. The degree to which these assessments are systematised and transparent varies across municipalities and school boards. Education directors may take into account a variety of indicators, ranging from the school's academic results and teachers' or parents' testimonies to the labour market outcomes of their students. Some municipalities have taken inspiration from the private sector or other public sectors like health to design evaluation systems for their leaders (Pont, Nusche and Moorman, 2008[27]).

Table 2.2. Factors influencing school principals' salaries (ISCED 1-3), 2018

OECD review countries, public schools

Performance-related	I			C	I, C						I		I			I	I			
Development-based				D					D, Q				D		D		D			
School characteristics																				
Part. in other mgmt. activities																				
Factors at sub-national discretion																				
Country	Austria (1)	Belgium (Fl.)	Belgium (Fr.)	Chile (2)	Colombia (3)	Czech Republic	Denmark (4)	Estonia	Iceland	Kazakhstan	Lithuania	Luxembourg (5)	Mexico	Portugal	Slovak Republic	Slovenia	Spain	Sweden	Turkey (6)	Uruguay

Notes: For performance-related factors, "I" indicates individual performance, "C" indicates collective performance, i.e. measures based on the performance of multiple principals or schools (e.g. in a given cluster/area); For development-based factors, "D" indicates professional development, "Q" indicates formal qualifications. Performance-related compensation includes annual payments and bonuses (end-year or quarterly); Development-based compensation includes salary progression, allowances and annual payments; Compensation related to school characteristics (e.g. size, type, location) relates to a higher base salary; Compensation based on participation in management activities includes occasional or annual payments.

1. Austria: Applies to leaders working under the new teacher service code (*Dienstrechts-Novelle 2013 – Pädagogischer Dienst*) that applies to all leaders appointed from 2019/20.
2. Chile: The performance bonus refers to the Collective Performance Allowance (*Asignación de Desempeño Colectivo*, ADECO) based on the results of a specific project led by the leadership team. This bonus is different to the National System for Performance Evaluation (*Sistema Nacional de Evaluación de Desempeño*, SNED).
3. Colombia: Individual principals can receive one extra monthly salary per year pending performance on an education management indicator. Schools exceeding improvement thresholds and meeting their excellence target as defined by a quality index (*Índice Sintético de Calidad Educativa,* ISCE) receive a collective bonus.
4. Denmark: Salaries and their component parts are fixed in collective agreements.
5. Luxembourg: There are no school principal positions in primary education. School principal remuneration in secondary education is determined by seniority only.
6. Turkey: For ISCED 3, additional remuneration for school principals varies across seven school types.

Sources: OECD (2019), *Education at a Glance 2019: OECD Indicators*, OECD Publishing, Paris, https://doi.org/10.1787/f8d7880d-en, Table D3.11; European Commission/EACEA/Eurydice (2018) Teachers' and School Heads' Salaries and Allowances in Europe – 2016/17, https://eacea.ec.europa.eu/national-policies/eurydice/publications_en; Country Background Reports and Country Review Reports (http://www.oecd.org/education/school/school-resources-review-reports-participating-countries.htm).

In Austria, school principals are eligible to receive one-off bonuses for outstanding performance or their involvement in particularly successful projects (Bruneforth et al., 2016[99]). Likewise, school founders in the Czech Republic may reward their school principals for outstanding performance with allowances or bonuses. The OECD review team noted, however, that evaluations of Czech principals typically focussed on the schools' financial management and budget discipline, while their educational quality often played a subordinate role at best (Shewbridge et al., 2016, p. 177[20]). To recognise and reward principals' performance holistically, evaluations for performance-related bonuses would need to take into account not only their administrative, but also pedagogical leadership.

Another critical condition for the success of performance-related pay for principals is to ensure that the process is transparent and perceived as a fair, positive encouragement by principals themselves. It is therefore essential to develop reliable indicators and clear assessment criteria, to prepare and train evaluators and to ensure that assessment procedures take into account the context in which principals are working. As with the performance-based compensation of teachers, incentives for school leaders can be provided at the individual or group level. Chile's Collective Performance Allowance system (*Asignación de Desempeño Colectivo*), for example, uses collective incentives to encourage collaboration and distributed leadership (see Box 2.4).

Box 2.4. Group-based incentives for school leaders in Chile

Based on the belief that good leadership is the product of organisational as well as individual qualities, the Collective Performance Allowance system (*Asignación de Desempeño Colectivo*) is designed to improve the practices and capacity of leadership teams and encourage school leaders to collaborate. By setting and evaluating collective objectives and targets, the system seeks to encourage school leaders' commitment to the improvement of teaching and learning in their school, and to facilitate and encourage successful collaboration among leadership teams. Participation in the Collective Performance Allowance process is voluntary for school leaders in all public and government-dependent private schools with at least 250 students. First implemented in 2005, an increasing number of school leadership teams are taking part.

The Collective Performance Allowance system is built around the development of an institutional objective and two to four institutional targets that form the basis for an agreement of collective performance. The development of this agreement involves the distribution of related tasks and responsibilities between school principals and other technical-pedagogical school leaders. The institutional targets correspond to local contexts and priorities, but need to be linked to five areas of school leadership (leadership, curriculum management, school climate and support to students, financial management, and results). At least one of the institutional targets needs to be related to leadership or curriculum management, another to results.

To align the process with other measures for improving school leadership, the institutional objective and institutional targets need to be defined with reference to the Annual Development Plan of Municipal Education (*Plan Anual de Desarrollo Educativo Municipal*, PADEM) and the School Development Plan (*Proyecto Educativo Institucional*, PEI). Since 2016, the Ministry of Education provides templates for agreements (*convenios tipos*) to leadership teams. These templates are prepared based on current themes and ministerial regulations, which influence the approaches and tasks for leadership teams across the country.

Once a school leadership team has established an agreement of collective performance, it collaborates with the school provider to develop strategies to monitor the achievement of the objective, each of the targets and the related leadership practices and behaviours. The responsible provincial department of education (*Departamento Provincial de Educación*, DEPROV) then has to approve or revise the agreement to ensure that it complies with legislation and corresponds to national education goals. Once approved, the school leadership team presents the agreement, institutional objective and targets to the school community.

The school provider assesses whether the institutional objective and each of the institutional targets have been met based on an implementation report and an evidence portfolio compiled by the school leadership team. The results are passed on to the provincial department of education for validation. School leadership teams that have attained a rating above 75% or 90% receive a financial allowance equivalent to 10% or 20% of the national minimum basic salary. The Chilean Ministry of Education can audit schools to ensure that they correctly implement the process.

Source: OECD (2013), *Synergies for Better Learning: An International Perspective on Evaluation and Assessment*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264190658-en.

2.3.4. Compensation of professional support, administrative and maintenance staff in schools

Although – as discussed in Chapter 1 – professional support, administrative and maintenance staff play an important role in schools, there is no internationally comparable data on their remuneration. This may be because the employees conventionally subsumed under these categories perform a wide range of different roles and vary considerably with respect to their qualifications, salaries and employment contracts. Furthermore, unlike teachers' and principals' salaries, the remuneration of other school staff tends to be more heterogeneous and may not be regulated by national statutes or service codes.

Since many non-teaching employees schools (especially those in maintenance or operational roles, such as security guards, electricians, cooks, gardeners or drivers) could engage in comparable work outside the education sector, schools or local authorities may benefit from some flexibility in adjusting their salaries based on local labour market conditions. In the Czech Republic, for example, the OECD review team noted that salaries of operations staff were considerably higher in the capital and wealthier cities than in other regions, and that adapting the expenditure on technical staff to local labour market conditions could lead to a more efficient use of school funding. Whereas rich municipalities with higher local salaries may be unable to attract sufficient operations staff if they were obliged to remunerate them at the national average, poorer authorities could avoid excess spending by adjusting the salaries of their operations staff based on local market rates (Shewbridge et al., 2016, p. 119[20]).

Some professionals working in schools, such as psychologists, may also have a significantly higher earnings potential working in a private or clinical environment and face foregone earnings that schools are unlikely to match. This can create difficulties in attracting high-performing candidates to serve in these roles, which raises serious questions given the increasing commitment to strengthening socio-emotional and psychological support in schools.

2.3.5. Implementing compensation reforms

Adjusting salaries in the education sector can pose significant challenges related to the political economy of reform. Compensation reforms are prone to create uncertainty about the size and distribution of their benefits and are likely to face the resistance of those who stand to lose out, whether in absolute or relative terms. At the same time, given the collective bargaining arrangements governing educators' salaries and the well-organised, politically active unions in many OECD countries, the implementation of reforms is often impossible without the co-operation of teachers (Wurzburg, 2010[100]). The complex and

often divided governance arrangements underpinning staff salaries and related aspects of their careers (as discussed in the next paragraphs), further complicate the implementation of reforms since they may require multiple levels of government to act in concert.

In light of these challenges, as for the implementation of new school funding formulas (OECD, 2017, p. 122[101]), the experience of OECD review countries highlights the importance of effectively managing these reform processes, having realistic expectations concerning the costs and challenges involved, and ensuring sufficient budgetary resources. Policy makers also need to bear in mind the inertia of reform processes and the significant amount of time that it can take for a change in teachers' career structures or compensation systems to reach all or even just a majority of the profession. In Austria, for example, the newly introduced qualification requirements and service codes are expected to take about 40 years to apply to all teachers (Nusche et al., 2016, p. 29[32]).

Teacher and school leader salaries can be subject to complex governance arrangements

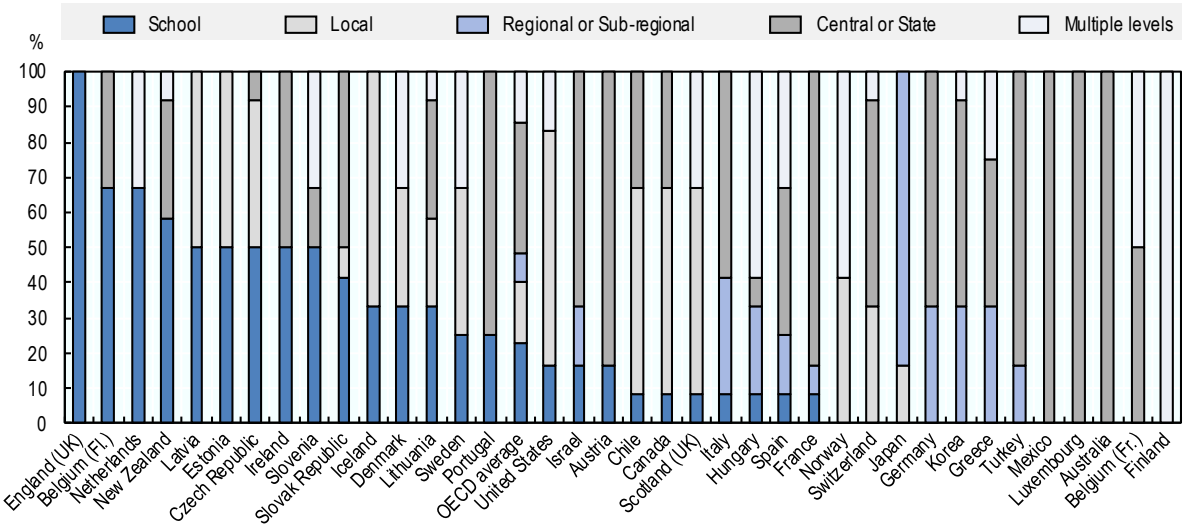
The teacher labour market and its wage-setting institutions differ from traditional labour markets in that salaries are determined through a political process that may involve multiple levels of government and is frequently subject to collective bargaining agreements (Santiago, 2002, p. 67[55]). The authorities responsible for deciding on the compensation of teachers and other school staff vary significantly across countries, which affects both the process of reform implementation and the strategies that might facilitate it. The level at which teachers' salaries are determined can also have implications for regional competition to attract high-performing teachers and their mobility across jurisdictions, which need to be borne in mind when implementing reforms. For example, in contrast to decentralised systems like the United States, where salaries are determined at the district level, in centralised systems, non-pecuniary factors may play a more important role for teachers' mobility and in addressing shortages (Falch and Strøm, 2005[102]).

On average across OECD countries, decisions concerning human resource management in schools are relatively evenly distributed across different levels of government (see Figure 2.5). While decisions on teachers' duties and working conditions are highly decentralised, only 16% of countries report that schools or local authorities are responsible for setting teachers' salaries and the majority vests this authority in the central or state level. Decisions concerning the salaries of principals – as for their hiring, duties and working conditions – are even more centralised, and largely rest with central or state authorities (OECD, 2018, pp. 413, Figure D6.3a[50]).

A complicating factor is that decisions on teachers' working conditions and salaries are often taken by more than one authority. Even in countries where a single level of government has the ultimate authority across all of these domains, they usually operate in consultation with or within frameworks set by at least one other level of administration. Under these circumstances, split responsibilities for some aspects of human resource management are inevitable. For example, in 11 of 41 OECD countries and economies with available data, multiple authorities are responsible for fixing teachers' and school leaders' salaries (OECD, 2018, pp. 417, Table D6.6a[50]). As with any domain of decision making that involves authorities from different levels of government, careful co-ordination is then essential to avoid misalignments that could undermine successful reform implementation.

Figure 2.5. Responsibilities for human resource management in public education (ISCED 2), 2017

Percentage of decisions taken at each level of government



Notes: Countries and economies are ranked in descending order of the percentage of decisions about organisation of instruction taken at the school level. For a definition of levels of government, see the Glossary in Annex B.
Source: OECD (2018), *Education at a Glance 2018: OECD Indicators*, OECD Publishing, Paris, https://doi.org/10.1787/eag-2018-en, Table D6.2.

StatLink https://doi.org/10.1787/888934026373

Ensuring stakeholder involvement and teachers' buy-in

In many school systems, teachers' salaries are subject to collective bargaining agreements negotiated by teachers' unions, although the extent and mode of their engagement in the wider development of education policy varies significantly across countries. Teachers unions have occasionally been charged with impeding vital reforms in defence of vested interests and the empirical effects of unionisation on student learning have been positive in some contexts (Matsudaira and Patterson, 2017[103]; Steelman, Powell and Carini, 2000[104]) and negative in others (Kingdon and Teal, 2009[105]; Eberts, 2007[106]). Nevertheless, unions are generally recognised for their potential to play a significant role in the professionalisation of teaching and to act as constructive partners for educational improvement (Bruns and Luque, 2015[107]; OECD, 2015[108]).

In Chile, for example, negotiations between the government and the *Colegio de Profesores* – the country's main teacher union – have facilitated the passage and implementation of teacher evaluation and incentive systems. This was in part made possible by the union's adoption of a technical and proactive approach to policy making since the late 1990s. In turn, the government has involved the union in the design of teacher reforms, for example by creating a tripartite technical committee that provided a platform for the union, central and local education authorities to develop consensus positions (Gindin and Finger, 2013[109]).

A country's institutional history and degree of corporatism can have profound implications for the implementation of human resource policies. Reforms in consensus-oriented systems with strong social partners, such as Austria, may be subject to prolonged decision-making processes and a larger number of potential veto players. On the other hand, they ensure that competing interests of relevant stakeholders balance each other out and preclude one particular set of organised interests from monopolising access to policy making. A strong role for intermediary actors, such as employers' associations, can also reduce administrations' problem of "information overload" by supplying decision makers with policy-relevant information on behalf of their constituents (Nusche et al., 2016, p. 22[32]). Systems with less developed corporatist structures and more majoritarian traditions of decision making may require a very different approach to human resource policy reforms and a more proactive inclusion of stakeholders' views to foster ownership among the social partners and ensure that decisions are sustainable.

Engaging in an open dialogue with stakeholders and involving them in reform design and implementation processes are key principles of effective governance (Burns and Köster, 2016[110]; Viennet and Pont, 2017[111]). These stakeholders include the relevant unions representing teachers in different sectors and at different levels of administration. To build and sustain trust for the implementation of reforms, they must be underpinned by clear communication, consensus building, and a process for prioritising competing claims on resources. Education authorities can facilitate this process by communicating their long-term vision and by enabling stakeholders to understand the educational rationale behind the proposed reform packages (Burns and Köster, 2016[110]). Failing to effectively engage stakeholders in compensation reforms can come at a high cost and some OECD review countries have had to delay or abandon their projects in the face of stakeholders' resistance (Liebowitz et al., 2018[7]).

Providing fair arrangements for reform transition periods

Reforms of teachers' salary scales are often part of larger adjustments to teacher service codes. Particularly where they involve amendments to the distribution of earnings over the course of the career or changes to the salary progression process, collective agreements may require governments to allow teachers who took up work prior to a given date to continue their career on the previous terms. The result is often a divided teaching profession that is subject to different working conditions for extended periods of time. Managing these transition periods in an equitable way can be a significant challenge.

In Austria, a new teacher service code introduced in September 2015 has compressed the slope of teachers' compensation structure to provide higher statutory starting salaries while roughly maintaining their lifetime earnings. The salaries of teachers who joined the profession under the old service code will not be affected and new teachers joining the profession until September 2019 have been given the choice between the old and the new salary structure (Nusche et al., 2016, p. 78[32]). During the review visit, teachers in Austria expressed concerns that the employment under different service codes and the differences in salaries and benefits associated with them might create tensions among colleagues that will negatively affect the school climate (Nusche et al., 2016, p. 160[32]).

Similar challenges have been observed in Colombia since introducing a new employment framework and salary scale for public school teachers in 2002, which left the old system in place for all teachers recruited prior to this date. While salary increases under the new statute are conditional on teachers' performance, teachers under the old statute benefit from automatic salary progression. The resulting differences in employment conditions have

occasionally placed a strain on the working climate and collegiality in schools, particularly since opportunities for salary progression under the new teacher statue have been restricted, causing a large share of teachers to remain on the first step of their respective scales. In addition, teachers working under the new statute are subject to annual evaluations by their school principals, which teachers under the old statute are not (Radinger et al., 2018, pp. 25, 241[8]).

When Chile introduced a new salary and career structure from 2016, it addressed these challenges by re-assigning practicing teachers to those positions in the new structure that corresponded most closely to their current roles. All new teachers were assigned to the lowest stage, while current ones were designated a step based on their years of experience and their previous results in multiple teacher evaluation processes (Santiago et al., 2017, p. 240[9]).

2.4. Working conditions in schools

Working conditions in schools are usually understood to encompass the working environment and all circumstances that affect the daily work of teachers, leaders and other staff. This includes, but is not limited to, their working hours, the organisation of their work, health and safety at the workplace, and employer-employee relations[3]. Working conditions shape both the demands that school staff face in their jobs and the resources they have at their disposal to meet them.

Conducive conditions that enable school staff to work effectively are critical to support their students' success and can be an important lever to make schools more attractive places to work. Not surprisingly, the governance of working time, the organisation of administrative support and possibilities for involvement in school-level decision making played an important role for enhancing the individual and collective professional capacity of teachers and school leaders in many OECD review countries. Teachers' opportunities for professional learning – another central factor – are discussed in more detail in Chapter 4.

The pressures faced by teachers and school leaders in their daily work are well-documented, as are the prevalence and harmful impact of stress, exhaustion and burnout in schools (Viac and Fraser, forthcoming[112]; Hakanen, Bakker and Schaufeli, 2006[113]). Supporting staff in coping with these pressures by shaping their working conditions is therefore an important policy goal as highlighted in Chapter 1. While some aspects of teachers' and school leaders' working conditions are highly variable across schools – such as the quality of school facilities, the level of administrative support or the student population served – system-level policies can exert a significant influence on many of them. This includes setting standards for class sizes, the flexibility of working practices, the teaching load or professional development (Dolton, 2006[54]).

Good working conditions are also thought to play an important role in attracting and retaining high-performing teachers. At the same time, some frequently discussed responses to staff shortages (such as increasing teachers' instruction hours or class sizes) might have a detrimental effect on working conditions. Potential trade-offs between the supply and retention of teachers, their effectiveness and working conditions are therefore highly relevant for policy makers (Santiago, 2002, p. 63[55]). Nevertheless, robust evidence concerning the effect of working conditions on individual teacher supply decisions, motivation and attrition remains scarce and difficult to establish, not least since working conditions tend to be highly correlated with other school characteristics, such as their socio-economic composition (Horng, 2009[114]).

According to PISA data, cross-country differences in working conditions (teaching load and class sizes) are not significantly associated with the proportion of 15-year-olds expecting to pursue a teaching career (Won Han, Borgonovi and Guerriero, 2018[115]). Yet, practicing school teachers in a Europe-wide survey ranked improvements in working conditions and lower class sizes as one of the factors with the greatest potential to make the profession more attractive – after higher salaries and social status (European Commission, 2013, p. 72[116]). Teachers' desire for good working conditions that allow them to focus on student learning was corroborated by the results of TALIS 2018. Across the OECD, 65% of teachers considered reducing class sizes to be highly important (compared to 64% for improved salaries) and 55% attached a high importance to reducing teachers' administration load (OECD, 2019, pp. 110, Figure I.3.16[1]).

The degree of autonomy that teachers and school leaders have over their work mediates not only the subjective experience of their working conditions, but also shapes their professional identity and collective agency. Professional autonomy relates to the scope that individuals are given in deciding how to fulfil a specific set of tasks, but also their involvement in defining the parameters of their roles and the conditions they require to carry them out effectively.

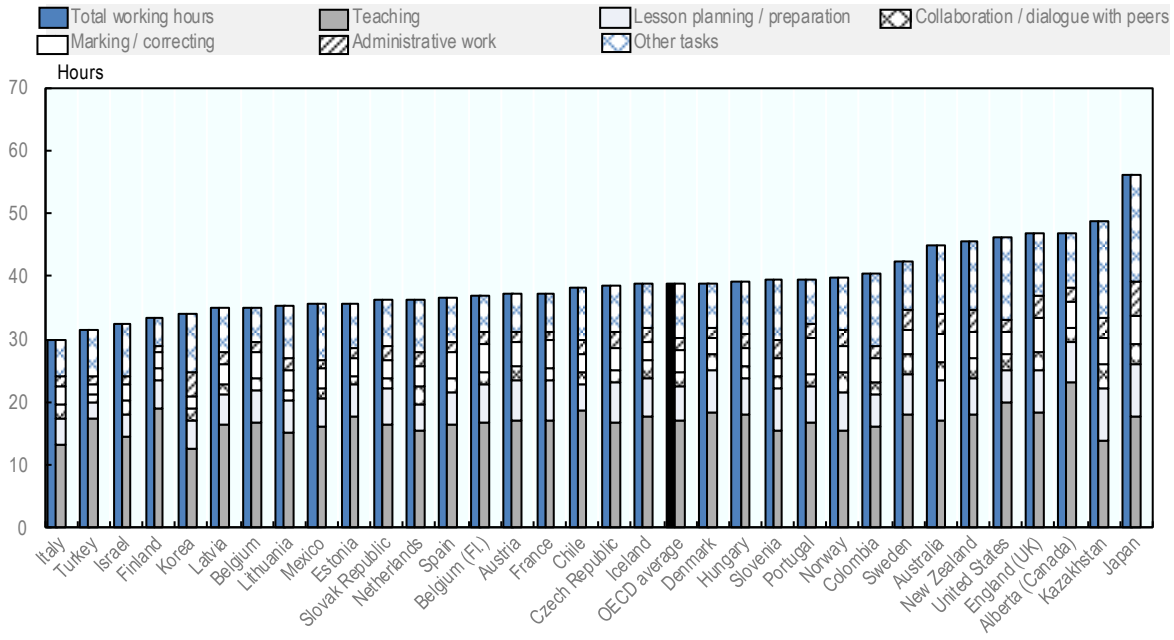
Highly qualified teachers can be relied upon to exercise their professional judgement when tailoring their pedagogical approaches to their students' needs and to continuously improve their practice. Fostering trusting relationships that allow professionals to individually or collectively take control over their work can strengthen their motivation and self-efficacy, but also generate positive outcomes at the organisational level (Wrzesniewski and Dutton, 2001[117]). However, professional autonomy is no substitute for a supportive work environment. For autonomy to lead to positive results at both the school and classroom levels, certain conditions need to be in place, which will be discussed in the following sections.

2.4.1. Teachers' working conditions, working time and teaching hours

Teachers' work is highly complex and involves a great variety of responsibilities and activities that compete for their time during the school week (see Figure 2.6 and Chapter 1). In addition to regular classroom instruction, teachers are usually expected to spend time preparing their lessons, correcting students' work, collaborating with their peers, counselling students, communicating with parents and engaging in professional learning. They may also – sometimes on a voluntary basis – engage in mentoring or induction activities for new teachers, substitute for colleagues, contribute to school projects or the organisation of extracurricular activities and participate in school self-evaluation and improvement planning (OECD, 2019, p. 72 f.[1]; OECD, 2014, p. 162[2]). Ensuring that teachers are empowered and supported in pursuing all activities that form the basis of high-quality teaching is an important dimension of their professionalism and an important condition for schools' success.

Figure 2.6. Teachers' working hours (ISCED 2), 2018

Average number of total 60-minute hours teachers report having worked during the most recent complete calendar week and estimated shares of individual tasks



Notes: The reported times are national averages of all surveyed teachers, including part-time teachers. Time spent on individual tasks was proportionally adjusted to match total reported working hours; "Other tasks" include student counselling, participation in school management, professional development, engagement with parents and extracurricular activities; A "complete" calendar week is one that was not shortened by breaks, public holidays, sick leave, etc. Also included tasks that took place during weekends, evenings or other off-classroom hours.
Source: OECD (2019), *TALIS 2018 Results (Volume I): Teachers and School Leaders as Lifelong Learners,* OECD Publishing, Paris, https://doi.org/10.1787/1d0bc92a-en, Table I.2.27.

StatLink https://doi.org/10.1787/888934026392

The excessive working hours observed in some school systems point to the challenges in providing teachers with the time and space to fulfil their various individual and collective professional demands (see Figure 2.6). This is particularly concerning since insufficient recovery time during and after the school day can exacerbate the negative impact of work-related stress on teachers' health, long-term motivation and efficacy (Gluschkoff et al., 2016[118]). Developing frameworks for teachers' working time that prevent excessive workloads, that are aligned with the breadth of their professional roles and that enable schools to effectively manage the use of their staff time – individually and collectively – while retaining teachers' autonomy is a critical challenge for any school system.

The relative amount of time that teachers dedicate to instruction, collaboration, administrative work and other tasks also varies considerably across countries. Some of this reflects different cultural traditions and conceptions of the teacher's pedagogical and professional role. Japanese schools, for example, emphasise teachers' involvement in certain non-instruction tasks (e.g. supervising children as they clean the school and or serve school lunches to classmates) as central to their pedagogical philosophy, which emphasises the cultivation of life competencies as part of a holistic education (OECD, 2018, p. 53[119]).

In some contexts, however, teachers feel that they lack the time to prepare lessons, collaborate with peers, reach out to parents or engage in professional learning due to excessive instruction hours, administrative tasks or accountability requirements. As discussed below, such imbalances in teachers' task profiles can have a variety of causes that countries may need to address to ensure that teachers can use their time effectively.

Recognition of teachers' non-teaching tasks

The tasks that teachers perform outside of the classroom are increasingly recognised as an integral part of their professional roles. Nevertheless, in many countries, teachers are left with too little time to prepare their lessons, collaborate with colleagues, and engage in peer observation or knowledge creation. While the reasons for these shortcomings are manifold and vary across systems (as elaborated below), adopting a conception of teachers' working time that accounts for their responsibilities both within and outside the classroom is an important precondition.

In many OECD school systems, service codes and other statutes that regulate how teachers spend their time are based on a narrow conception of the profession. They primarily regulate teaching hours, (i.e. the time teachers are expected to spend on classroom instruction) while only vaguely defining non-teaching time. According to information collected for OECD Education at a Glance, at least 20 of the 34 countries with available data for 2012, required lower secondary teachers to plan and prepare lessons, to engage in teamwork and peer exchange or communicate and co-operate with parents during their statutory working time. Around half of the countries also required teachers to mark or correct students' work, engage in general administrative communication and paperwork, and professional development activities (OECD, 2014[52]). Nevertheless, although many OECD countries specify the non-teaching tasks required of teachers in their working conditions, most countries do not make explicit how many hours teachers should allocate for each or sum of these activities.

The teachers service code for Austrian federal schools does not specify an overall workload but, prior to the implementation of a new regulations in 2015 (see Box 2.5), merely provided them with a basic teaching assignment of 20 hours, weighted by the subjects they taught (Nusche et al., 2016, p. 151[32]). In the Flemish Community of Belgium, regulations stipulate a minimum and maximum teaching load but do not specify teachers' overall working hours or the time they are expected to spend on non-teaching tasks, which are established by schools on an individual basis (Nusche et al., 2015, p. 142[40]). Likewise, teachers' contracts in Uruguay are based exclusively on a stipulated number of teaching units. Even though the contracts in secondary education stipulate anywhere between 20 and 48 teaching hours, low salaries have compelled many teachers in Uruguay to supplement them with additional teaching hours in a second or third school, which leaves little room for non-teaching activities or professional learning (Santiago et al., 2016, p. 230[41]).

Failing to explicitly account for teachers' time spent on non-instruction tasks has a number of negative consequences for the effective use of their time and the status of the profession. On the one hand, it fails to provide any formal recognition for the important work that teachers perform outside of the classroom, which can have a detrimental effect on their motivation. On the other hand, it diminishes school leaders' capacity to plan their teachers' time based on a holistic conception of their tasks. Failing to account for teachers' non-teaching tasks can leave them with insufficient time to pursue these duties, which in turn has a negative impact on the quality of their teaching and their engagement with peers or the wider school community.

To address these challenges, all factors contributing to teachers' workload – including their non-teaching obligations – should be taken into account when determining their teaching hours. This principle was already recognised in the 1966 ILO/UNESCO Recommendation concerning the Status of Teachers (ILO/UNESCO, 2016, pp. 36, §§ 90-93[120]). Reflecting the time teachers are expected to commit to non-instruction tasks in service codes and working regulations is an important step to align regulations with modern conceptions of teacher professionalism. Moving towards an employment framework that recognises teachers' entire workload can also provide a good basis for moving towards a greater diversity in teachers' roles and granting schools more flexibility in allocating individual teachers' time to instructional and non-instructional activities, depending on the functions they perform at the school.

Examples of workload-based conceptions of teachers' working time can be found in a number of OECD review countries, including Chile, Estonia, Lithuania and the Slovak Republic. There are different ways for introducing such employment systems (see Box 2.5 for examples). Some school systems specify nothing but the overall workload, leaving it to school principals to assign teachers' time across different kinds of activities. Others indicate the total number of hours or a proportion of teachers' time that should be dedicated to teaching and non-teaching activities (e.g. 60/40 or 75/25), or they might be even more prescriptive, stipulating guidelines or requirements for the weekly time to be spent on specific non-instruction tasks or categories of tasks.

Box 2.5. Workload-based models of teacher working time

Shifting from employment based on teaching hours to a workload system in Estonia

In 2013, teacher employment in Estonia was reformed based on the Working Time of Educational Staff Act. The reform marked a shift from a teaching load system – in which staff contracts only specified teaching hours – to a workload system that specifies the total number of working hours and defines the full range of tasks that teachers are expected to perform. The reform implicitly acknowledged 290 annual hours spent on non-teaching activities in pre-primary education, 921 in primary and lower secondary education and 972 in upper secondary education, yielding a total annual workload of 1 610 statutory working hours in pre-primary education and 1 540 hours in primary to upper secondary education (corresponding to 35 weekly hours). These overall working hours are below the OECD average, as were the teaching hours specified by the old system. Given that the new regulations no longer specify teaching hours, the distribution of teachers' overall workload across individual teaching and non-teaching tasks is at the discretion of the school management. In some cases, school leaders' decisions on the use of teachers' time are subject to political agreements at the municipal level or with a school's teacher council.

Source: Santiago, P., A. Levitas, P. Radó, C. Shewbridge (2016), *OECD Reviews of School Resources: Estonia 2016*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264251731-en.

Creating more time for non-teaching activities through a workload system in Chile

Chilean teachers are employed on the basis of a workload system that stipulates their total working hours and the teaching and non-teaching activities they are expected to perform within this time. In 2014, teachers at all levels had 2 006 annual working hours, of which 75% were designated to classroom activities, which constituted both a heavy workload and a high proportion of contact hours by international comparison. Motivated in part by a desire to ameliorate these working conditions, Chile introduced a new System for Teacher Professional Development in 2016. The new law initiated a reduction in the proportion of

teaching time to 70% of the workload by 2017 and to 65% of the workload by 2019. This provides teachers with more time to engage in non-teaching activities, fosters teachers' engagement in the school and provides greater opportunities for collaboration among peers since teachers are required to stay at the school during some of their non-instruction hours.

Source: Santiago, P., A. Fiszbein, S. Garçia, T. Radinger (2017), *OECD Reviews of School Resources: Chile 2017*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264285637-en.

Workload-based systems in provincial and federal schools in Austria

In Austria, the workload of teachers in provincial schools is regulated to comprise 1 736 hours of work per year for teachers aged 43 or older, and 1 776 hours of work per year for all younger teachers. The annual standard is divided into three activity areas: teaching duty including supervision; preparation, follow-up and correction; and hours for other activities such as substitute teaching, class co-ordination, administrative tasks and school projects. Over one year, 720 to 792 hours, that is about 20 to 22 hours a week, have to be dedicated to direct teaching, 600 to 660 hours are foreseen for the planning and follow-up of lessons, and the remaining 324 to 456 hours of the annual standard are available for other activities. For all teachers, the task of student assessment is regulated and typically takes up a substantial amount of their teaching time. While no such workload system exists in federal schools yet, a new teacher service code (*Dienstrechts-Novelle 2013 – Pädagogischer Dienst*) implemented in 2015 has sought to harmonise the working time arrangements of federal school teachers with those in provincial schools. This included a slight increase in their teaching load from 20 to 24 units of 50 minutes per week and the specification that two of these need to be spent on non-instructional tasks, such as student counselling and mentoring new teachers, which had not previously been acknowledged.

Sources: Bruneforth, M. et al. (2016), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools*, *Country Background Report for Austria*, Bundesministerium für Bildung und Frauen, Vienna; http://www.oecd.org/education/schoolresourcesreview.htm; Nusche, D., T. Radinger, M. R. Busemeyer, H. Theisens (2016), *OECD Reviews of School Resources: Austria 2016*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264256729-en.

Of course, other obstacles besides a lack of official recognition, may impede teachers from using their non-teaching time effectively to engage in collaboration and the preparation of lessons. In Uruguay's general and technical-professional secondary schools, for example, teachers' working time includes a number of hours for non-instructional activities. Given that many teachers are required to work in multiple schools, though, teachers' ability to make use of this time to collaborate with other teachers or participate in co-ordination meetings is significantly diminished (Santiago et al., 2016, p. 187[41]).

Scope for teaching load adjustments

Some countries allow statutory teaching hours to be adjusted to reflect teachers' other commitments, their experience, their effectiveness or the subjects they teach. At the time of the OECD review in 2015, for example, Austrian federal schools adjusted their teachers' basic instruction time of 20 hours depending on the subjects taught (e.g. German language instruction receives a higher weighting than physical education, resulting in a range of about 17 to 21 teaching hours) and the fulfilment of additional responsibilities, such as managing the school library or providing administrative support for the principal (Nusche et al., 2016, p. 151[32]). Since 2019, all new teachers entering Austrian federal or provincial schools are expected to teach 22 hours per week, regardless of their subjects, and to spend an additional two hours on mentoring and counselling or some form of leadership activities

(with the exception of upper secondary core subject teachers, who are expected to teach only 20 hours).

Of the 39 OECD members and review countries with available data for OECD Education at a Glance 2019, only a few reported to adjust teachers' instruction hours to incentivise their engagement in non-teaching tasks. In Denmark instruction hours are lower for teachers who take on additional school management activities and those who teach students with special educational needs (SEN). In Slovenia, teachers benefited from reduced instruction hours for serving as class teachers and, at the upper secondary level, for engaging in management activities. In the Slovak Republic, instruction hours were reduced for teachers engaged in student counselling (see Figure 2.3) (OECD, 2019[23]).

Teaching loads can also be adjusted to respond to teachers' changing capacity and needs over the course of their career. Beginning teachers, for example, tend to report lower levels of self-efficacy and effectiveness in the classroom, are at the highest risk of leaving the profession, and tend to be assigned to more challenging schools (OECD, 2019, p. 39[1]; Jensen et al., 2012[31]). Reducing novice teachers' teaching load could help them to focus on developing their teaching skills at the beginning of their careers, while experienced or highly effective teachers might cope more easily with additional instruction hours or larger, more challenging classes. Other strategies, such as team teaching, could allow effective teachers to share responsibility for the quality of a less experienced teacher in exchange, for example, for a reduced administrative workload (Jensen et al., 2012, p. 110[31]).

Despite the various ways in which teaching load adjustments could improve a school's effectiveness, teachers' working time and how they are expected to use it changes remarkably little over the course of their careers. According to TALIS 2018 data, for example, most OECD countries do not adapt the teaching load of novice teachers in any meaningful way to reflect their lack of experience and their potentially greater need for professional development. On average across the OECD, novice teachers report having about the same number of teaching hours as their more experienced peers, even though teachers' effectiveness is known to increase markedly during the first years on the job (Kraft and Papay, 2014[121]). In ten countries and economies, novice teachers reported a higher teaching load and although the opposite pattern can be observed in 18 systems, there are only six countries and economies in which novice teachers have to teach at least two hours less than their experienced peers (OECD, 2019, pp. 208, Table I.4.57[1]).

Some OECD review countries adjust teachers' instruction hours towards the end of their careers. For example, while novice teachers in Portugal benefit from reduced teaching hours, the same is true for senior primary school teachers who benefit from a reduction of five teaching hours at the age of 60 and the completion of 25 years of full service. Those in secondary education receive a reduction of two hours at the age of 50 (and 15 years of service), another two at the age of 55 (and 20 years of service), and another four hours at the age of 60 (and 25 years of service). Although their overall working hours remain unchanged, they are not required, for example, to use this additional time to support less experienced peers (Liebowitz et al., 2018[7]).

OECD review countries also assign varying degrees of responsibility to school leaders in adjusting individual teachers' teaching load and assigning non-instructional tasks and responsibilities. In theory, greater flexibility in the allocation of teaching hours could allow for a more efficient management of teachers' time by adapting it to the learning needs of their students as well as the competencies, strengths, weaknesses and learning needs of staff. Whether or not expanding school leaders' scope for adjustments would lead to a more efficient allocation of tasks and responsibilities in practice depends on a range of factors,

including the ability of school leaders to recognise teachers' needs and potential and to work with them to address students' needs. In any case, translating this flexibility into practical improvements can take time and requires strong leadership.

In 2013, Denmark passed new legislation (Act no. 409) which gave school leaders greater scope in determining the use of teachers' working hours. While agreements had regulated the amount of teaching hours and given every teacher a dedicated amount of preparation time for each class they taught (regardless of their subjects or experience) prior to this, the new framework enabled school leaders to, for example, assign more teaching hours to experienced teachers or reduce their contact hours with students to let them support newly qualified colleagues in their school or collaborate with peers on their areas of expertise.

While the new regulations established the necessary conditions for managing teachers' time more efficiently, the OECD review team noted that not all school principals were prepared to make the most of it. Many school leaders lacked examples of effective ways to allocate the working and teaching hours of their workforce based on the needs of teachers and students and reported a lack of capacity to evaluate the effectiveness of their interventions (Nusche et al., 2016, pp. 52, 147, 169[15]).

At the same time, the new framework has prompted some concerns since it has not only led to a redistribution of instruction hours across teachers, but also their overall increase by an average of two hours per week. To balance teaching and non-teaching hours and ensure that the overall workload system supports rather than restricts teachers' work outside the classroom, many Danish municipalities have therefore introduced upper limits for teachers' weekly instruction hours (Nusche et al., 2016, p. 52[15]).

Accountability and presence at school

In many OECD review countries, teachers have traditionally enjoyed a high degree of autonomy over the use of their non-teaching time, deciding not only how, but also where to spend it. Many school systems thus do not prescribe whether teachers should spend any of their non-teaching time at school, leaving it to them to work from home. This is the case in Austria, for example, where the teacher service codes do not regulate the hours that teachers are expected to be present at school (Nusche et al., 2016, p. 151[32]). By contrast, full-time teachers in Colombia are required to spend at least six of their eight daily working hours on school premises (Radinger et al., 2018, p. 235[8]), whereas teachers at the pre-primary and primary level in the Flemish Community of Belgium, are required to spend a certain amount of time at the school, but only marginally more than their teaching hours (Nusche et al., 2015, p. 143[40]).

Where national service codes do not prescribe the amount of on-site presence or the tasks that teachers are expected to perform in their non-instruction time, doing so may be at the discretion of school leaders, as is the case in Flemish secondary schools (Nusche et al., 2015, p. 143[40]). Yet, principals' leverage over their teachers' presence in schools may be limited. Even though Portuguese teachers are normally expected to devote about ten hours of their weekly non-teaching time to tasks like grading assignments, contacting families and planning lessons at school, their principals can only define the content of up to 2.5 of these hours (Liebowitz et al., 2018[7]).

In 2018, more than half of OECD countries and economies with available data specified the overall amount of time that primary and secondary teachers are required to be available at school. The differences between teachers' statutory teaching hours, their overall working time and the hours to be spent at school provide some indication of where teachers are

expected to work when not teaching and reveal large differences across countries. In general programmes at the lower secondary level, official regulations suggest that teachers are expected to spend at least 500 hours a year performing non-teaching duties on school premises in Chile, Greece, Hungary, Iceland and Norway and at least 300 hours a year in Canada, Colombia, Israel, New Zealand, Spain, Turkey and the United States. However, in almost half of the countries, central regulations do not mandate teachers to spend any at school beyond their teaching hours, or relatively little (e.g. 85 hours in Ireland and 30 hours in Latvia) (OECD, 2019, pp. 427, Table 4.1b[23]).

Teachers' shared presence in schools can make it easier for them to engage in informal professional exchange, observe each other's practice, collaborate on projects, engage in collective knowledge creation, and innovate (Paniagua and Istance, 2018[122]). According to TALIS results, having a collaborative culture within the school, the use of team teaching, peer observation and feedback, and collaborative professional learning, are also some of the factors that show the strongest association with teachers' self-efficacy and job satisfaction (OECD, 2014, pp. 424 f., Tables 7.16 and 7.17[2]). Yet, not all schools provide teachers with physical spaces to work with colleagues, and opportunities for interaction among peers are often limited in practice due to a lack of shared non-teaching time at school.

In order to facilitate teachers' collaboration and increase accountability around their non-instruction time, countries like Denmark have taken steps to increase teachers' presence at school beyond their teaching hours. Following the passage of the above-mentioned legislation that afforded greater flexibility in the organisation of teachers' time (Act no. 409) in 2013, more than half of Danish municipalities introduced attendance requirements that demand teachers to be present at school for a certain duration of the day, irrespective of their number of teaching hours (Nusche et al., 2016, p. 52[15]).

Of course, building a collaborative culture in schools requires more than teachers' shared presence and attempts to impose professional collaboration may be counter-productive and poorly received by teachers. Conversely, teachers who perceive their school's atmosphere to be collegial and conducive to their professional learning may spend more time on the school premises of their own volition. As discussed in more detail in Chapter 4, the importance of ensuring that teachers can spend time together at the school therefore needs to be balanced against the risk of imposing collegiality or crowding teachers' agenda with time requirements that might inhibit bottom-up professional initiatives and true collaboration (Schleicher, 2018, p. 88[66]). The strong resistance experienced in Denmark demonstrates that changes to teachers' working hours can be seen as an infringement on their autonomy and it underlines the importance of ensuring buy-in from teachers and stakeholder support (Nusche et al., 2016, p. 52[15]).

Professional autonomy and self-governance

An extensive body of research points to professional autonomy as a key dimension of job characteristics that affect workers' sense of self-efficacy, their satisfaction and intrinsic motivation (OECD, 2013[123]; Hackman and Oldham, 1976[124]). Conversely, a desire for autonomy is driving many professionals to engage in an ongoing process of reinterpreting and reshaping the tasks, meanings and relationships associated with their jobs (Wrzesniewski and Dutton, 2001[117]). In this context, the organisational factors that shape teachers' control over their working conditions may have a significant bearing on their professional efficacy, job satisfaction and well-being. Teachers' autonomy in the classroom, i.e. the extent to which they are entrusted with exercising professional

judgement over curricular choices, instructional planning and classroom practices is a central component of professionalism (OECD, 2016, p. 33[125]). It has also been shown to affect turnover rates among some groups of teachers (Ingersoll and May, 2012[126]).

Multiple OECD review countries provide teachers and school leaders with considerable professional autonomy. In the Czech Republic, for example, schools and teachers are given significant flexibility in designing and adapting school-level curricula based on a set of broad national education objectives. In addition, teachers have a high level of autonomy in their choice of adequate pedagogical methods and educational materials. This provides a strong foundation for teacher professionalism and reflects the Czech Republic's high level of trust in teachers' professional judgement and their ability to tailor teaching practices to students' needs (Shewbridge et al., 2016, p. 143[20]).

Of course, greater classroom autonomy needs to be complemented by adequate support and collective capacity to enable teachers to make effective use of this autonomy. In the Czech Republic, for example, school-level co-ordinators provide advice on the development of local curricula and teachers can rely on assistants to help them, for example with non-teaching tasks or in supporting students with special needs (Shewbridge et al., 2016, p. 165[20]). Other important conditions for effective teacher autonomy are sufficient opportunities for professional exchange, regular feedback, mentoring and professional learning (see Chapter 4).

Teachers' involvement in decision-making processes that affect their work is another significant dimension of their autonomy. The degree of staff involvement in school-level decisions plays a critical role in strengthening teachers' professionalism (OECD, 2016, p. 34[125]). It can provide a means for schools to mobilise leadership capacity at all levels and offers teachers an opportunity to communicate their needs while also assuming collective responsibility for their school's improvement. As discussed above, establishing roles that allow teachers to take on leadership tasks allows schools to draw on their growing expertise while at the same time providing attractive opportunities for professional growth within the teaching career.

Beyond the permanent assumption of leadership roles, there are many ways in which teachers can play a role in school management, either as individuals or collectively. These practices are not always formalised and their prevalence varies significantly both across and within countries. In most OECD systems, however, the majority of principals surveyed in PISA 2012 reported that they provide their teachers with regular opportunities to make decisions on school practices between once a month and once a week. By contrast, teachers' opportunities to engage in reviewing their schools' management practices was a lot more variable across OECD countries and, on average, 50% of principals reported this to happen never or only once or twice a year (OECD, 2013, pp. 396, Table IV.4.8[127]).

The TALIS 2013 survey conceptualised teachers' decision-making autonomy to include their involvement in decisions concerning five domains: content, course offerings, discipline practices, assessment and materials (OECD, 2016, p. 55[125]). The average number of decision-making domains that principals reported their teachers to be significantly involved in ranged from a high of 4.1 to a low of 0.9 across TALIS countries. However, the number of domains that teachers are reported to be involved in did not appear to have a strong relationship with teachers' predicted satisfaction, their perceived professional status, their satisfaction with the work environment or their self-efficacy (OECD, 2016, p. 55[125]).

This seeming lack of association may reflect differences between principals' and teachers' perception of their opportunities to be involved in school management. The experience of the OECD reviews also suggests, however, that teachers' involvement cannot be reduced to a simple binary and that the quality and type of involvement determines its potential for strengthening collective professional capacity and improving students' learning in school.

In Colombia, for example, the OECD review team observed a range of ways in which teachers are given a say in their schools' governance, but also in the development of their profession and education policy more widely. Within the school, teachers have a prominent role in decision making through their participation in the governing board (*consejo directivo*) and the academic council (*consejo académico*), which are responsible for the organisation, pedagogical orientation, implementation and continuous improvement of the school curriculum and study plan (Radinger et al., 2018[8]). Similar teacher bodies exist in the schools of a range of OECD review countries, including the Czech Republic, Estonia, Portugal, the Slovak Republic and Spain.

In Colombia, the school calendar furthermore includes five annual weeks dedicated to institutional development, during which teachers work on the school's educational project (*Proyecto Educativo Institucional*), its study plan, pedagogical developments, self-evaluation, and partnerships with other institutions (Radinger et al., 2018, p. 245 f.[8]).

Teachers' involvement in educational governance at the school level can also feed into the formulation and implementation of education policy at higher levels of administration, complementing the critical roles that teacher unions and professional bodies, such as teacher or school leadership councils, often play in this processes. In Uruguay, for example, schools are required to organise two Teachers Technical Assemblies (*Asambleas Técnico Docentes*) a year, which serve as a platform for teachers to consult their school leadership and to voice their views on national policy initiatives (Santiago et al., 2016, p. 174[41]).

2.4.2. School leaders' working conditions, task profiles and time use

The tasks and responsibilities associated with school leadership roles and positions vary across OECD countries and, to some extent, among schools within them. Yet, it is widely acknowledged that the role of principals has expanded and become increasingly complex. In many systems, this is reflected in a high workload (Pont, Nusche and Moorman, 2008[27]). Survey data from the United States, for example, suggest that principals spend on average 60 hours per week on school-related activities (Mitani, 2018, p. 841[128]) and that as few as 4% of principals work 40 hours a week or less (Yan, 2019[129]).

Besides their formal responsibilities, a range of factors related to principals' working conditions can moderate their task profile, workload and ability to live up to the demands placed upon them. These include the support they receive from the education administration, administrative staff and middle management within their school, and networks that connect them with peers, but also their individual skills and preparation.

School leaders' task profile and autonomy

School leaders typically function as the supervisors for all school staff, including teachers, advising them on their teaching and pedagogical work and monitoring their instruction and students' achievement. They are also responsible for liaising between the school, its students, their parents, the school partners and the wider community, and for implementing the decisions adopted by school boards as well as laws and directives issued by education

authorities. In addition, they are held accountable for and may be expected to report data on various aspects of the school's conditions to the responsible authorities.

The task profile of school leaders differs markedly when it comes to their pedagogical, organisational, staff and financial responsibilities, depending on the schools' curricular autonomy and their scope to manage their own budget and recruit staff for their school. The extent of school leaders' autonomy is an important dimension of their working conditions. Sufficient levels of autonomy for school leaders can enhance their ability to engage in pedagogical leadership while control over resource allocation decisions can have positive effects on student outcomes in specific contexts (Hanushek, Link and Woessmann, 2013[130]), provided that principals possess sufficient managerial and leadership capacity and adequate accountability and support mechanisms are in place.

In some OECD review countries, principals are entrusted with little formal power to engage in autonomous decisions (Santiago et al., 2016[41]). For example, in systems with centralised processes for the selection and distribution of teachers, school leaders' contribution to the hiring process may be limited to submitting estimates of their demand for human resources, serving in an advisory capacity or exercising the right to veto proposed appointments (see Chapter 3).

Limiting the scope of school leaders' decision-making authority can be a pragmatic response to limited leadership capacity and resources. On average across the OECD, school principals report spending 30% of their time on administrative tasks or meetings and a shortage of time for instructional leadership was among the most frequently cited resource issues hindering quality instruction among school leaders participating in TALIS 2018 (OECD, 2019, pp. 109, Figure I.3.15[1]).

In some OECD school systems, principals – especially in smaller schools – may have a substantial teaching load or lack administrative support and middle leadership staff. Local or central authorities may therefore seek to reduce their administrative burden and allow principals to focus on other areas of work by retaining certain responsibilities, e.g. related to budgeting and accounting (OECD, 2017[101]). It must be borne in mind, however, that school leaders' limited autonomy or a lack of support to exercise it effectively reduces their ability to align budget allocations and operations with their schools' pedagogical needs and may also render a leadership career less attractive to some candidates.

School leaders' use of time

In addition to the various dimensions of leadership and conflicting demands placed on school leaders' time, additional external responsibilities can limit the time that principals have at their disposal to engage in the management and improvement of their schools. Not all school leaders, for example, are exempt from teaching duties and although countries such as Austria have lifted teaching requirements for most school leaders, they remain in place in small and very small schools (Nusche et al., 2016, p. 157[32]). Principals' involvement in regular instruction activities can take away time from other tasks, notably organisational management activities (such as managing budgets and staff and hiring personnel), which studies of principals in the United States have shown to be associated with positive school outcomes (Horng, Klasik and Loeb, 2010[131]).

In other OECD review countries, like Uruguay, low salaries have created incentives for school leaders to take on additional roles in private schools, teacher education institutions, or adult education to supplement their income, diminishing the time and energy they can devote to effectively run their schools (Santiago et al., 2016, p. 184[41]). In situations like

these, an adequate level of remuneration combined with effective accountability systems around school leaders' use of time may help to ensure that they commit sufficient time and energy to the management of their schools.

Even where principals can dedicate themselves exclusively to their leadership role, there is considerable variation in the way they organise their time and disagreement over the kinds of activities that they should prioritise. One of the many trade-offs principals face is the question how to divide their time among tasks associated with administrative, organisational and pedagogical leadership. Studies drawing on time-use data collected by trained observers in the United States find that while principals' overall time invested in instruction-related activities does not predict their students' achievement growth, some forms of pedagogical leadership are more effective than others. The time principals spend on teacher coaching, evaluation, and developing the school's educational program, for example, was associated with achievement gains, while the time they spent on informal classroom walkthroughs had a negative impact – possibly because they tended not to be integrated in the schools' broader school improvement strategy (Grissom, Loeb and Master, 2013[132]).

Considering the intense demands placed on school leaders' schedules, their effectiveness depends on an ability to prioritise and manage their time efficiently, which may include identifying priorities, remaining organised, setting achievable goals and monitoring one's progress towards them. In a study of a large school district in the United States, principals with stronger time-management skills reported lower levels of stress and appeared to be better at prioritising tasks that they considered to be of high priority, particularly instructional leadership. Principals' time-management skills were also associated with the positive evaluation of their job effectiveness by assistant principals and teachers at the upper secondary level, although not at the lower secondary and primary levels (Grissom, Loeb and Mitani, 2015[133]). Since time-management skills are comparatively easy to impart, the study's authors conclude that offering training to principals could be an effective means to increase their time spent on high-priority tasks and reduce stress. A precondition for this is to build a shared understanding of priorities for principals to spend their time on, for example through a set of school leadership standards, jointly developed with the profession.

Although the general effect of workplace stress on performance and other outcomes, such as turnover, is well-documented (Jamal, 1984[134]), relatively little is known about the specific ways in which intensified work demands and stress affect principals' ability to engage in administrative and pedagogical leadership, as well as their relationships with teachers. The few studies investigating the impact of principals' working conditions on turnover rates have failed to established consistent effects and suffered from data limitations, such as the inability to distinguish between principals' voluntary departure and their dismissal due to under-performance (Yan, 2019[129]).

Investigating the potential negative consequences of principals' workload and strategies to address them therefore remains a priority. This is particularly critical at a time when some OECD school systems are looking for ways to increase school-level accountability (OECD, 2013[3]), since sanction systems (such as those introduced under the No Child Left Behind Act in the United States) are likely to further intensify the pressures experienced by principals (Mitani, 2018[128]).

2.4.3. Administrative tasks and support

Teachers' work is associated with a range of administrative tasks, both inside and outside of the classroom. On average across the OECD, teachers report spending 2.7 hours per week engaging in general administrative work. This includes various forms of communication, paperwork and other clerical duties, for example keeping systematic minutes of meetings, documenting their year planning, or justifying decisions they take in writing (e.g. to fail a student or take specific remedial measures). In addition, teachers report spending 8% of an average lesson on administrative tasks (e.g. recording students' attendance) (OECD, 2019, pp. 205, Tables I.2.27 and I.2.10[1]).

Countries differ not only with regard to the administrative requirements that schools are expected to fulfil, but also in the extent to which these duties are shared between teachers and administrative staff. Receptionists, secretaries, bookkeepers and clerks can assume various secretarial and logistical tasks to enable teachers and school leaders to focus on their core pedagogical responsibilities. In addition, professional pedagogical support staff or teacher aides may assume administrative tasks that other systems consider to be the responsibility of teachers (also see Chapter 3).

Regardless of these differences, the management of administrative tasks and support is an important concern for teachers across OECD review countries. Administrative overload is frequently cited as a source of frustration among teachers and one of the factors that reduce the attractiveness of their profession (Nusche et al., 2015, p. 151[40]). Not surprisingly, on average 55% of teachers in OECD countries said that reducing the administrative workload was of high importance when asked for their spending priorities in TALIS 2018. In 24 of the 48 participating countries and economies, teachers ranked "reducing teachers' administration load by recruiting more support staff" as one of their top three priorities (OECD, 2019, pp. 110, Table I.3.66[1]).

The inadequate organisation and distribution of administrative work can also be a significant source of inefficiency. In some countries, such as Austria, for example, the OECD review team observed that many teachers have to assume a significant share of logistical and secretarial tasks due to a lack of sufficient administrative support - sometimes in return for a reduced teaching load. This not only reduces the time that they can spend on instruction and the preparation or follow-up of classes, it is also inefficient, given that teachers' time tends to be more highly remunerated than that of administrative staff (Nusche et al., 2016, p. 171[32]).

In other cases, for example in primary schools of the Flemish Community of Belgium, similar challenges have been observed for school leaders, many of whom reported that they lacked the time to engage in teacher appraisal and coaching due to their administrative workload (Nusche et al., 2015, p. 164[40]). The distribution of administrative tasks among teachers has also been a cause for concern in some OECD review countries, since novice teachers have been reported to be disproportionately burdened with these duties (Nusche et al., 2016, p. 171[32]).

The causes of administrative overload can be complex and vary across contexts. In some cases, excessive administrative requirements may be at the heart of teachers' administrative burden and technological solutions, such as advanced data management systems, can undoubtedly play a role in alleviating them in some cases. Nevertheless, the mix of staff in schools and the distribution of responsibilities among them tends to be at the forefront of both practitioners and policy makers' concerns when it comes to teachers' administrative work (see Chapters 1 and 3). Across the OECD countries and economies participating in

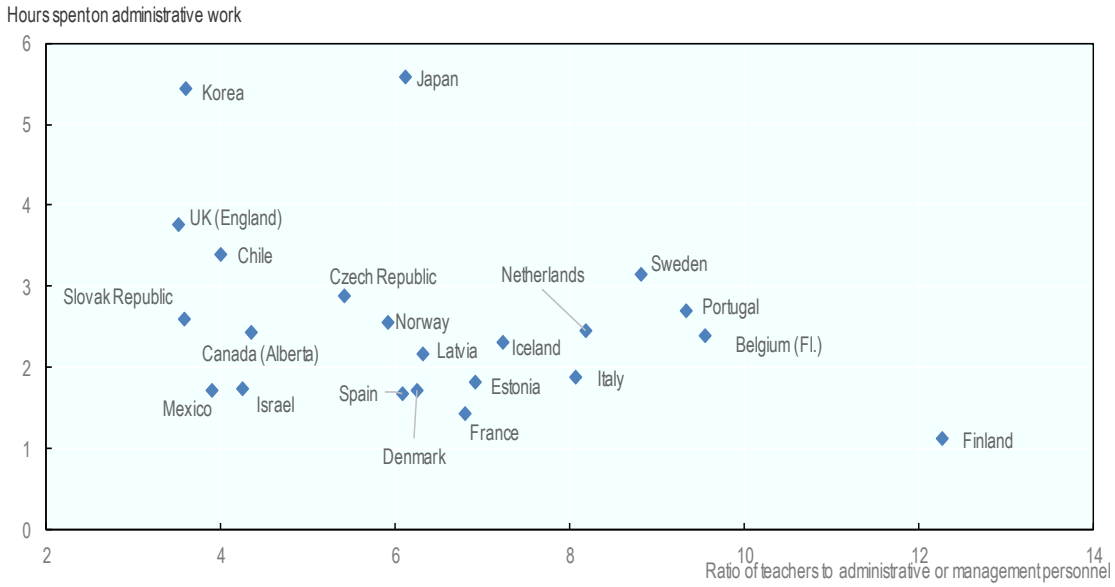
TALIS 2018, for example, a lack of support personnel remains the resource shortage most frequently reported by principals (OECD, 2019, pp. 109, Table I.3.63[1]).

The way in which teachers and school leaders are supported in their work varies significantly across OECD school systems (see Figure 2.7 and Chapter 3). According to lower secondary principals' reports, there are on average seven teachers for each administrative or managerial school staff member across the OECD, but the ratio ranges from as little as 3 in New Zealand to 20 in Austria. Between 2013 and 2018, this ratio has remained relatively stable across TALIS countries (see Chapter 1). Some school systems, such as Iceland and Sweden, appear to compensate for a relatively small number of administrative staff by employing a greater number of other pedagogical support personnel (including teacher aides and other non-teaching instruction support staff, curriculum specialists, educational media specialists, psychologists or nurses), while other OECD systems, such as Austria and the Flemish Community of Belgium, provide teachers with little of both (OECD, 2019, pp. 207, Table I.3.74.[1]).

Different strategies have been invoked to alleviate teachers' administrative workload and to help them focus on their core pedagogical work, notably increasing the administrative support for schools and using existing support staff more effectively. Austria, for example, encourages groups of schools within a region to share their support staff (e.g. to provide IT support) and in some cases redeployed civil servants who had become redundant in other public services to provide administrative support to schools (Nusche et al., 2016, p. 172[32]). Yet, the marginal impact and effectiveness of hiring more staff to support teachers in their administrative duties is contested.

Across countries, there is no statistically significant association between the average proportion of teachers' working time devoted to general administrative tasks and the number of administrative and managerial staff per teacher employed in their schools (see Figure 2.7). In some of the systems with the most administrative support staff, such as Korea and England (United Kingdom), teachers devote the largest share of their working time to administrative tasks. By contrast, in countries like Finland and the Flemish Community of Belgium, teachers perform considerably less administrative work despite a small number of administrative and management support staff. A similar pattern holds for pedagogical support personnel, whose number is not related to the time teachers report spending on administrative tasks over the course of the week or during lessons (OECD, 2019, pp. 207, Table I.3.74 and authors' analysis[1]).

Figure 2.7. Teachers' administrative work and support (ISCED 2), 2018



Note: School administrative personnel include receptionists, secretaries and administration assistants; while management personnel include principals, assistant principals, and other management staff whose main activity is management.
Source: OECD (2019), TALIS 2018 Results (Volume I): Teachers and School Leaders as Lifelong Learners, OECD Publishing, Paris, https://doi.org/10.1787/1d0bc92a-en, Tables I.3.74 and I.2.30.

StatLink https://doi.org/10.1787/888934026411

Although the international comparison suggests that the employment of support staff might neither be sufficient nor necessary to ease teachers' administrative burden, the country-level data need to be interpreted with care. School systems differ with respect to the administrative duties that teachers are expected to fulfil and other factors that may mediate the observed relationship, such as the average school size. Nevertheless, some national evidence at the school level has corroborated that more administrative staff may not be correlated with lower workload. Across schools in England (United Kingdom), for example, the time teachers spent on administrative work was unrelated to both the number of classroom assistants and the ratio of administrative and managerial staff to teachers in 2013 (Sellen, 2016[135]). The relationship was equally non-significant in 40 of the 49 OECD countries and economies in TALIS 2018 with available data (authors' analysis).

Previously, starting in 2003, England had undertaken a large workforce remodelling reform, which included expanding the number and administrative responsibilities of teaching assistants with the aim to ease teachers' workload and permit them to spend more time on pedagogical tasks like planning, preparation and assessment. Despite the reform's high cost of implementation, evaluations showed mixed results, highlighting the reform's negative impact on the working conditions of support staff, its minimal impact on the time teachers spend on administrative tasks, as well as difficulties in delineating the tasks that should be transferred from those that teachers should retain (i.e. those that require their professional skills and judgement) and the transaction costs involved (Hutchings et al., 2009[136]).

Since then, between 2013 and 2015, England significantly reduced its use of pedagogical support personnel. By 2018, England was the only TALIS country with available data to report a significant reduction in the level of administrative support, from 4.1 teachers per pedagogical support staff in 2013 (the second highest level among TALIS countries) to 6.5 five years later (OECD, 2014, pp. 285, Table 2.18[2]; OECD, 2019, pp. 207, Table I.3.74[1]).

For support staff to have an effect on alleviating teachers' administrative burden, it is essential to consider how their tasks are defined, how they collaborate and co-ordinate their work with that of teachers, and how these factors interact with other developments that transform schools as working environments (Masdeu Navarro, 2015[137]). It is also important to recognise that changes in the staff composition of schools can have significant effects on the work of school staff that are not easily captured by either their overall working time or their time dedicated to individual tasks. To investigate its effects on dynamics like task compression or intensification, stress and interpersonal relationships, more fine-grained analyses are needed.

2.5. Policy options

2.5.1. Setting entry and qualification requirements that reflect professional responsibilities and respond to system needs

The mechanisms that regulate prospective teachers' entry into initial education and the profession play an important role in attracting, selecting and retaining effective staff. They affect the quality and quantity of prospective teachers and school leaders and contribute to shaping the social status of their careers. The significant heterogeneity among high-performing school systems suggests that there is no one-size-fits-all solution to the process, timing or criteria used to select effective school staff. Instead, the design of entry and qualification requirements should be informed by a range of contextual factors, including recruitment needs and the characteristics of the teacher labour market.

Whichever process the selection and retention of teachers is based on, it should be informed by teachers' demonstrated effectiveness in a classroom environment. Some school systems have chosen to engage in selection early on and raised the bar that candidates need to clear before entering the profession (e.g. by introducing stricter admissions criteria for initial preparation or additional examinations to obtain a teaching qualification). This approach tends to reduce the overall supply of teachers and risks to screen out some potential high-quality candidates since most teacher characteristics that can be readily observed prior to their entry into the classroom are imprecise indicators - at best – of their future teaching quality.

Making practical teaching experience an integral part of teacher education can alleviate some of these concerns by ensuring that initial qualifications more meaningfully reflect classroom teaching abilities. Other systems have reduced the hurdles that teachers need to take prior to entering the classroom and instead introduced a higher bar for retention later on, which may help to alleviate teacher shortages and gives schools or education authorities an opportunity to evaluate teachers based on their performance after a few years on the job. Involving teachers, leaders and their professional bodies in the design of the requirements and standards that regulate entry and retention in their profession can help ensure that they are fit for purpose and foster professional self-regulation.

Qualification requirements should reflect the fact that not all teachers of a school perform the same work and that their qualifications may evolve in line with changing task profiles and responsibilities over the course of their career. Allowing for some diversity in teachers' qualification requirements can also allow schools to recruit the right mix of expertise and skills to meet their needs. At the same time, generalised differences in qualification requirements for teachers at different levels of education (e.g. for primary versus secondary education) are rarely justified by the nature of teachers' work and can have undesirable consequences, such as reducing the supply of highly qualified graduates to teach students during the early years of their education.

In some cases, harmonising qualification requirements across levels of education can therefore lend greater recognition to highly qualified pedagogical work and address concerns about the distribution or mobility of teachers across different school settings, which is discussed in depth in Chapter 3. It should be noted though, that such a step can have significant budgetary implications and – given the inertia in the teacher workforce – can take a very long time to be reflected among practicing teachers. Gradually phasing in the convergence of qualification requirements and salaries over time can render its fiscal impact more feasible, for example by integrating more highly qualified and paid teachers at the same rate as more experienced teachers with higher salaries retire. Where the process needs to be accelerated, school systems can extend their efforts beyond the point of entry and provide practicing teachers with targeted professional development.

There is also a growing awareness that a successful teaching record alone is not sufficient to guarantee the effectiveness of future principals and that school leadership requires a distinct set of knowledge, skills and competencies. School systems should acknowledge this by developing entry requirements based on professional standards for school leadership and by providing aspiring leaders with rigorous preparation prior to assuming their position, as analysed in Chapter 4.

2.5.2. Creating opportunities for vertical and horizontal advancement in the teaching career

Career structures should offer teachers opportunities to apply the skills and experiences they acquire in roles with commensurate responsibility without having to move out of the classroom and into administrative roles. Pathways for vertical career progression can incentivise teachers to perform at their best, engage in continuing professional learning and be recognised for effective teaching. Different steps in the career structure (e.g. for beginning, advanced, senior and expert teachers) should be aligned with professional standards detailing the knowledge and skills that teachers are expected to display for different roles. This can offer a transparent structure to integrate teachers' appraisal, their certifications and promotion. Position-based standards can also provide teachers with a clear sense of their needs and opportunities for growth, particularly if they are linked to professional development opportunities.

Teachers' advancement across the career structure should be voluntary and involve a formal certification process based on national frameworks of teacher competencies. Given the high stakes of certification procedures, they should be based on standard procedures and involve an external component (e.g. external markers of a professional portfolio) to ensure objectivity and fairness. The certification process should be well-aligned with students' learning needs and linked to teaching practice, for example by including classroom observation as part of teachers' evaluated portfolio.

Once teachers have been certified as fit to perform at a given career stage, regular re-certifications after a given number of years can ensure that they remain capable of performing at a given level and reduce the risk of non-identified long-term performance concerns. Re-certification also provides incentives for teachers to continuously develop their knowledge and skills and to proactively address their learning needs. At the same time, re-certification can place significant demands on administrative resources and teachers' time, which need to be considered in its design and weighed against prospective benefits.

In addition to opportunities for vertical progression, career structures should allow for horizontal diversification and for teachers to assume leadership positions in specific areas corresponding to their interests and expertise. Allowing teachers to acquire and apply specialised knowledge and skills creates opportunities for a more effective allocation of tasks and for building both individual and collective professional capacity. It also offers teachers greater autonomy in shaping their career, which may motivate them and have a positive effect on the attractiveness of the teaching career. Examples for specialised roles that teachers might assume include teacher mentors, learning and career counsellors, curriculum experts and co-ordinators for school projects. The definition of these roles, their associated responsibilities and appropriate forms of compensation (for example reductions in teaching hours) should occur in close consultation with teachers.

2.5.3. Establishing distinct career structures and salary scales for school leaders, underpinned by clear professional standards

To make leadership positions attractive to senior teachers and to acknowledge school leaders' additional responsibilities, their salaries should be attractive not only relative to those of similarly educated adults in other occupations, but also relative to those of teachers. This should be accounted for in resource allocations and budgeting decisions. Adequate levels of remuneration could take the salaries of professionals with similar levels of responsibility as a benchmark. To ensure that all schools have a chance of attracting effective leaders, salary scales should also reflect school-level characteristics, such as size and the composition of their leadership teams, to account for the challenges associated with a given position. Separate salary scales and career structures for school leaders can contribute to raising the status of school leadership and communicate its importance, rather than treating school leadership as a mere extension of the teachers' career.

Multi-level career structures for school leaders should provide opportunities for professional advancement and continued motivation as they gain experience and assume progressively increasing responsibilities. These career structures should also provide opportunities for school leaders to progress to system leadership roles that allow them to contribute to the improvement of the wider education system. Each step of the career structure should be underpinned by an authoritative set of professional standards expressing the skills and competencies school principals are expected to have.

These professional standards can promote professionalism and a coherent vision of school leadership while increasing transparency since they can be used as a basis for the selection of candidates, their appraisal, professional development and career advancement. School leader standards should be developed with the profession to reflect the complexity of their role and go beyond the administrative qualities emphasised by traditional models of principal-ship in order to acknowledge their responsibility for pedagogical leadership.

2.5.4. Involving teachers and school leaders in the design and introduction of career structures

Giving teachers and school leaders a prominent voice in the design of career pathways and their associated professional standards is critical to guarantee their relevance and alignment with the day-to-day experience and needs of schools. It can also be an effective means to strengthen teachers' voice and sense of self-agency, their involvement in the profession's self-regulation and to generate a sense of ownership that is critical for a new career structure to be accepted, implemented and contribute to the profession's attractiveness. Teachers' participation in the process recognises their professionalism, the importance of their skills and experience and the extent of their responsibilities.

To help teachers assume greater responsibility for the self-regulation of their profession, the authorities responsible for the development of career structures should work hand in hand with teacher unions and professional organisations as well as outstanding teachers from across the system. To ensure that career pathways and opportunities for professional advancement are well understood and contribute to teachers' motivation, their implementation needs to be accompanied by a strategy for their socialisation. Initial teacher education programmes, induction courses and professional development should be adapted to reflect new career structures, to explain their implications and to take into account teachers' needs at different stages of their careers.

2.5.5. Ensuring that salaries are competitive for the recruitment and retention of high-quality teachers and school leaders

Remuneration is only one of many factors that can render a profession attractive. Working conditions, opportunities for professional learning and growth, social status, as well as professional autonomy are important to make teaching careers not only financially, but also intellectually satisfying and to attract high-calibre candidates. Nevertheless, the structure of salary scales and the factors that determine salary progressions are critical policy levers that should be considered when confronting challenges related to the supply, retention and motivation of school staff.

Ensuring that salaries are commensurate with teachers' roles and responsibilities

The optimal design of a salary scale depends on a range of contextual factors, including the structure of local labour markets, the demand and supply of teachers and the wider teacher policy environment. Yet, it is widely recognised that teachers' remuneration should be competitive with that of similarly educated adults working in comparable occupations in order to attract and retain high-potential candidates.

Depending on a country's specific policy challenges, a range of strategies can bolster the system's capacity to attract new entrants (e.g. by making the salaries of beginning teachers more attractive) or to retain experienced and high-quality teachers (e.g. by expanding the potential for salary progression). Some of these adjustments can be budget neutral while others may have significant long-term fiscal implications or incur high-transition costs, which need to be accounted for in longer-term budget plans.

How salaries compare across levels of education and between different roles also affects the relative attractiveness of different careers and the distribution of qualified candidates across different staff categories. Salaries of school leaders, for example, need to 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.

Recognising and encouraging high performance while balancing the risks of extrinsic reward structures

Providing teachers' with a good balance of intrinsic and extrinsic sources of motivation is critical to promote and reward high performance across the whole range of their tasks. Teachers' self-motivation should be encouraged by providing the conditions for their work to be intellectually stimulating and enjoyable. Many countries have sought to complement these efforts with sources of extrinsic motivation, including financial incentives.

Where available, school systems should establish clear links between teachers' salary scales and the steps in their career structure. Linking teachers' performance to financial rewards by more indirect means (for example via their career progression) can avoid some of the damaging consequences that may result from badly implemented bonus systems. Robust certification systems should govern teachers' career progression on the basis of established teaching standards and competency frameworks as well as their capacity to assume responsibilities and perform at the level required by a given step in the teacher career. Linking salaries to career progression promises to incentivise high performance while at the same time affording administrations and the teaching profession greater scope in ensuring that the frameworks guiding this process are transparent, well-understood and aligned with students' learning objectives,.

Direct links between teachers' performance and their salaries have had mixed results in practice and are notoriously difficult to implement in ways that are transparent, fair and conducive to student learning. The most encouraging examples have been based on multi-dimensional measures of teacher performance, clearly articulated the system's expectations to teachers and provided them with coaching and support to meet these expectations. Doing so can require significant investments which need to be weighed against the policy's potential gains. In addition, the evidence base is insufficient to provide clear guidance on many technical aspects of performance pay programmes, such as the optimal size of rewards or the best individual- or group-based measures to use. The overall impact of incentive systems appears to be highly variable based on their design and implementation, which often entails challenges such as the resistance among teachers, insufficient fiscal resources, and other context-dependent unintended consequences.

2.5.6. Ensuring that teachers' and school leaders' working time reflects the diversity of their tasks

Teachers are expected to engage in a range of activities beyond classroom instruction. Ensuring that they can devote sufficient time to lesson preparation, collaboration, peer observation and knowledge creation is increasingly recognised as central to their professional role and their individual and collective effectiveness. Providing employment contracts based on a workload system that stipulates the total number of hours of work (and possibly presence at school) rather than or in addition to their teaching hours is an important step to recognise the diversity of tasks that a teaching career entails.

A holistic conception of teachers' working time can make it easier for schools to foster collaboration among their staff and develop professional learning communities, for example by formally setting aside and co-ordinating time to engage in peer feedback and joint work with colleagues. It also makes it easier for school leaders to plan and allocate teaching and non-teaching hours and tasks across all teachers within their school based on the commitments and expertise of their staff or their experience and effectiveness in the classroom. All of this has not only the potential to use teachers' time and skills in schools

more effectively to build professional capacity and improve instruction, but also to make the profession more attractive. School systems also stand to benefit from gaining a better understanding of how teachers use their time in practice by investing in related research.

It is equally important to clarify task expectations for school principals and help them prioritise among various and competing claims on their time. Studies drawing on time-use data find that some forms of pedagogical leadership are more effective than others. Offering training to principals to manage their time could be an effective means to increase their time spent on high-priority tasks and to reduce stress. A precondition for this is to build a shared understanding of priorities for principals to spend their time on, for example through a set of school leadership standards, jointly developed with school leaders.

Another consideration is to redistribute leadership responsibilities within schools and systems, shifting some responsibilities for school management, professional evaluation and pedagogical leadership and supporting those responsible for each task to fulfil them effectively. Establishing roles that allow teachers to take on leadership tasks allows schools to mobilise their growing expertise while at the same time providing attractive opportunities for professional growth within the teaching career.

2.5.7. Providing a good balance of autonomy and supports for school staff to collaborate

In many OECD review countries, teachers have traditionally enjoyed a high degree of autonomy over the use of their non-teaching time, including how and where they spend it. Many school systems do not prescribe whether teachers should spend most of their non-teaching time at school, leaving it to them to work from home. However, teachers' shared presence in schools can make it easier for schools to develop a shared working culture and collaborative practice which have been shown to have some of the strongest associations with teachers' self-efficacy and job satisfaction.

While not sufficient, as discussed in Chapter 3, one way to facilitate teachers' collaboration and increase accountability around their non-instruction time is to increase teachers' presence at school beyond their teaching hours and to provide them with spaces to work independently or with colleagues. At the same time, teachers who perceive their school's atmosphere to be collegial and conducive to their professional learning may want to spend more time in schools voluntarily. In any case, requirements for teachers to spend time together at school need to be balanced with the risk of imposing collegiality or crowding schedules with time demands all of which might inhibit bottom-up professional initiative and true collaboration.

An extensive body of research also points to professional autonomy as a key dimension of job characteristics that affect workers' sense of self-efficacy, their satisfaction and intrinsic motivation. Likewise, teachers' involvement in the decision-making processes that affect their work can provide a means for schools to mobilise leadership capacity at all levels and it offers teachers an opportunity to communicate and address their needs while assuming greater collective responsibility for their school's improvement. Coupled with dedicated time for collaboration in staff schedules, evidence-based protocols or work processes and a school culture that encourages peer feedback and collaboration, a focus on teacher leadership and agency is therefore an essential ingredient to strengthen professional working environments in schools.

Notes

[1] In Austria, responsibilities for school education differ between so-called federal schools and provincial schools. Federal schools (*Bundesschulen*) comprise academic secondary schools as well as upper secondary vocational schools and colleges (ISCED 2-3). Provincial schools (*Landesschulen*) include primary schools, general lower secondary schools, New Secondary Schools, special needs schools, pre-vocational schools and part-time upper secondary vocational schools (ISCED 1-3).

[2] In 2017, this is the case in Canada, the Flemish Community of Belgium (upper secondary level), Norway (upper secondary level), Poland (pre-primary, primary and lower secondary levels), in the United Kingdom, and the United States (primary, lower and upper secondary levels), and at some stages of the teaching career in the French Community of Belgium, Greece, Hungary, New Zealand and Norway (primary and lower secondary levels).

[3] The European Commission's Eurobarometer survey, for example, defines working conditions to encompass working time, work organisation, health and safety at work, employee representation and relation with the employer (European Commission, 2014[138]).

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