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**NOT ENOUGH HOURS IN THE DAY: POLICIES THAT SHAPE
TEACHERS' USE OF TIME****OECD Education Working Paper No. 245**

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Abstract

Teachers' time is a critical resource for education systems and a key input for student learning. Like any type of resource, teachers' time can be used more or less effectively to promote a range of outcomes such as student learning, equity and well-being. Whether teachers are given an additional hour in the classroom, an hour to prepare their lessons or an hour to engage in professional learning can affect both the cost and the quality of education. Based on OECD survey data and indicators, this paper provides a systematic overview of how teachers across the OECD report using their time and how their time use is regulated in national policy frameworks. Building on the findings from the OECD School Resources Review series, the paper then explores human resource policies that can support education stakeholders in rethinking priorities, roles and responsibilities in school education and promote an effective use of teachers' time.

1. Introduction: Why teachers' use of time matters

Teachers' time is a critical resource for education systems and a key input for student learning. Like any type of resource, teachers' time can be used more or less effectively to promote a range of outcomes from student performance to equity. Whether teachers are given an additional hour in the classroom, an hour to prepare their lessons or an hour to engage in professional learning can affect both the cost and the quality of education.

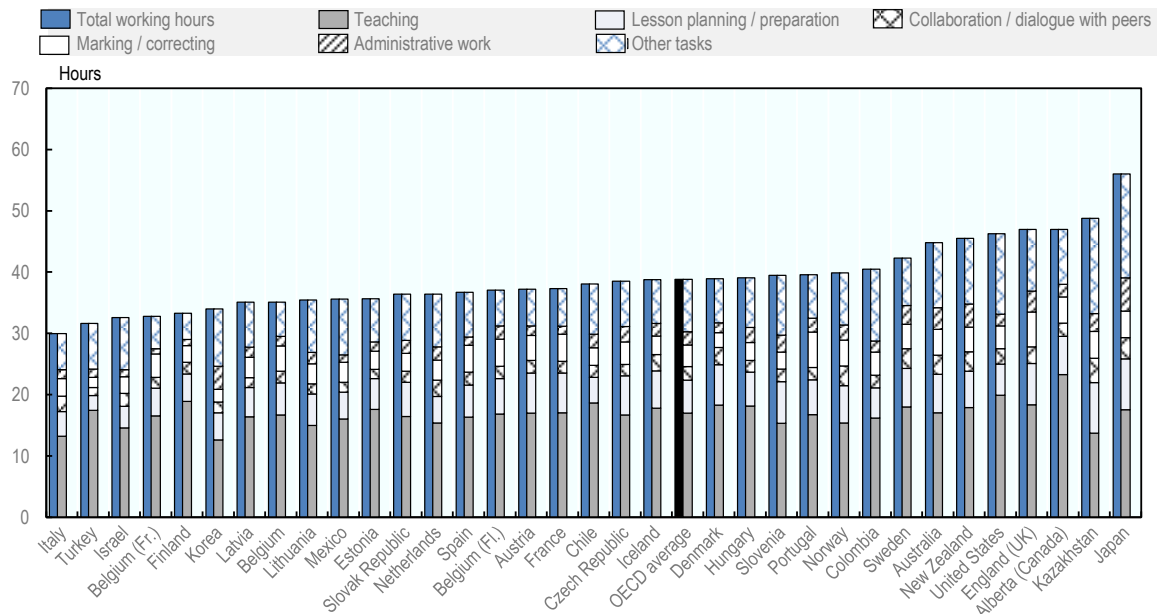
Since education is a labour-intensive process, teachers' salaries account for the largest share of current expenditure at all levels of education and, on average, 58% of total education expenditure from the primary to the post-secondary non-tertiary level in 2019 (OECD, 2019, pp. 339 f., Tables C6.1 and C6.2^[1]). The effective use of teachers' time is therefore critical for education systems to attain their objectives with the limited resources at their disposal.

Just like teachers face the challenge of balancing various tasks competing for their attention, school systems as a whole are confronted with difficult decisions and trade-offs when regulating teachers' time. OECD countries have taken diverse approaches to these trade-offs, giving rise to significant variation in teachers' overall workload, teaching hours, and the time dedicated to various non-teaching activities (see Figure 1.1). These differences reflect a diversity of educational cultures, varying levels of resources and explicit reflections on educational effectiveness as much as they are the result of the complex processes by which various stakeholders' interests shape policies and the regulation of teachers' time.

The aim of this paper is to explore strategies that can help countries develop effective policy frameworks to support teachers in prioritising their time to the benefit of students' learning and well-being. Following this introduction, Section 4 examines how teachers report using their time in the OECD Teaching and Learning International Survey (TALIS) and how the observed variation relates to our knowledge about effective time use in different contexts. Section 5 then takes stock of countries' different approaches to regulating teachers' time, based on a review of national policy frameworks. Finally, Section 6 reviews reforms and practices around teachers' use of time that can help support the quality and equity of student learning and well-being, while also ensuring teachers' own well-being and continued motivation. The focus of this paper is on human resource policies that can support teachers' effective use of time. The equally important role of policies to promote an effective use of technology in schools, which undoubtedly influence teachers' time use, will be explored in a separate strand of OECD work.

Figure 1.1. Teachers' working hours and task composition (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 extra-curricular activities; A "complete" calendar week is one that was not shortened by breaks, public holidays, sick leave, etc. Also includes tasks that took place during weekends, evenings or other off-classroom hours.

Source: OECD (2019^[2]) TALIS 2018 Results (Volume I): Teachers and School Leaders as Lifelong Learners, <https://doi.org/10.1787/1d0bc92a-en>, Table I.2.27; Figure adapted from OECD (2019^[3]) Working and Learning Together, , <https://doi.org/10.1787/b7aaf050-en>.

1.1. Scope

The paper aims to provide an overview of how teachers – primarily in OECD countries – divide their time between different types of activities as well as the policies that regulate their time and help them prioritise among competing tasks. The paper focuses on teachers in general education, although occasional references are made to teachers in vocational education and training (VET) and special education needs (SEN) education. It considers the time use of other staff, such as teacher aides, professional pedagogical support or administrative staff mainly insofar as their work affects teachers' use of time. The paper does not consider how teachers use their teaching time with students inside the classroom or the relative effectiveness of different pedagogical practices. It will merely consider the total amount of time teachers spend in the classroom and how it relates to their time for non-teaching activities.

1.2. A framework for the analysis of teachers' time

The analysis of survey data and national policies presented in this paper look at teachers' time within the wider context of school systems' equitable and efficient use of resources, drawing substantially on country reviews conducted as part of the OECD School Resources Review (OECD, 2017^[4]; OECD, 2018^[5]; OECD, 2019^[3]). The paper therefore places

particular emphasis on time as a limited resource, which teachers can use to engage in a range of competing activities and which can be employed more or less effectively to advance school systems' diverse educational goals. In doing so, the paper seeks to take into account the complex processes that shape teachers' use of time (the interaction of policies, contextual factors and decisions of various actors at different levels of the system), but also the complexity of teachers' time use itself, which extends beyond the distribution of time over a given set of activities.

Nevertheless, it should be acknowledged that the paper's approach to teachers' time as a resource means that other important perspectives are less prominently represented, e.g. the way time is subjectively experienced and imbued with meaning (Hargreaves, 1990^[6]). The same is true for the paper's emphasis on the *amount of time* that teachers devote to different activities (leisure and work, activities in and outside of the classroom, as well as teaching-related and non-teaching-related tasks). Thinking about *how much* time teachers allocate to different tasks should be seen as a complement (and by no means as a substitute) to the question of *how* teachers engage in these tasks. For example, it is clear that providing teachers with "sufficient time" for professional learning is only meaningful if they have the opportunity and support to use this time for effective learning activities (Boeskens, Nusche and Yurita, 2020^[7]). Conversely, investing resources in teachers' professional learning offer is futile if teachers do not have the time to engage with it. It is this second type of problem, which the paper seeks to address.

1.2.1. Components of teachers' time

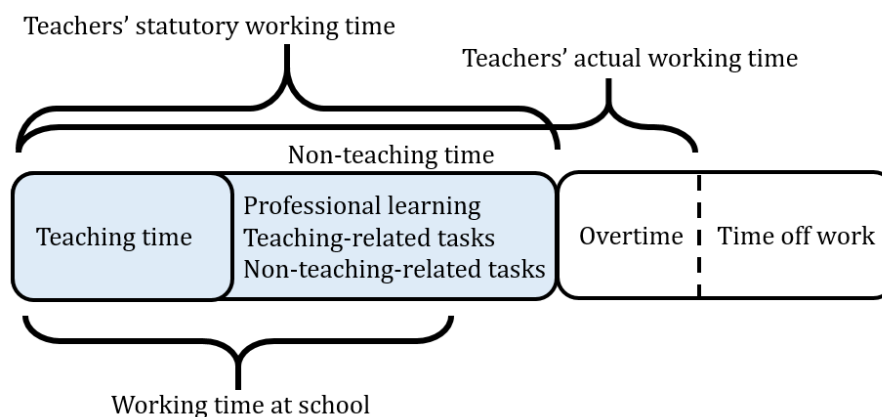
This paper considers teachers' time to be comprised of three principal components, which are defined below (see Figure 1.2): The teaching and non-teaching time that makes up teachers' working time and teachers' time off work.

Working time: The total time that teachers spend working, which encompasses both teaching time and non-teaching time spent inside or outside of their school(s). Teachers' working time is here taken to include both the regular contractual working time and overtime work. Broadly defined, teachers' working time may also include unpaid overtime, including some forms of preparation or self-regulated professional learning taking place after school hours or during school holidays, which may be neither captured by teachers' contractual time obligations, nor their paid overtime work. Teachers' working time can be further divided into two main components:

- *Teaching time:* The working time that teachers spend teaching a group or class of students, or individual students.
- *Non-teaching time:* The working time spent on tasks other than teaching. These tasks can be directly related to teaching, such as lesson preparation, sourcing curriculum materials, correcting assignments and tests, collaborating with or mentoring peers, and engaging in professional learning activities. They can also be less directly related to teaching, for example communicating with parents, engaging in school management and extra-curricular activities, counselling students or engaging in administrative duties. Depending on national policies and/or individual teachers' preferences, some of these activities can take place outside the school (OECD, 2018, p. 48^[8]).

Time off work: Teachers' time off work comprises their recovery time available for leisure and personal care, as well as commuting time and time spent on unpaid work (such as housework and caring for family members) (OECD, 2017^[9]). Some of teachers' recovery time may also take place during the school day, e.g. during lunch breaks.

Figure 1.2. Components of teachers' time



As discussed further in Section 4, teachers' working time as defined above (which might be called "teachers' actual working time") may diverge from teachers' contractual working time or the time officially recognised and recorded through administrative procedures (e.g. including paid overtime). The divergences between teachers' actual working time and the time that is recognised, regulated or recorded are further explored further below.

1.2.2. Factors that influence teachers' use of time

Teachers' use of time is influenced by a wide range of factors, some of which are illustrated in the schematic overview of Figure 1.3 and explained below:

Policies, regulations and collective agreements concerning teachers' time: Although the governance of teachers' time differs across OECD countries, policies and regulations at the central or local level tend to provide a broad framework defining key aspects of teachers' time with varying levels of specificity. These regulations may be the result of collective agreements between teachers and their employers and usually – at a minimum – determine teachers' contracted working or teaching hours. They can also set out teachers' requirements or entitlements to dedicate time to professional learning and other activities or regulate how much of their time teachers need to be present at school. These policies and regulations may affect teachers differently based on characteristics like their tenure or subject area, their school context etc. In addition, teachers' working hours and the allocation of their time may respond to incentives, such as accountability legislation or performance-related pay. Although performance pay reforms do not appear to have caused an increase in teachers' working hours in the United States (Stoddard and Kuhn, 2008^[10]), other studies have demonstrated that accountability pressures do lead to the reorganisation of time within schools across teachers (Reback, Rockoff and Schwartz, 2014^[11]).

Contextual factors shaping teachers' task composition and range: Many aspects of how teachers use their working time (beyond a broad division into teaching and non-teaching time) are not explicitly defined by laws or collective agreements. Cultural norms can influence teachers' propensity to work overtime, or the desirability of flexible working arrangements. Other factors include the use of technology, which may render some aspects of teachers' work less time-consuming. The presence of other staff, such as teaching aides or support staff, can alter the division of labour and time in schools. A range of contextual developments also affect how policies and regulations concerning teachers' time are formulated, reformed and applied. The introduction of new curriculum contents, teaching standards, changing student needs and pedagogical developments, for example, may require teachers to devote more time to professional learning or tasks like student

counselling. Likewise, shifting political, budgetary and educational priorities can lead to changes in class sizes, student-staff ratios, instruction times or other parameters that have implications for teachers' time use (for example, other things being equal, a reduction in class sizes requires an increase in teaching hours). Teachers in many countries report to perceive an expansion of their responsibilities, which – without compensation or adequate structural supports – can create a sense of “intensification” or overwork, if teachers are asked to do more in the same amount of time or more than they can manage in a regular school day (Ingvarson et al., 2005^[12]; Bartlett, 2007^[13]).

Events: Events – large or small, predictably or unpredictable – shape how school leaders and teachers arrange their time. The arrival of novice teachers, for example, may motivate school leaders to assign additional mentoring duties to some senior teachers and reduce their teaching time while plans to introduce a new subject may require some teachers to shift more time to the design of lesson plans. The same goes for teacher shortages due to absenteeism, teacher turnover or other factors that may – depending on the school management's responses – temporarily alter the faculty's workload or the task composition of individual teachers. Targeted programmes or initiatives can also have a direct impact on teachers' use of time. Equity policies and school turnaround programmes, for example, can be tied to additional professional development hours (Heissel and Ladd, 2018^[14]). Furthermore, disruptive events of local, national, or international scale may lead to the temporary suspension of schooling activities or require teachers to change the way they work and spend their time. In many of the countries affected by the 2020 COVID-19 pandemic, for example, teachers were asked to teach remotely during the initial phase of the virus outbreak, requiring them to rapidly adapt their use of time to acquire new skills and prepare material suited to distance education (Schleicher and Reimers, 2020^[15]).

School management can also exert significant influence over teachers' time use, particularly where schools enjoy a high level of autonomy over their use of resources. Schools can have discretion over the design of teachers' schedules, the organisation of meetings and administrative work, as well as the assignment of different tasks and roles beyond teachers' regular instruction obligations. Effective school leaders can also seek to minimise teachers' routine administrative work, protect them from duties that interfere with their educational role, co-ordinate the work of support staff and encourage teachers to engage in peer collaboration or resource sharing to save time. Evidence from North Carolina confirms that school principals have a strong effect on whether teachers feel able to use their time to “focus on teaching” (Burkhauser, 2016^[16]).

Teacher autonomy: Despite the important role played by regulatory and school management decisions, teachers usually retain a significant amount of autonomy over the use of their time inside and outside of the classroom. This includes – to varying degrees – the ability to regulate their overall working time (e.g. through part-time work), how they divide their non-teaching time among different tasks, as well as the types of additional responsibilities they chose to spend time on, specific roles they carve out for themselves, or career paths they follow (e.g. assuming managerial roles that involve spending more time outside of the classroom).

1.2.3. Potential effects of teachers' time use and policy goals

How teachers use their time may have effects on a range of relevant outcomes related to students' learning and equity as well as teachers' own motivation and well-being. Some of these outcomes are explicitly or implicitly pursued through regulations, policies and initiatives, while others may be unintended or overlooked. The paper will consider the effectiveness of different time-use policies in bringing about some of these desired outcomes. Particularly when evaluating the overall costs and benefits of time-use policies

in a context of scarce resources, it is important to take the whole range of possible outcomes into account (see “Outcomes” in Figure 1.3).

Student learning

A strong evidence base suggests that the quality of teachers is one of the most important determinants of students’ educational success and their development of both cognitive and non-cognitive skills (Kraft, 2019^[17]; Jackson, 2018^[18]; Chetty, Friedman and Rockoff, 2014^[19]; Rivkin, Hanushek and Kain, 2005^[20]). For effective teachers to support students’ learning progress, spending time with them is clearly a necessary condition. Nevertheless, evidence on the effect of additional instruction time on student achievement has been mixed. Across the countries and economies participating in the OECD’s 2015 Programme for International Student Assessment (PISA), the total number of intended instruction hours at school was not correlated with students’ performance in science (OECD, 2016, pp. 217, Figure II.6.23^[21]). The same was true for students’ reading performance in the 2018 PISA test (OECD, 2019, pp. 67, Figure I.4.5^[22]) and some countries with very little learning time at school (such as Finland) are consistently performing highly in PISA. Estimates based on within-student and within-school variations in instruction time, however, suggest a positive association with PISA 2006 scores (Lavy, 2015^[23]). Other studies based on observational data have found that returns to instruction time may be decreasing and that its impact on learning is relatively minor when compared to factors such as teacher effectiveness (Gromada and Shewbridge, 2015^[24]). More recent studies based on randomised control trials have found mixed results: A 15% (3 hour) increase in weekly reading classes in Denmark was found to increase student achievement in reading by 0.15 standard deviations (if teachers were given discretion over the use their additional teaching time) (Andersen, Humlum and Nandrup, 2016^[25]). By contrast, an extended day programme in Dutch primary schools increasing both math and language instruction time by 40% (2 hours) yielded no significant effect over its three month duration (Meyer and Van Klaveren, 2013^[26]). Regardless of these results— or perhaps even more so in light of them – the way in which teachers spend their time is of critical importance to student learning.

One of the reasons why instruction time has a weak correlation with student learning is that the time students spend *engaged* with tasks that are of adequate difficulty, of interest and aligned with the curriculum is what matters more than the overall time they spend with teachers in the classroom. Longer teaching and instruction time is of little significance if students are not paying attention, if the teacher has to spend more time ensuring discipline in the classroom, or their learning materials and pedagogical methods are unfit to help their students learn (Moriconi and Bélanger, 2015^[27]). On the students’ part, boredom or fatigue could explain decreasing returns to instruction. At the same time, the best evidence suggests that disadvantaged students tend to benefit more from extended learning time than advantaged students do (Patall, Cooper and Batts Allen, 2010^[28]). On the teachers’ side, raising teaching time could conceivably diminish the quality of their instruction if it comes at the expense of the time they can spend on lesson planning or professional learning.

The effectiveness of teachers’ time in the classroom is at least to some extent a function of what they do outside of it. Teachers therefore need to balance their time between activities that directly affect student learning in the classroom, and those outside the classroom that indirectly affect students by enhancing teachers’ ability to offer high-quality instruction. This process involves complex trade-offs which are explained in greater depth in Section 4. On the other hand, some activities – such as administrative work – would seem to affect student learning primarily in the sense that they reduce the time that teachers have available for their core activities. Measures designed to help teachers spend less time on these

activities and more on those related to teaching and learning could therefore be a way to enhance student learning.

Student equity

The increasing diversity of students and a focus on equity in many OECD countries have no doubt changed the way teachers are expected to work. For example, they may require teachers to spend additional time on professional learning about teaching students with SEN in inclusive classrooms or teaching in multicultural and multilingual settings. Classrooms with more heterogeneous learner profiles may also require new approaches to the way teachers use their teaching time to engage in more individualised approaches to student learning.

On the other hand, teachers' use of time can itself affect educational equity in at least two distinct senses. First, students respond to the actions of teachers in ways that are systematically related to their socio-economic status, prior achievement, and other relevant characteristics. Analyses of PISA scores, for example, suggest that returns to additional instruction time are heterogeneous across the student population (Gromada and Shewbridge, 2015^[24]). An international study using student and school fixed effects has suggested that additional instruction time disproportionately benefits socio-economically disadvantaged students (Lavy, 2015^[23]), possibly because they are less likely to be exposed to learning opportunities at home.

By contrast, a study of similar design has found longer instruction times in Switzerland to be associated with greater within-school achievement heterogeneity, as well as greater achievement gains among students in higher-ability tracks (Cattaneo, Oggenfuss and Wolter, 2017^[29]). This divergent finding could be explained by different learning inputs across tracks (e.g. if classroom discipline is better in higher-ability tracks or their teachers are more qualified and can make more of an additional hour of instruction). Both examples here merely serve to illustrate that teachers' time spent on any given activity (in this case classroom instruction) can have heterogeneous effects across the student population. In practice, the effects of additional instruction time on equity are likely to depend not only on the way teachers use this time in the classroom (i.e. how teachers adapt their instruction to individual learners' needs), but also on the counterfactual, i.e. how students and teachers would have spent their time otherwise.

The second way in which teachers' use of time may have an impact on equity is through its distribution across the student population. Teachers' time – both inside and outside the classroom – is a resource that can be unevenly distributed in ways that either diminish or exacerbate inequities. Most importantly in the context of this paper, schools can direct teachers' time to activities aimed at specific student groups, e.g. by organising enrichment classes for gifted students or offering remedial instruction and counselling to students who lag behind. At the system level, teachers' time can be explicitly used to reduce inequities by devoting additional resources to increasing instruction time or providing additional educational services in schools or areas with a high proportion of disadvantaged students.

Teacher well-being and motivation

Teacher shortages, high attrition rates and concerns around the perceived low attractiveness of the teaching profession have led policy makers and researchers in many OECD countries to investigate the relationship between working conditions, teachers' occupational well-being, their job satisfaction and the quality of their instruction. A good work-life balance is an important determinant of individuals' quality of life and constitutes one of eleven dimensions of well-being captured by the OECD's Better Life Index (OECD, 2017,

p. 365^[9]). Likewise, the *OECD Job Quality Framework* considers time pressures to be one of the key job demands alongside, for example, risks to physical health (Cazes, Hijzen and Saint-Martin, 2015^[30]).

The prevalence and harmful impact of stress, exhaustion and burnout in many schools are well documented (Hakanen, Bakker and Schaufeli, 2006^[31]; Viac and Fraser, 2020^[32]) and comparisons across occupations have tended to confirm that teachers face a high amount of stress on the job (Johnson et al., 2005^[33]). Time plays an important role in the way teachers experience their working environment. Evidence suggests that the length of working hours, but also the time spent commuting, and the availability of leisure time and the quality of sleep affect workers' subjective well-being (Kahneman and Krueger, 2006^[34]). In the case of teachers, excessive working hours, a high work intensity and a lack of recovery time have been shown to impair not only teachers' own well-being but also, by extension, their motivation and ability to provide high-quality instruction (Viac and Fraser, 2020^[32]).

According to the Job Demands–Resources (JD–R) Model of burnout, time-related job demands (which include long working hours but also a high work intensity and working time inflexibility), need to be balanced with corresponding job resources (which include compensation, job control and the social climate at work) in order to avoid job-strain and negative effects on well-being (Gluschkoff et al., 2016^[35]). In light of the JD-R Model, the long working hours observed in some school systems, as well as insufficient recovery time during and after the school day should be reasons for concern since they risk to have a negative impact on teachers' health, long-term motivation and efficacy (Gluschkoff et al., 2016^[35]). Developing frameworks for teachers' working time that prevent excessive workloads or stress and that are aligned with the breadth of their professional roles is therefore a critical challenge for any school system (OECD, 2019^[31]).

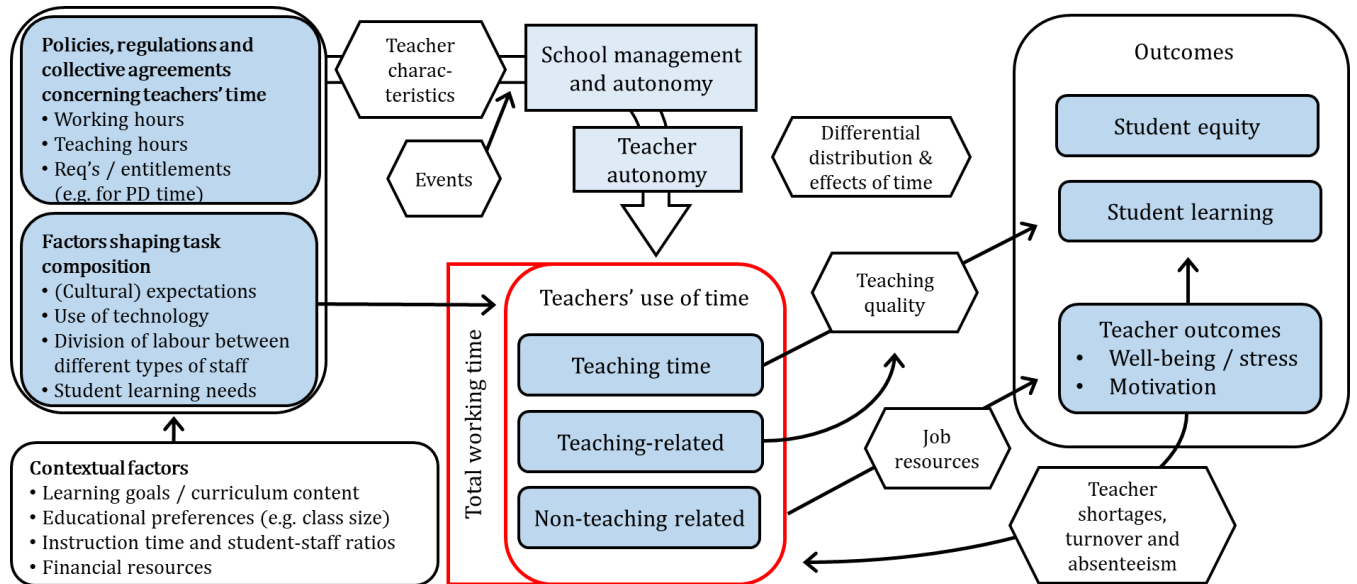
Besides the amount and intensity of teachers' working time, their well-being may be affected by the way their time is governed (i.e. the extent to which they perceive themselves to be in control of their time) and the tasks they are expected to work on. Results from the TALIS 2018 survey, for example, suggest that spending more time on non-teaching-related tasks is associated with higher levels of stress (OECD, 2020, p. 97^[36]). It is therefore important for schools to be able to effectively manage their staff time – individually and collectively – while retaining teachers' autonomy (OECD, 2019^[31]).

Besides the intrinsic value in ensuring teachers' well-being, a recent OECD literature review has highlighted that low levels of well-being can negatively affect school systems through increased turnover, absenteeism and the reduced classroom performance of stressed or burnt-out teachers (Viac and Fraser, 2020^[32]). TALIS 2018 data confirms that teachers who report high levels of stress are also more likely to plan to leave the profession (OECD, 2020, p. 102^[36]). High rates of teacher absenteeism and turnover can result in a loss of instruction time if no adequate replacement or substitute teachers are found. Even if replacements are organised, estimates from the United States suggest that the expected loss in daily productivity from employing a temporary substitute is on par with replacing a regular teacher of average productivity with one at the 10th to 20th percentile of productivity (Herrmann and Rockoff, 2012^[37]).

In addition, at least in the United States, the negative impact of teacher absenteeism is regressive and affects disadvantaged schools the most (Clotfelter, Ladd and Vigdor, 2009^[38]). Results from the OECD's PISA survey show a similar picture at the international level. In 2018, on average across OECD countries, 21% of students in disadvantaged schools compared to 15% of students in advantaged schools were enrolled in a school whose principal reported that instruction is hindered at least to some extent by teacher absenteeism. This proportion was higher than 40% in the bottom quarter of disadvantaged

schools in some countries (Belgium, Colombia, Germany, Israel, Norway and Sweden) (OECD, 2019, pp. 272, Table II.B1.5.7_[39]).

Figure 1.3. Schematic overview of factors influencing teachers' use of time and its outcomes



1.2.4. The relationship between teachers' teaching time and students' learning time

Although student learning does not require the presence of a teacher at all times, in 2015, the majority of 15-year-old students' learning time in every OECD country (with very few exceptions internationally) was spent in a classroom at school (OECD, 2016, pp. 217, Figure II.6.23_[21]). Students' learning time and teachers' teaching time are therefore closely connected. The time that students are taught in the classroom has traditionally assumed a central place in efforts to understand and conceptualise their learning process. Carroll's influential Model of School Learning, for example, postulates that any student's degree of learning is a function of the time they engage in learning and the time they need to master their learning content. If the time engaged in learning is reduced or the time needed to learn increases, they learn less. The time students are engaged in learning and the time they need to learn are, in turn, assumed to depend on a set of five factors, as shown in Figure 1.4 (Carroll, 1963_[40]). The time students are *engaged* in learning depends on their *opportunity to learn*, i.e. the time allocated to learning, and their *perseverance*, i.e. the proportion of the allocated time students are actually willing to spend learning. The time students *need* to learn is assumed to be a function of the *quality of instruction*, students' *aptitude*, which determines time students need to learn a given unit of instruction under optimal conditions, their *ability to understand instruction*, which includes, among others things, students' language comprehension (Carroll, 1989_[41]).

Figure 1.4. The Carroll Model of School Learning

$$\text{Degree of learning} = f \left(\frac{\text{time engaged (perseverance} \times \text{opportunity to learn)}}{\text{time needed (aptitude} \times \text{ability to understand} \times \text{quality of instruction)}} \right)$$

Source: Adapted from Carroll, J. (1963^[40]), “A model of school learning”, *The Teachers College Record*, Vol. 64/8, pp. 723-723.

In Carroll’s model, teachers’ time enters into the equation only indirectly at two points. First, students’ learning time (i.e. their *opportunity to learn*) is a function of the time that teachers spend with them in the classroom, as well as the time students spend learning independently, with parents or other academic support staff. Second, teachers’ use of their time may affect the *quality of instruction*. Other things being equal, one might assume that the quality of teachers’ instruction depends on their ability to use the time in the classroom effectively, which is also affected by the way they use their remaining time (e.g. preparing their lesson, collaborating with peers etc.). While it is easy to see how student learning will suffer if teachers spend all or none of their time in the classroom, the question *how much* of their time teachers’ should spend in the classroom and how much outside of it is far from trivial and is explored in more depth in Sections 4 and 5.

Most educational research has, understandably, addressed the subject of time from the students’ perspective (Duncheon and Tierney, 2013^[42]). Students’ instruction time is nominally independent from the amount of time that any given teacher spends in the classroom (i.e. their teaching time). Yet, an increase in instruction time implies an increase in individual teachers’ teaching hours if other relevant factors are held constant – namely the total number of students, class sizes, the total number of full-time equivalent (FTE) teachers and the use of team teaching. In practice, the relationship between students’ instruction time and full-time teachers’ teaching hours is therefore mediated by several policy decisions, as illustrated in Figure 1.5.

Figure 1.5. Relationship between teaching time and instruction time

$$\text{Teaching time} = \frac{\text{Instruction time}}{\text{FTE teachers}} \times \frac{\text{Students}}{\text{Class size}}$$

Source: Adapted from OECD (2018^[8]), *OECD Handbook for Internationally Comparative Education Statistics 2018: Concepts, Standards, Definitions and Classifications*, <https://doi.org/10.1787/9789264304444-en>.

If expenditure is held constant, a reduction in teaching time (to reduce teachers’ working hours or provide them with more time for collaboration, professional learning and other activities), would require an increase in class sizes or a reduction of instruction time. Figure 1.5 also shows that flexible working hours could be a way to respond to shrinking student numbers without reducing the number of FTE teachers or their full-time teaching hours while maintaining instruction time and class sizes. These decisions concerning students’ and teachers’ time affect the learning process, but also have significant financial implications and involve resource trade-offs.

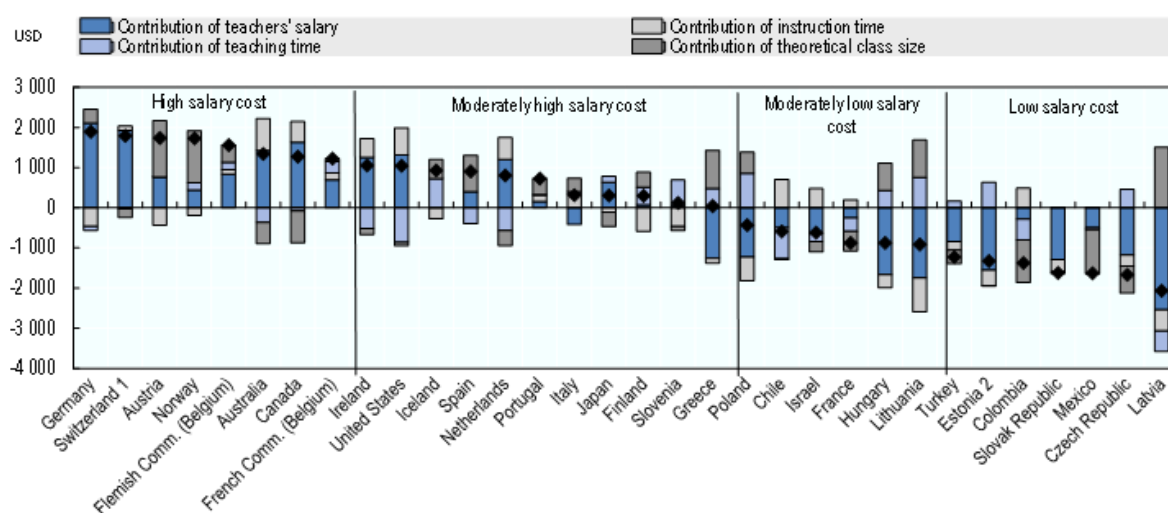
OECD countries vary significantly in the time they expect their students to learn, teachers to teach, and how they organise teachers’ and students’ shared time. Figure 1.6 illustrates how these decisions contribute to cross-country differences in the salary cost of teachers

per student. In Slovenia, for example, teachers' salaries and class sizes are close to the OECD average and students' overall amount of instruction time is significantly lower. Nevertheless, the country spends about the same amount per student on teachers' salaries as the OECD average (adjusting for purchasing power parity [PPP]) since the time that full-time teachers are expected to spend in the classroom is equally low. Similarly, Spain spends about the same amount per student on teachers' salaries as Iceland, despite having higher teacher salaries and smaller classes. This is because full-time teachers in Spain are expected to spend significantly more time teaching than their peers in Iceland, who may have more time for other activities, such as lesson preparation or collaboration with their peers.

Next to teachers' salaries and the size of their classes, the amount of time each teacher spends in the classroom is one of the most financially consequential policy levers in OECD school systems. Figure 1.6 shows how each country's deviation from the average number of teaching hours affects their per student educational expenditure. In the United States, teachers spend more time in the classroom than any other country in this comparison, which pushes the annual teacher salary cost per student down by USD 854, compared to the OECD average (although there is significant heterogeneity across states and districts, on average, this is more than compensated by their above-average salaries and instruction time). By contrast, low teaching hours in Poland increase the annual cost of teachers by USD 864 per student (this, in turn, is compensated by lower salaries and instruction time).

Figure 1.6. Contribution of various factors to the salary cost of teachers per student in public primary schools, 2017

Based on statutory salaries after 15 years of experience (USD converted using PPPs for private consumption)



1. Teachers' statutory salaries after 10 years of experience instead of 15 years.
2. Teachers' statutory salaries at the start of their career instead of after 15 years of experience.

Notes: Countries and economies are ranked in descending order of the difference between the salary cost of teachers per student and the OECD average. Theoretical class size refers to the theoretical size of classes given the statutory – or theoretical – values of instruction and teaching time and the student teacher ratio; it may therefore diverge from countries' actual average class size.

Source: OECD (2019^[11]) *Education at a Glance 2019: OECD Indicators*, <https://doi.org/10.1787/f8d7880d-en>, Figure C7.2.

The financial impact of teachers' time explains why school systems can be tempted to increase teaching hours as a means to cut costs. In Spain, for example, fiscal pressures

during the economic crisis motivated a 2012 reform that increased the teaching hours of primary and secondary school teachers, alongside a relaxation of class size rules and restrictions placed on teachers' pay. The policies related to teaching hours and class sizes have been repealed in 2019 (OECD, 2019, pp. 188, 503^[43]).

As discussed above, teachers' non-teaching time can – if well spent – have a critical impact on the quality of their instruction as well as the wider school community and the net effect of a change in teaching hours depends on many contextual factors. In a rural suburb of Chengdu, China, for example, teachers succeeded in mobilising parents (many of whom had little or no formal education) to support the educational journey of their children by calling them twice a week to discuss how they might support the development of their children. This was made possible by limiting their classroom teaching time to 15 hours per week (Schleicher, 2018, p. 167^[44]). Of course, what works well in one system may not be suited to another and decisions concerning teachers' time need to be sensitive not only to the complex trade-offs involved, but also the context in which they operate.

1.3. Structure of this paper

Following this introduction, which laid out the paper's motivation, scope and key concepts, Section 4 provides descriptive information on teachers' use of time in OECD and partner countries and economies, drawing primarily on self-reported data from the TALIS 2018 survey. Bearing in mind that there is no one-size-fits-all model for the effective use of teachers' time, the section explores heterogeneities in time use across teachers and schools. It discusses these empirical findings in light of our knowledge about effective practices in different contexts.

Section 5 focuses on the central policies and regulatory frameworks governing different aspects of teachers' time and explores how they relate to the variations observed in the preceding section. Drawing on international indicators collected through the OECD's NESLI network and examples of country practices, the section looks at the regulation of teachers' overall working time, their teaching and non-teaching time, their recovery time and their on-site presence.

Section 6 starts from the observation that many teachers feel obliged to spend too much time on activities that distract them from their core teaching-related tasks. The section therefore explores different policies and practices that promise to help teachers to make better use of their non-teaching time and to focus on the core activities that matter the most for student learning. Specifically, the section considers balanced policy frameworks, learning-centred leadership and effective divisions of labour in schools as promising avenues for policy makers to consider.

2. How do teachers use their time? Exploring heterogeneities between and within OECD countries

This section explores how teachers in OECD countries report to use their time in the TALIS survey and discusses its implications for policy. Both theoretical and empirical insights suggest that there is no one-size-fits-all model for the effective use of teachers' time. Instead, the effective use of any given teacher's time depends on a wide range of factors related to their own abilities and dispositions, their students and learning objectives as well as the context in which they teach. With this in mind, the section explores heterogeneities in teachers' use of time within and between schools and countries and discusses how these empirical findings relate to our knowledge about effective practices in different contexts.

2.1. International survey data on teachers' time use and its limitations

The empirical analyses in this paper are largely based on the OECD Teaching and Learning International Survey (TALIS), the first major international survey of teachers and school leaders, which collected information on teachers' use of time across its three waves in 2008, 2013 and 2018. The international target population for TALIS 2018 is lower secondary teachers and their school leaders in mainstream public and private schools. For the 2018 survey, a representative sample of 4 000 teachers and their school principals from 200 schools were randomly selected in each country. Across all survey components, approximately 260 000 teachers responded to the survey, representing more than 8 million teachers in 48 participating countries and economies. Data collection took place between September and December 2017 for Southern Hemisphere participants and March to May 2018 for Northern Hemisphere participants (OECD, 2019^[2]). The survey provides unique, internationally comparable insights. Nevertheless, TALIS data on teachers' time use has a number of limitations that are inherent to its structure as well as the methods used in its collection.

While the TALIS surveys include a wide array of questions about teachers' practices, the items that are most directly concerned with the way in which teachers divide their time between different activities are based on self-reported time totals collected through questionnaires. More specifically, the data used for most of the following analyses are based on questions asking teachers how much time they had spent on different types of activities during and their overall work during the most recent completed calendar week. Compared to other data collection modes, such as time diary reports, such questionnaires are more susceptible to recall and social desirability bias.

While respondents in time diary studies are usually asked to record which activities they engaged in during specific 10 minute or 15 minute intervals, questionnaires ask respondents to estimate the aggregate amount of time spent on a given type of task, which is more prone to produce intentional or unintentional misrepresentations (Andorka, 1987^[45]). For example, time diary data from the American Time Use Survey (ATUS) suggests that teachers in the United States worked more than contractually required, but less than they self-report when asked about a typical week. While workers across all occupations were found to over-estimate their working hours, teachers were more likely to do so (West, 2014^[46]), possibly due to the greater irregularity in their schedules and the prevalence of take-home and weekend work.

Of course, the use of questionnaires also presents distinct advantages over the use of time diaries. Most importantly, they are less burdensome for respondents to complete. England's Department for Education, for example, had surveyed teachers' workload in 1994, 1996, 2000, annually from 2003 to 2009 and in 2013 using a paper-based diary format. The Department switched to conducting a survey in 2016, noting that the "large amount of time and intrusiveness required of teachers in maintaining a diary meant they were burdensome, resulting in low response rates," which, in turn, "raised questions about the impact of that response format on the validity of the workload estimates" (Higton et al., 2016^[47]).

Another limitation of the data presented in this paper is the time horizon of its coverage. TALIS questionnaires ask teachers to recall how they had spent their most recent complete calendar week during the school year. While this relatively short and recent reference period serves to reduce recall bias, it also means that the survey provides no information on how teachers spend their time during the school holidays. Neither does the cross sectional nature of the data reveal how teachers' time use varies over the course of the school year. The variation observed within the sample may therefore be the result of teachers engaging in persistently different uses of their time, or reflect fluctuations in

teachers' activities from one workweek to the next. For activities that are unevenly distributed over the school year, such as administrative work or professional development, the results should also be treated with care.

Since self-reported time totals do not reveal when and in which order teachers engaged in different types of activities during the day, the data does not permit the analysis of activity sequences. These sequences are of significant research interest and have become increasingly accessible to scientific investigation, thanks to advances in computational methods (Gershuny and Sullivan, 1998^[48]). Questionnaire data on teachers' time use also lacks contextual information on where activities took place, whether tasks were performed simultaneously or in succession, why teachers engaged in them, how they felt while doing so, and whether they performed tasks alone or with peers.

Finally, most countries and economies participating in the TALIS 2018 survey administered the questionnaire only to teachers at the lower secondary level. Of the 48 participating systems, only 15 also surveyed teachers at the primary level and 11 surveyed teachers at the upper secondary level. To the extent that teachers' use of time differs systematically across levels, the generalisability of results presented here is therefore limited.

Even though the data reported in the following allows for important insights into teachers' use of time, they necessarily fail to do justice to the subject's complexity and – in light of the limitations described above – comparisons across countries, as well as the absolute estimates of teachers' time use should be treated with great care.

2.2. Overall working time

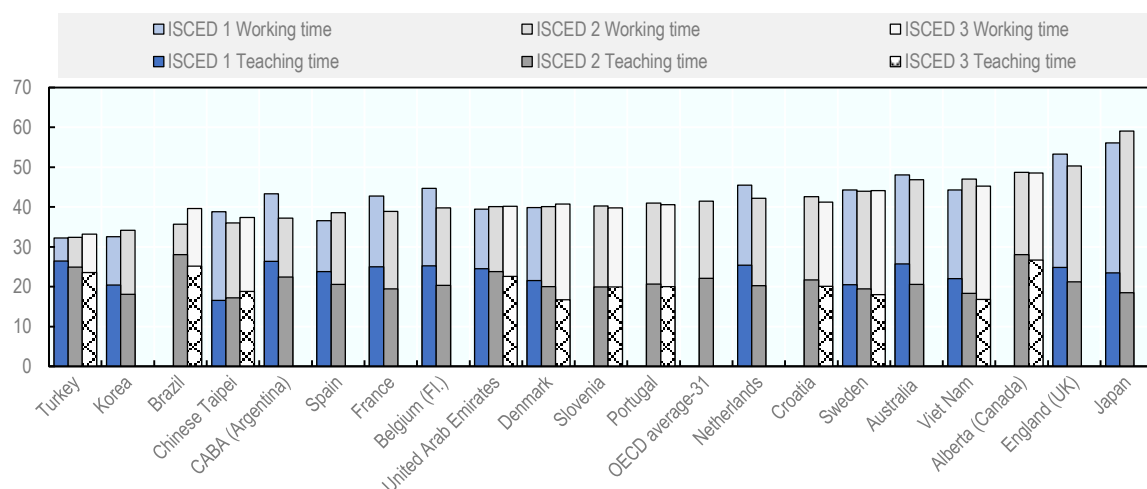
In the 2018 TALIS survey, teachers were asked how many 60-minute hours they had spent working in total and on various tasks related to their job during the most recent complete calendar week (including weekends, evenings or other out-of-class hours). On average across the OECD, teachers (including full-time and part-time teachers) reported to spend 38.8 hours per week on all the tasks related to their job in the surveyed school – around half of which they reported to spend on classroom teaching (OECD, 2019, p. 70 and Table I.2.27^[2]).

For full-time lower secondary teachers, the average reported working time in countries with available information ranged from 32 hours in Italy and Turkey to 59 in Japan, around an OECD average of 41 hours. As can be seen in Figure 2.1, there are some differences in both working and teaching hours across levels of education. Among the countries that administered the TALIS 2018 survey at the primary or upper secondary level, full-time teachers taught fewer hours at higher levels of education in nearly all countries (except Chinese Taipei). As discussed in Section 5, these differences reflect longer statutory teaching hours at the lower and upper secondary levels.

While teachers tend to teach fewer hours at higher levels of education, there are no such systematic differences in their total working hours (OECD, 2019, p. 72 f.^[2]). Among the 13 countries and economies with available data for ISCED 1 and 2, full-time primary teachers worked significantly shorter hours than lower secondary teachers in five systems and longer hours in another five systems. The most notable gaps in either direction were observed in Argentina, where primary school teachers worked 6.1 hours (or 14%) more than lower secondary teachers, and in Viet Nam, where they worked 2.7 hours (or 6%) less. Among the 11 countries and economies with available data for ISCED 2 and 3, lower secondary teachers worked shorter hours than upper secondary teachers in two systems (Brazil and Chinese Taipei) and longer hours in another two (Croatia and Viet Nam).

Figure 2.1. Working and teaching time by level of education (in hours), 2018

Results based on responses of full-time teachers



Note: Countries sorted in ascending order of working hours at the lower secondary level.

Source: OECD (2019), *TALIS 2018 Results* (database), <https://www.oecd.org/education/talis/talis-2018-data.htm> (accessed on 12 January 2021).

Between the last two TALIS surveys in 2013 and 2018, the average reported working time of teachers has increased overall and rose significantly in about half of the countries with available data (OECD, 2019, p. 70^[2]). The OECD's Better Life Index measures work-life balance using two indicators: the time that full-time employees devote to personal care and leisure (including sleep) and the percentage of employees working very long hours (defined as regularly working 50 hours or more per week) (OECD, 2017, p. 365^[9]). Although it only captures teachers' working time for a single week and is based on self-reports, TALIS data suggests that a large number of teachers might work very long hours in some OECD countries. At the lower secondary level, 25% of teachers in the TALIS sample report having worked 50 hours or more in the preceding week. Although the data is not directly comparable, for reference, national labour force surveys suggest that 7% of paid employees across all occupations *routinely* worked 50 hours or more each week across the OECD in 2018 (OECD, 2020^[49]).

2.2.1. Teachers' working time over the course of their career

Occupational and developmental psychologists point to a range of behaviours that can help employees to regulate their resources and remain healthy over the course of their career, which includes strategies related to selection, optimisation, and compensation (Baltes and Baltes, 1990^[50]). In the case of teachers, these strategies may involve focussing on fewer or different tasks, optimising their time on tasks with greater efficiency, and compensating for the high demands of the job by regulating their career ambitions or effort (Philipp and Kunter, 2013^[51]). One way in which teachers can regulate their time resources out of their own initiative is to reduce their overall working hours through part-time work.

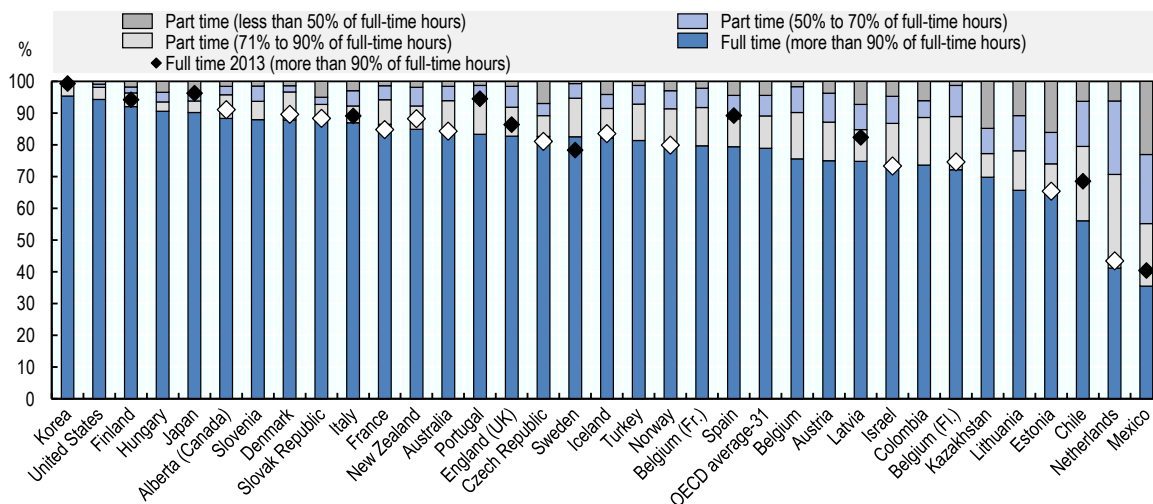
Part-time work plays an increasingly important role in many OECD countries as it promises a more family-friendly working-time arrangement and helps groups with traditionally low labour force participation, such as mothers and older workers to remain in work. Nevertheless, part-time work in many sectors continues to be associated with penalties in terms of pay, job security, benefits, promotion and training (OECD, 2017^[52]). In the TALIS 2018 survey, part-time work was also associated with lower levels of self-efficacy (OECD,

2019, p. 70^[2]) and there is a risk that part-time teachers have fewer opportunities for collaboration, professional learning and other important activities (OECD, 2019^[3]). Nevertheless, for many prospective and in-service teachers, flexible working arrangements contribute to the attractiveness of the profession.

Across OECD countries, the prevalence of part-time work among teachers differs significantly (see Figure 2.2). While more than 30% of lower secondary teachers reported to work part-time in Estonia, Kazakhstan and Lithuania, less than 10% reported doing so in Finland, Hungary, Japan, Korea and the United States. In Mexico and the Netherlands, more than half of teachers reported working part-time. Part-time work has also become more widespread over time. In ten of 24 countries with available data, the share of teachers working part-time increased significantly between the TALIS 2013 and 2018. In Chile, Portugal and Spain, the increase was more than ten percentage points (OECD, 2019, p. 221^[3]).

Figure 2.2. Employment status of teachers, full-time or part-time, 2018

Percentage of lower secondary teachers who are employed full-time and part-time (taking into account all their current teaching jobs, based on teacher reports)



Notes: Countries and economies are ranked in descending order of the percentage of teachers working full-time; significant differences between 2013 and 2018 are marked in black.

Sources: OECD (2020^[36]), *TALIS 2018 Results (Volume II): Teachers and School Leaders as Valued Professionals*, <https://doi.org/10.1787/19cf08df-en>, Tables II.3.7 and II.3.10; Figure adapted from OECD (2019^[3]) *Working and Learning Together: Rethinking Human Resource Policies for Schools*, <https://doi.org/10.1787/b7aaf050-en>.

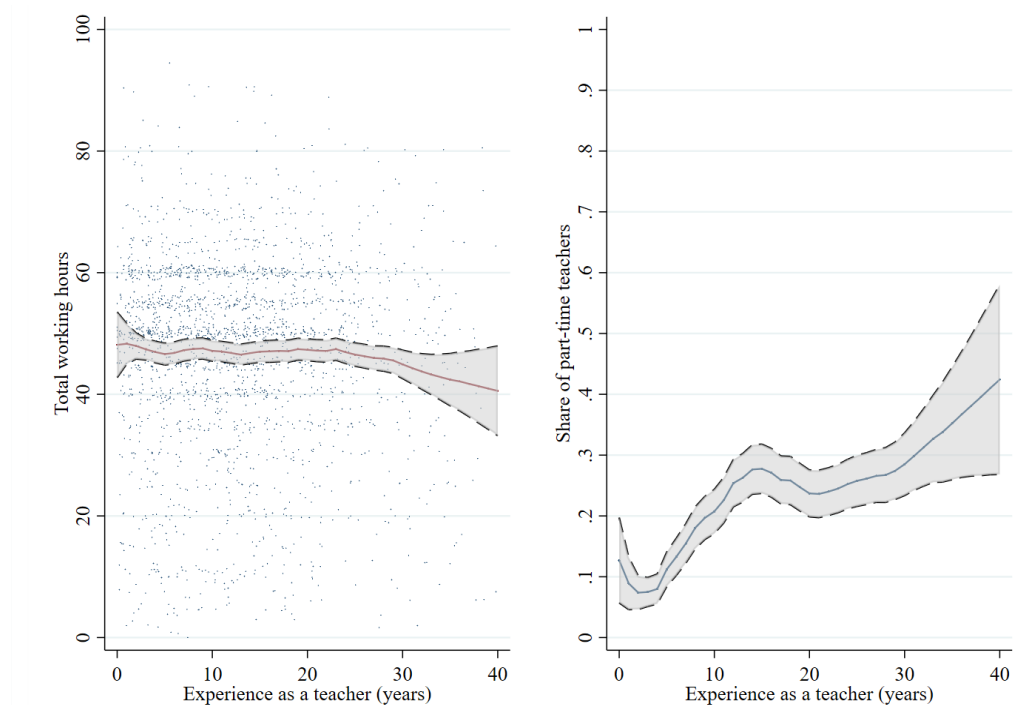
In most OECD countries, the prevalence of part-time work is unevenly distributed across the teacher population. On the one hand, women are more likely to work part-time than men, as are teachers in private schools (OECD, 2020^[36]). On the other hand, teachers are more likely to engage in part-time work at specific points in their career. Across countries, three distinct patterns can be observed, with part-time work being concentrated either among early career teachers, among senior teachers, or at both ends of the experience distribution.

In some countries, like England (United Kingdom) or Australia, there is a greater prevalence of part-time work among more experienced teachers. While few novice teachers work part-time, the share increases among teachers with more than 5 years of experience and again among those with more than 30 years of experience. To some extent, this also

explains lower average working hours among senior teachers (see Figure 2.3). It should be noted that differences observed across teachers of different levels of experience within a single TALIS wave may point to *age* effects (i.e. teachers changing their work patterns as they progress in their careers) or *cohort* effects (e.g. different regulations that may have applied to older generations of teachers ever since they joined the profession). It is not possible to distinguish between these two effects here and, even with multiple waves of observations, it would be difficult to disentangle age and cohort effects from *period* effects since each of the three is, by construction, a linear combination of the others (Paccagnella, 2016^[53]). Interpreting the results at hand as anything but differences between teachers with different levels of experience at one point in time therefore demands great care.

Figure 2.3. Working hours and share of part-time teachers by experience in England (United Kingdom), 2018

Based on self-reports of lower secondary teachers



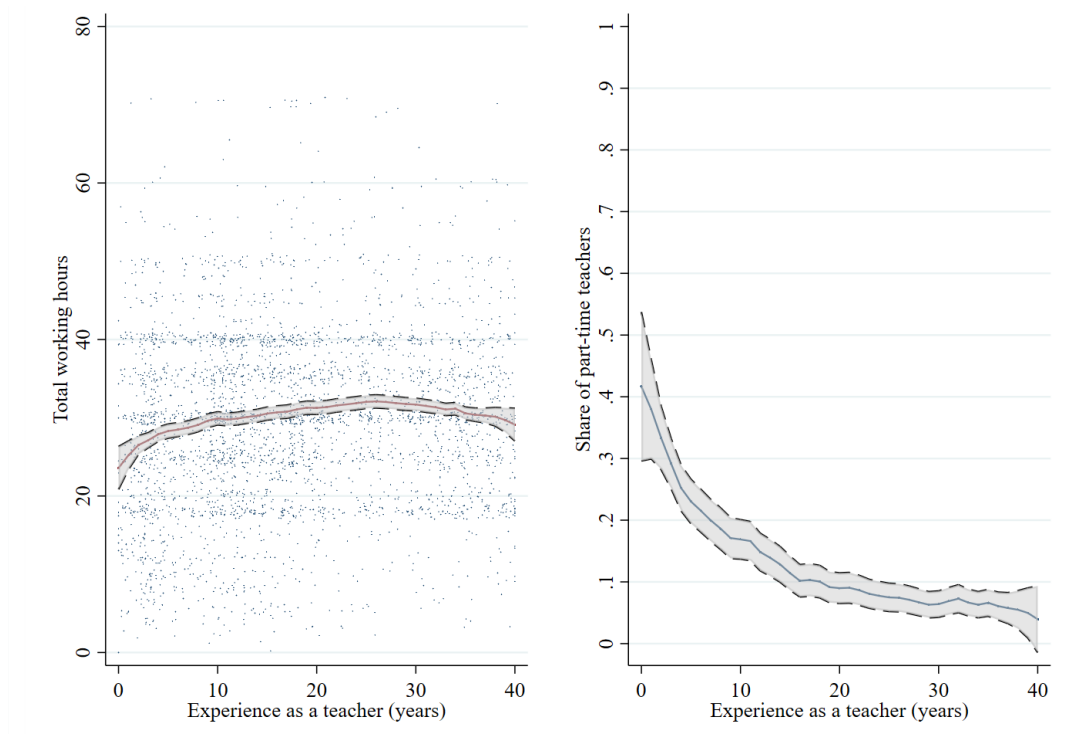
Note: Analysis restricted to teachers with 40 or fewer years of experience and 100 or fewer reported working hours. Running line and pointwise confidence interval for smoothed values of working hours / part-time share. *Source:* OECD (2019), *TALIS 2018 Results* (database), <https://www.oecd.org/education/talis/talis-2018-data.htm> (accessed on 12 January 2021).

The case of Italy (Figure 2.4) illustrates the opposite pattern, where a comparatively high share of novice teachers and significantly fewer experienced teachers work part-time. Correspondingly, novice teachers tend to report slightly shorter working hours. A similar pattern can be observed, for example, in Austria, Portugal and France. One explanation for this pattern could be the difficulty for new teachers to find full-time positions. In 2013, the TALIS survey asked whether teachers had chosen part-time employment out of their own volition or because there was no possibility to work full-time. While overall, around half indicated that they worked part-time because of a lack of other options, it is notable that the proportion of voluntary part-time work was highest in countries where part-time work is most common among senior teachers (e.g. 90% of part-time teachers in both England

and Australia in 2013). Conversely, in some of the countries where part-time work was concentrated among novice teachers, few reported to do so voluntarily (e.g. 49% in Italy, 7% in Portugal in 2013). Yet, in France, for example, most teachers reported to have chosen part-time work, despite its concentration among younger teachers (OECD, 2014, pp. 268, Table 2.7_[54]).

Figure 2.4. Working hours and share of part-time teachers by experience in Italy, 2018

Based on self-reports of lower secondary teachers

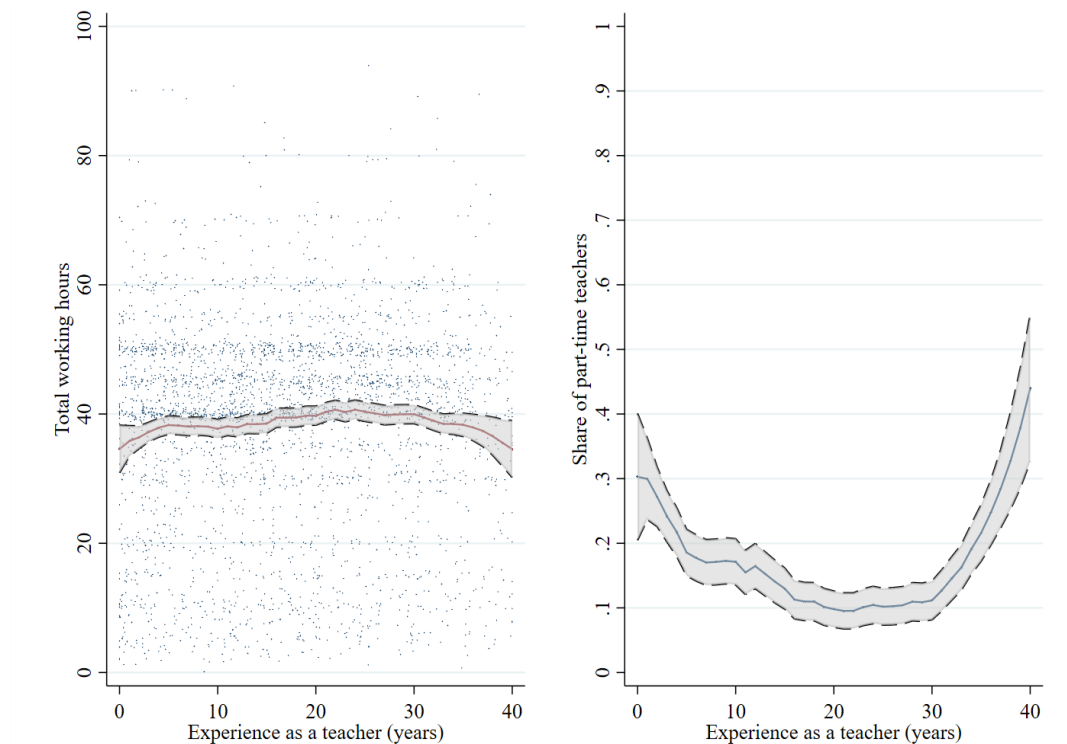


Notes: Analysis restricted to teachers with 40 or fewer years of experience and 100 or fewer reported working hours. Running line and pointwise confidence interval for smoothed values of working hours/part-time share.
Source: OECD (2019), *TALIS 2018 Results* (database), <https://www.oecd.org/education/talis/talis-2018-data.htm> (accessed on 12 January 2021).

A third pattern of teachers' part-time work is illustrated by the Czech Republic, where the share of part-time workers is U-shaped and higher among both early career teachers and senior teachers, resulting in a convex pattern of working hours across the experience distribution (Figure 2.5). A similar pattern can be seen in a number of OECD countries, including Belgium, Finland, Japan, Latvia and Spain. As a consequence, teachers' average working hours in the Czech Republic are noticeably shorter during both the first and the last years of teachers' careers. This non-monotonic pattern could indicate that both of the mechanisms above are at work with young teachers finding it difficult to obtain full-time employment and senior teachers wanting to reduce their hours as they approach retirement. Of course – as described above – different mechanisms may be at work across countries.

Figure 2.5. Working hours and share of part-time teachers by experience in the Czech Republic, 2018

Based on self-reports of lower secondary teachers.



Notes: Analysis restricted to teachers with 40 or fewer years of experience and 100 or fewer reported working hours. Running line and pointwise confidence interval for smoothed values of working hours / part-time share.
Source: OECD (2019), *TALIS 2018 Results* (database), <https://www.oecd.org/education/talis/talis-2018-data.htm> (accessed on 12 January 2021).

In most countries, the working hours of full-time teachers appear to be relatively stable over the course of their careers and most of the observed variations are driven by changing proportions of part-time work. When looking at full-time teachers only, those above the age of 50 work around half an hour less per week than their colleagues under the age of 30 on average across the OECD, but the working hours of novice and senior teachers do not differ systematically in one direction or the other across countries. Nevertheless, in some countries full-time teachers' working hours do vary based on their experience: In Alberta (Canada) and the United States, full-time teachers with 5 years of experience or less work 3 hours more than mid-career teachers (with 6-15 years of experience), whereas they work 3 hours less in Kazakhstan and 7 hours less in the Autonomous City of Buenos Aires (CABA) in Argentina. Senior teachers with at least 25 years of experience work around 4 hours less than mid-career teachers in Turkey, Japan, Shanghai (China) and Korea and about 2 hours more in the Flemish Community of Belgium, Hungary and Australia (see Table A.2). In addition, even though full-time teachers' overall working hours may be stable across their careers in many countries, the way in which they use their time can change significantly, as they get more experienced. This is explored in more detail further below.

2.2.2. What explains long working hours among full-time teachers?

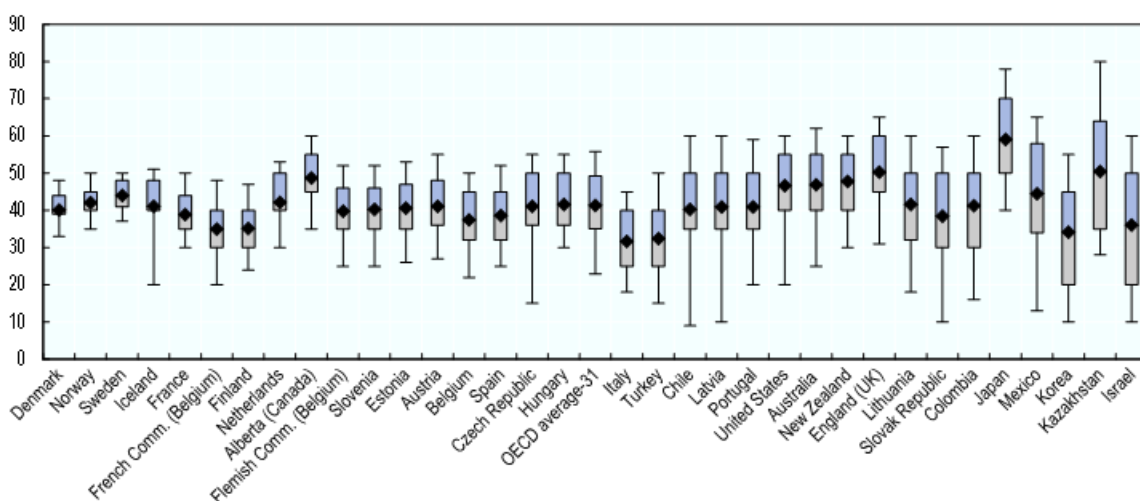
Although most OECD countries centrally regulate full-time teachers' working hours (see Section 5) the variation observed within countries is even greater than that between countries. Figure 2.6 illustrates the spread in teachers' working hours, showing the average number of hours full-time lower secondary teachers report to have worked in the previous week (black diamonds), as well as the time worked by the 10% of teachers with the longest hours and the 10% with the shortest hours (top and bottom whiskers respectively).

The Figure shows that, in a given week, a sizeable share of teachers in every OECD country is working long hours. With the exception of Italy, Finland, Denmark and the French Community of Belgium, more than 10% of the surveyed teachers reported to have worked 50 hours in the preceding week and in 17 of 31 countries, this share exceeded 25%. Of course, teachers' work is marked by peaks and troughs and may periodically intensify – for example during exam season or at the start of the term. The very long hours reported by some teachers may therefore be the exception for them, rather than the rule.

Nevertheless, teachers' working hours appear to be a lot less dispersed in some countries than in others. In both Sweden and Mexico, for example, the average full-time lower secondary teacher reports working comparatively long 44 hours. Yet, while the interquartile range in Sweden is 7 hours (i.e. 50% of teachers fall within 3 to 4 hours on either side of this average), in Mexico the interquartile range is more than three times as large (i.e. the middle 50% of teachers are removed from this average by up to 10 hours on either side). Likewise, full-time teachers in Finland and Israel have similarly low average working times of 35 and 36 hours respectively. In Finland, however, most teachers are relatively close to this average with 50% of teachers working between 30 and 40 hours. In Israel, by contrast, the spread is more than three times as wide with the middle 50% of teachers working between 20 and 50 hours a week. There are different factors that could explain these results. For example, some countries may have tighter regulations around teachers' overtime or make efforts to ensure that the workload is evenly distributed across teachers and over the course of the school year.

Figure 2.6. Variability in overall working hours, 2018

Full-time lower secondary teachers



Notes: The boundaries of boxes and whiskers represent values at the 10th, 25th, 75th and 90th percentiles. Countries are sorted in ascending order of their interquartile range.

Source: OECD (2019), *TALIS 2018 Results* (database), <https://www.oecd.org/education/talis/talis-2018-data.htm> (accessed on 12 January 2021).

When looking at the factors associated with the workload of full-time teachers, women almost invariably work longer hours than men. Across the OECD, they work 2.1 hours longer on average and significantly more in 20 of 31 OECD countries with available data. The difference in reported working times was as high as 6.3 hours in Lithuania and 8 hours in Latvia, with Turkey being the only OECD country where female full-time teachers work significantly less than men (see Table A.2).

Full-time teachers' working hours are also associated with some school characteristics. Across the OECD, full-time teachers report longer working hours in private schools, as well as those with a lower concentration of students from socio-economically disadvantaged homes. Although these differences are insignificant in the majority of OECD countries, among those where they are not, there are few exceptions to this overall pattern (see Table A.1). It is not clear what causes teachers in private and more advantaged schools to work longer hours and explanations may differ across contexts. Sellen (2016^[55]), for example, suggests that the financial support received by disadvantaged schools in England (United Kingdom) might enable them to ease their teachers' workload. It might also be that advantaged and private schools are able to attract teachers who are motivated to work longer hours or that private schools employ teachers on different modalities than schools offering public sector contracts.

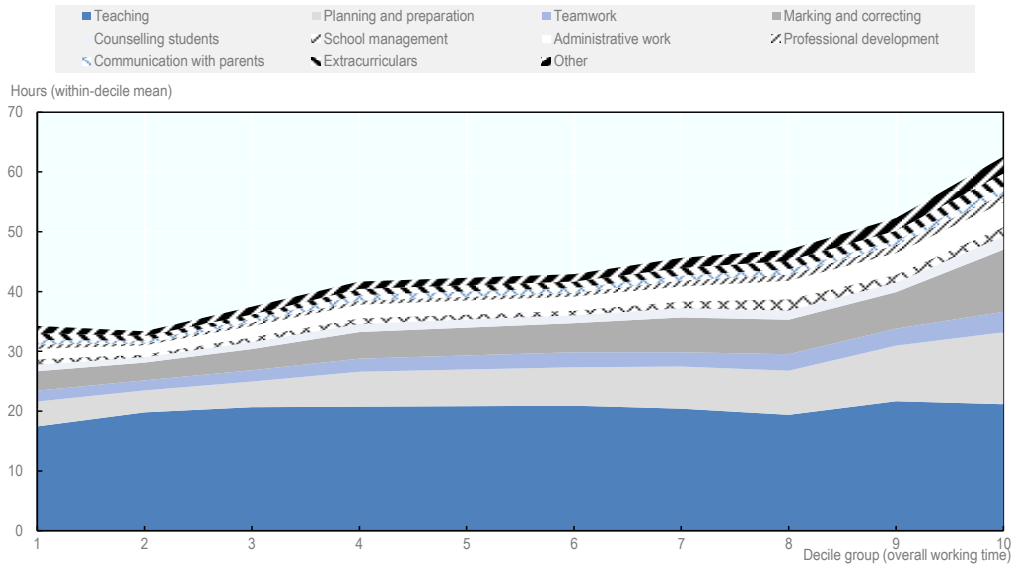
Another way to explore why some teachers within countries work longer hours than others is to compare how teachers at both ends of the spectrum spend their time. In most countries, it turns out, teaching hours are relatively consistent across full-time teachers and it is other non-teaching tasks that tend to explain to the exceptionally high workload reported by some teachers. Of course, there are different explanations why this might be the case (for two examples from the Flemish Community of Belgium and Japan, see Figure 2.7 and Figure 2.8).

As Sellen (2016^[55]) pointed out for similar analyses carried out in England (United Kingdom), the greater variance in teachers' reported times spent on non-teaching tasks may – to some extent – be the result of measurement error. While most teachers will have a relatively accurate sense of their weekly teaching hours based on their timetable, the number of hours spent on other tasks may be more difficult to recall. Given the scale of the variation, however, teachers' reports are likely to be reflective of at least some real variation across teachers. It is also not clear to which extent the time-use patterns at either end of the workload distribution present snap-shots of periods of intense or low activity that may be experienced by different teachers throughout the year, or whether some teachers experience these time-use patterns consistently.

There are also notable differences across countries in the non-teaching tasks that appear to contribute to teachers' high workload. In the Flemish Community of Belgium, for example, the 20% of teachers with the highest workload spend particularly long hours on planning and preparation as well as marking and correcting students' work (see Figure 2.7). By contrast, these tasks are more evenly distributed in Japan, where the teachers with the longest overall working hours spend a lot of time on administrative work, as well as extra-curricular tasks (see Figure 2.8). These contrasting examples suggest that different strategies may be needed to address excessive working hours depending on the particular country's (or even school's) context.

Figure 2.7. Task composition by overall workload in the Flemish Community of Belgium, 2018

Results based on responses of full-time lower secondary teachers

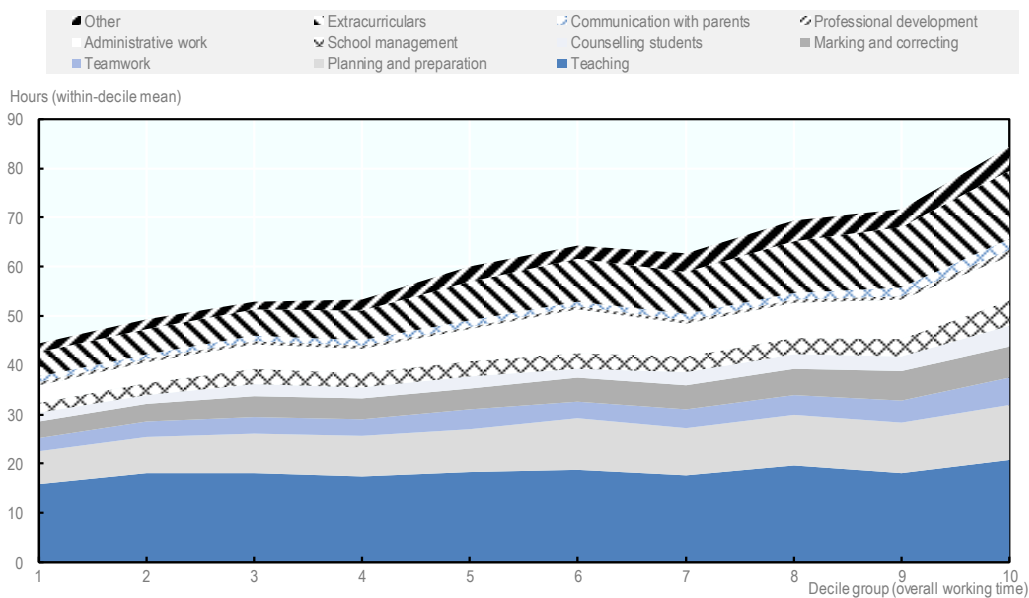


Note: Data is based on the average reported time for individual tasks among teachers within a given decile of the distribution of overall reported overall working hours.

Source: OECD (2019), *TALIS 2018 Results* (database), <https://www.oecd.org/education/talis/talis-2018-data.htm> (accessed on 12 January 2021).

Figure 2.8. Task composition by overall workload in Japan

Results based on responses of full-time lower secondary teachers



Note: Data is based on the average reported time for individual tasks among teachers within a given decile of the distribution of overall reported overall working hours.

Source: OECD (2019), *TALIS 2018 Results* (database), <https://www.oecd.org/education/talis/talis-2018-data.htm> (accessed on 12 January 2021).

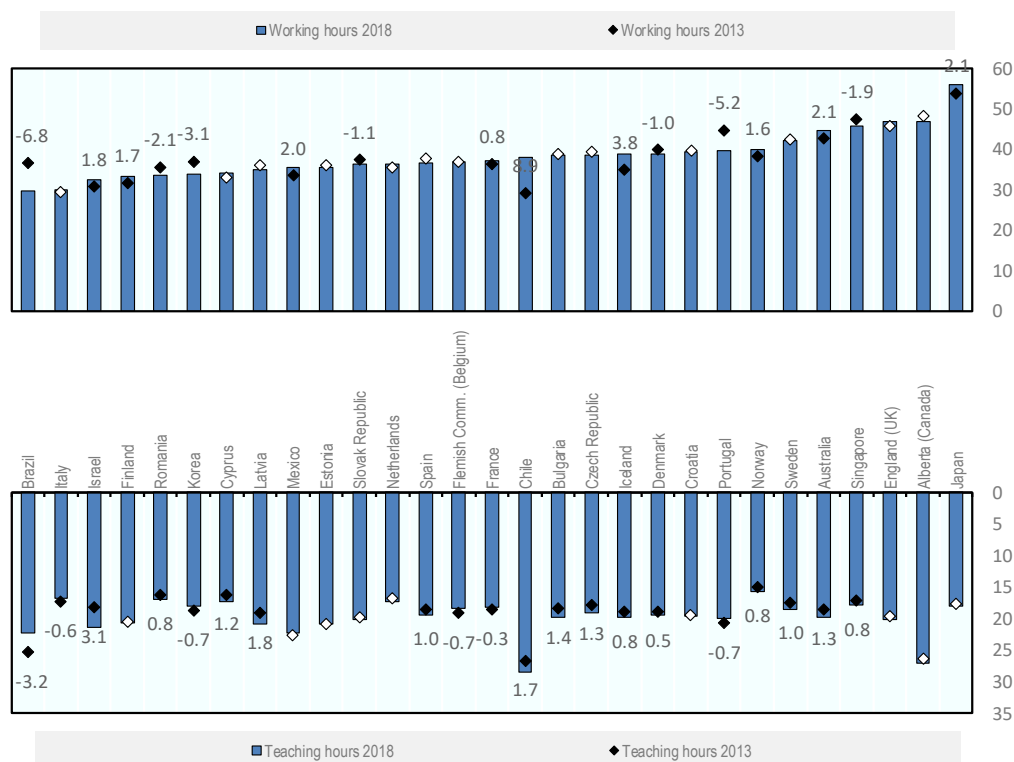
2.3. Teaching and non-teaching time

Striking the right balance between teaching and non-teaching time is critical to ensure that teachers have sufficient time outside the classroom to make their time within the classroom count for students' progress. In the 2018 TALIS survey, lower secondary teachers across the OECD reported to spend slightly more than half (53%) of their overall working hours on teaching. This division of time was similar for full-time and part-time teachers, but varied greatly across countries. Other things being equal, providing teachers with a lot of time outside the classroom is a costly policy. Yet, too little time for activities like lesson preparation, feedback to students and peers, collaboration or professional learning threatens to undermine the quality of instruction and teachers' professionalism.

In absolute terms, a number of OECD countries have seen significant changes in their average teaching hours between 2013 and 2018. Five OECD countries and economies with comparable data over time show a small decline in the reported number of teaching hours (the Flemish Community of Belgium, France, Italy, Korea and Portugal). By contrast, ten have seen a rise in their teaching hours – by more than one hour and a half per week in Israel, Latvia and Chile (see Figure 2.9). In some systems, the increase in teaching hours may be explained by a smaller share of part-time teachers and in others, such as Chile and Israel, it has gone hand in hand with an increase in overall working hours. In other systems, teaching hours have increased while working hours have remained stable (e.g. in Latvia), or even dropped (as was the case in Singapore and Denmark), implying a shift in the balance between the time spent on teaching vs. other tasks.

Figure 2.9. Change in teachers' working and teaching hours from 2013 to 2018

Results based on responses of all lower secondary teachers (including part-time teachers)



Notes: Countries are ordered by teachers' working hours in 2018. Statistically significant changes are marked in a darker tone and written above the markers.

Note by Turkey: The Information in this document with reference to “Cyprus” relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the “Cyprus issue”.

Note by all the European Union Member States of the OECD and the European Union: The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

Source: TALIS 2018 Tables I.2.27. and I.2.30 and TALIS 2013 Table 6.12.

Across countries, both the absolute teaching hours and the share of working time spent teaching vary greatly (see Figure 1.2). The lowest proportions of teaching hours among OECD countries are observed in Japan, Norway, England (United Kingdom), Sweden and Australia (between 32% and 44% of total working hours). They result from a combination of above-average working hours and below-average teaching hours. By contrast, the highest shares of teaching hours among OECD countries are found in Mexico, Israel, Colombia, Chile and Turkey (between 63% and 78%).

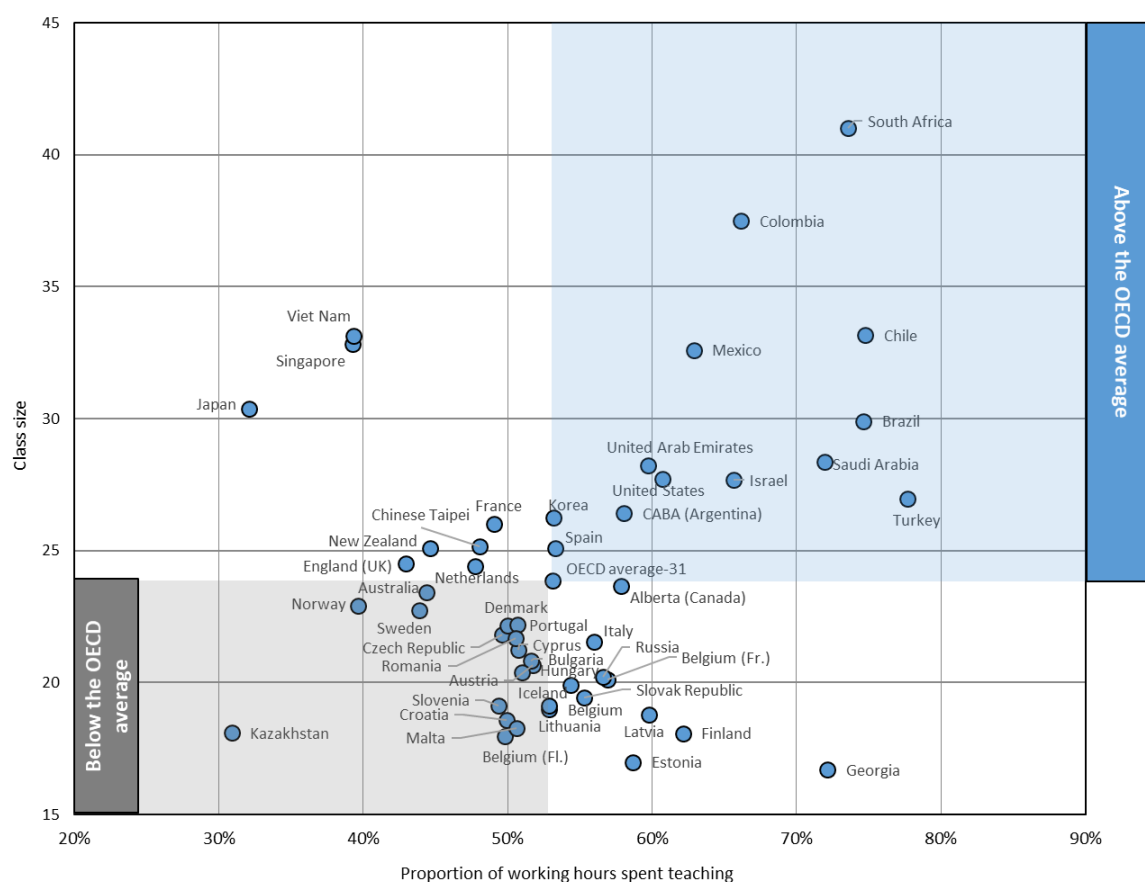
In some cases, these differences are driven by country-specific approaches to where teaching takes place. While teachers in Japan, for example, spend a low share of their working time teaching in regular lessons (32%), they are highly engaged in extra-curricular activities (13% of their working time, compared to 4% on average in the OECD), which can include organising and supervising learning activities in “school clubs” (OECD, 2019, p. 70^[2]).

In other cases, the proportion of time that teachers spend in the classroom is the result of national regulations around teaching hours (see Section 5) and implicit or explicit trade-offs involving class sizes, the use of other school staff etc. One might expect, for example, that systems with smaller classes require teachers to spend more of their time teaching. Singapore and Finland are examples of high-performing countries that have chosen contrasting approaches to this trade-off: In Finland, the average size of teachers’ target classes is significantly below the OECD average, which teachers compensate for by spending more of their working hours on instruction. By contrast, classes in Singapore are significantly larger than the OECD average, which permits teachers to spend fewer hours and a smaller proportion of their working time in the classroom.

Nevertheless, Figure 2.10 shows that the relationship between class sizes and the proportion of time spent teaching is not strong across OECD countries, which suggests that other factors moderate the trade-off between the two. It might be, for example, that some of the systems with larger classes also employ fewer teachers per student, which could offset the reduction in teaching time they would have otherwise gained. Another variable is students’ instruction time, which might be shorter in some of the systems with smaller classes.

Figure 2.10. Class size and time spent teaching

Results based on responses of all lower secondary teachers (including part-time teachers)



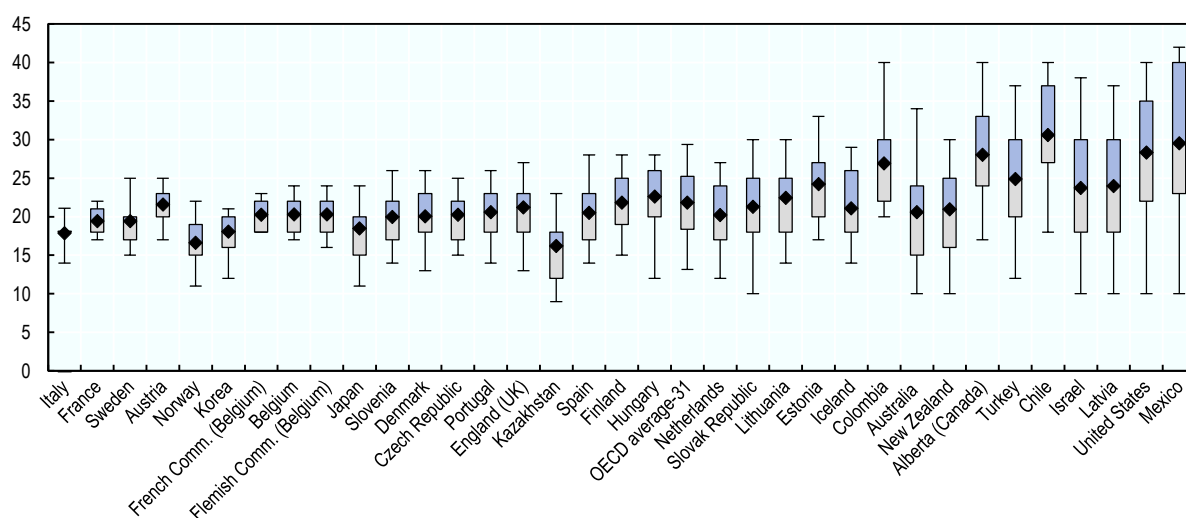
Notes: Average class sizes are based on the "target classes" of responding teachers; The proportion of working hours spent teaching is calculated as the ratio of country-level averages.

Source: OECD (2019), *TALIS 2018 Results* (database), <https://www.oecd.org/education/talis/talis-2018-data.htm> (accessed on 12 January 2021).

As for teachers' overall working hours, there is significant variability in the weekly teaching hours observed within some countries (see Figure 2.11). While the majority of full-time lower secondary teachers in countries like Austria, France, Italy and Sweden fall within a range of 3 hours around the average teaching time, in Israel, Latvia, Mexico and the United States, they fall within a range of 12 hours or more around the average. As discussed in more detail in Section 5, this may be indicative of different approaches to the regulation of teaching hours. While some countries centrally prescribe the number of hours each teacher is expected to engage in instruction per week, other systems leave this to the discretion of schools or may more loosely regulate teaching hours, e.g. on a monthly or annual basis. Likewise, some countries provide teachers with greater scope to substitute teaching hours for other tasks, such as mentoring, extra-curricular activities or school management.

Figure 2.11. Variability in teaching hours, 2018

Teaching hours of full-time lower secondary teachers



Notes: The boundaries of boxes and whiskers represent values at the 10th, 25th, 75th and 90th percentiles; Countries are sorted in ascending order of their interquartile range.

Source: OECD (2019), *TALIS 2018 Results* (database), <https://www.oecd.org/education/talis/talis-2018-data.htm> (accessed on 12 January 2021).

2.3.1. Do teaching hours vary based on teacher and school characteristics?

The variation in teaching hours within education systems may not be random, but systematically associated with specific teachers or school characteristics. As discussed in the following, such patterns can be indicative of inequities or efforts to redress them and may result from intentional efforts to adjust and improve teachers' use of time or a range of other processes.

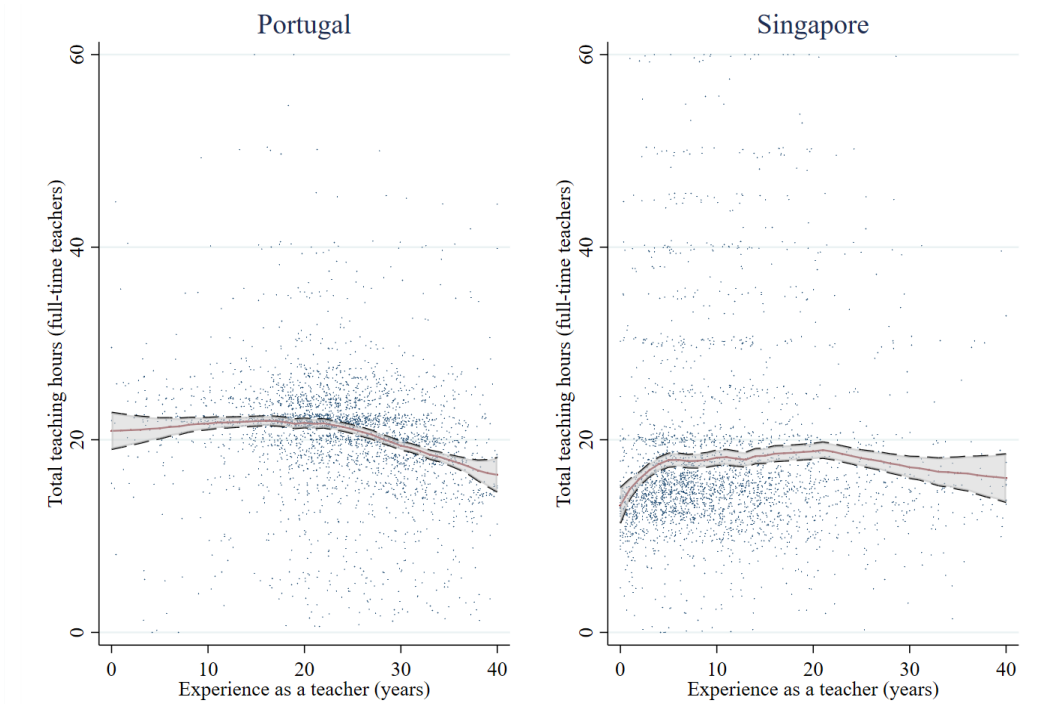
One of the factors that one may expect to explain variations in teaching hours is teachers' level of experience. School systems may, for example, choose to ease the teaching load of novice teachers and provide them with more time to adapt to the new working environment, learn from their peers and prepare their lessons (Jensen et al., 2012^[56]; Paniagua and Sánchez-Martí, 2018^[57]). Yet, in most systems where novice teachers teach fewer hours, it is because they are more likely to engage in part-time work. Among full-time teachers, across the OECD, those with five years of experience or less teach marginally *more hours* (about 0.4 per week) than their mid-career peers with 6-15 years of experience. While the differences are insignificant in most OECD countries, full-time novice teachers teach more hours in Norway, the Czech Republic, Belgium, Australia, England (United Kingdom) and Turkey (see Table A.4). Exceptions to this rule are Japan and Singapore (see Figure 2.12), where the teaching load is lower among full-time novice teachers. This provides them with more time to engage in other activities, like observing their peers, planning their lessons or engaging in induction training (OECD, 2019, p. 144^[2]; OECD, 2019^[58]).

Some countries also reduce the teaching load for senior teachers. Across the OECD, full-time lower secondary teachers with more than 25 years of experience teach about 0.7 hours less per week than mid-career peers with 5-16 years of experience, with significant differences in seven OECD countries. In Portugal, for example, secondary school teachers 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) while their overall working hours remain unchanged

(Liebowitz et al., 2018^[59]). The effect of this policy is clearly visible in Figure 2.12, which shows a shift in the central tendency of reported teaching hours across different levels of experience, even though the conditional variance remains high.

Figure 2.12. Teaching hours by experience in Portugal and Singapore, 2018

Based on self-reports of full-time lower secondary teachers.



Note: Analysis restricted to teachers with 40 or fewer years of experience and 60 or fewer teaching hours. Running line and pointwise confidence interval for smoothed values of teaching hours.

Source: OECD (2019), *TALIS 2018 Results* (database), <https://www.oecd.org/education/talis/talis-2018-data.htm> (accessed on 12 January 2021).

Teachers' contract status is associated with their teaching hours in a number of OECD countries. On average, full-time teachers on short (< 1 year) fixed-term contracts teach 0.4 hours more per week than teachers on permanent contracts. Although the difference is only statistically significant in nine countries with comparable data, the gap is as wide as 3.8 hours in Chinese Taipei, 4.7 hours in Cyprus and 5.6 hours in Colombia. These differences might arise from fixed-term staff being hired in specific circumstances (e.g. where there is a high teaching burden due to staff shortages), or because their assignments systematically differ from those of their permanent peers. A high teaching load may place temporary staff at a disadvantage if it reduces their time for professional learning and other important non-teaching tasks. By contrast, in Mexico, teachers on short fixed-term contracts teach 4.5 hours less than permanent staff (see Table A.4).

As discussed above, teachers' use of time may also vary based on the subjects they teach. For example, teachers covering multiple subjects might need to engage in a wider range of professional learning activities, subject-specific meetings and administrative work or spend more time preparing multiple distinct courses. Likewise, the nature of some subjects, such as physical education or arts, might require less time to correct students' work (but perhaps a greater amount of time in other respects). Another reason why teachers' time use may differ across subjects are teacher shortages, which often disproportionately affect specific

subject areas and could – at the school level – result in temporary or enduring imbalances in teachers’ workload across subjects.

Nevertheless, it is hard to discern systematic differences in the workload or teaching hours of full-time teachers based on the subjects they report teaching in the current school year (see Table A.9). An analysis of TALIS 2013 data in England (United Kingdom) found similarly small subject-specific differences and hypothesised that principals might respond to staff shortages in specific subject areas by “altering subject choices for pupils or increasing particular class sizes, rather than raising particular teachers’ timetables” (Sellen, 2016_[55]). The exception to this rule are shorter working hours among teachers who exclusively teach arts, religion, physical education, VET or technology. On average across the OECD, these teachers worked 3.2 hours less per week than teachers of reading, writing and literature. In most cases, these differences are explained by the time teachers spend on non-teaching tasks.

Another clear pattern is that teachers with a combination of subjects including literature, maths, science, social studies or a language have significantly more teaching hours in about a third of the countries, and – on average across the OECD – 0.9 hours more per week than those who only teach the language of instruction (see Table A.9). It is not clear what causes these differences, but perhaps teachers with multiple subjects take on more teaching hours because they can substitute for a greater number of colleagues.

One might also expect that the teaching hours of full-time staff vary based on different school characteristics. For example, targeted resources or regulations might reduce teaching hours in difficult contexts, to give teachers additional time for student counselling, individual follow-up, professional learning or innovative lesson planning. In a survey of secondary teachers in six European countries, for example, many cited a lack of time as the reason for not adapting their teaching methods to diverse student groups and cultures and a majority agreed that this would increase their workload too much (Fine-Davis and Faas, 2014_[60]).

However, as can be seen in Table A.3, in most OECD countries, teaching hours do not vary significantly based on the schools’ intake of disadvantaged, immigrant students or students with SEN and no clear pattern emerges among the few systems where differences do exist. The empirical findings are indicative of a high level of within-country homogeneity in the regulation of teachers’ working hours and reflects the fact that targeted resources may reach disadvantaged schools in the form of additional staff funding, rather than modified schedules for individual teachers (see the discussion in Section 5).

In a somewhat greater number of countries, teaching hours differ between private and public schools, although there are as many school systems in which private school teachers have longer teaching hours as those in which they have shorter hours. There are also some differences between rural and urban schools with full-time teachers in urban areas teaching longer hours in eight systems with available data and fewer hours in three systems (see Table A.3).

2.4. Time for preparation, planning and other teaching-related tasks

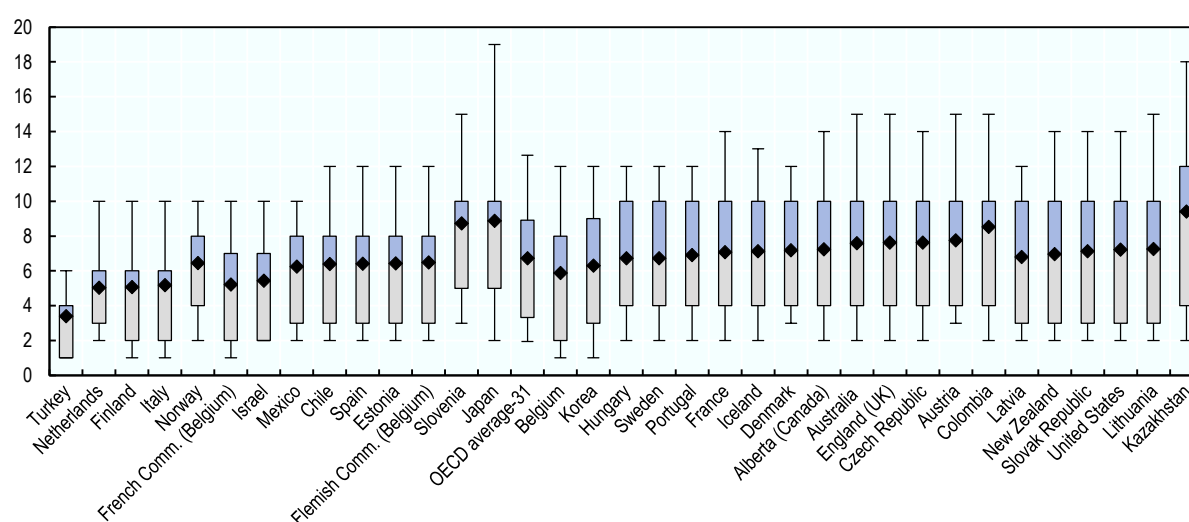
Of all the tasks that teachers are expected to engage in outside the classroom, the preparation of lessons is not only the most time-consuming on average – it is also undoubtedly an important condition for quality instruction. If teachers are understood as creative professionals whose work involves the design of effective lessons that are student-centred and promote active participation, they need time to engage in deliberate planning and preparation (Paniagua and Istance, 2018_[61]). Although there is little doubt about its relevance, few studies have explicitly investigated the time that teachers spend on lesson

preparation and its relevance for the quality of instruction, presumably because the marginal effect of planning time is conditional on the way it is used. Nevertheless, a qualitative study of primary school teachers in Ontario (Canada), found that a mandated increase in teachers' preparation time had conferred important benefits on the quality of teachers' work in general and their instruction in particular (Hargreaves, 1992^[62]).

Across OECD countries with available data, full-time lower secondary teachers reported to have spent a little under 7 hours to prepare and plan their lessons during the previous week. Country averages ranged from 3.4 hours in Turkey to more than 8 hours in Colombia, Slovenia and Japan (see Figure 2.13). In most countries, there is considerable variance around these averages, with interquartile ranges of 5 or 6 hours. On average across the OECD, a quarter of teachers thus spends 3 hours or less on preparation and planning, while another quarter spends 9 hours or more. This may be indicative of preparation times varying across subjects or classes, of teachers having different numbers of classes to prepare, putting different amounts of efforts into their planning, or of teachers' varying efficacy. It might also be that most teachers within a country spend similar amounts of time on preparation and that the survey responses merely capture week-to-week fluctuations in their planning time (more on this below).

Figure 2.13. Variability in hours spent preparing and planning lessons, 2018

Hours spent preparing and planning lessons by full-time lower secondary teachers



Note: The boundaries of boxes and whiskers represent values at the 10th, 25th, 75th and 90th percentiles; Countries are sorted in ascending order of the means.

Source: OECD (2019), *TALIS 2018 Results* (database), <https://www.oecd.org/education/talis/talis-2018-data.htm> (accessed on 12 January 2021).

Although trends over recent years varied across countries, on average, the number of hours teachers spend on planning and preparing lessons has decreased between 2013 and 2018, even though overall working and teaching hours have increased. As noted in the latest TALIS report, this may not be a cause for concern as long as lesson preparation has become more efficient, for example due to ageing effects: Since experienced teachers may need less time to prepare their lessons, ageing teacher populations may have contributed to a reduction in the average preparation time (OECD, 2019, p. 28^[2]). Wider developments affecting all teachers during this period may have played a role too, for example the spread of technologies that facilitate teachers' collaboration (e.g. to share lesson plans and materials). However, the reduction in planning time could also point to more worrying

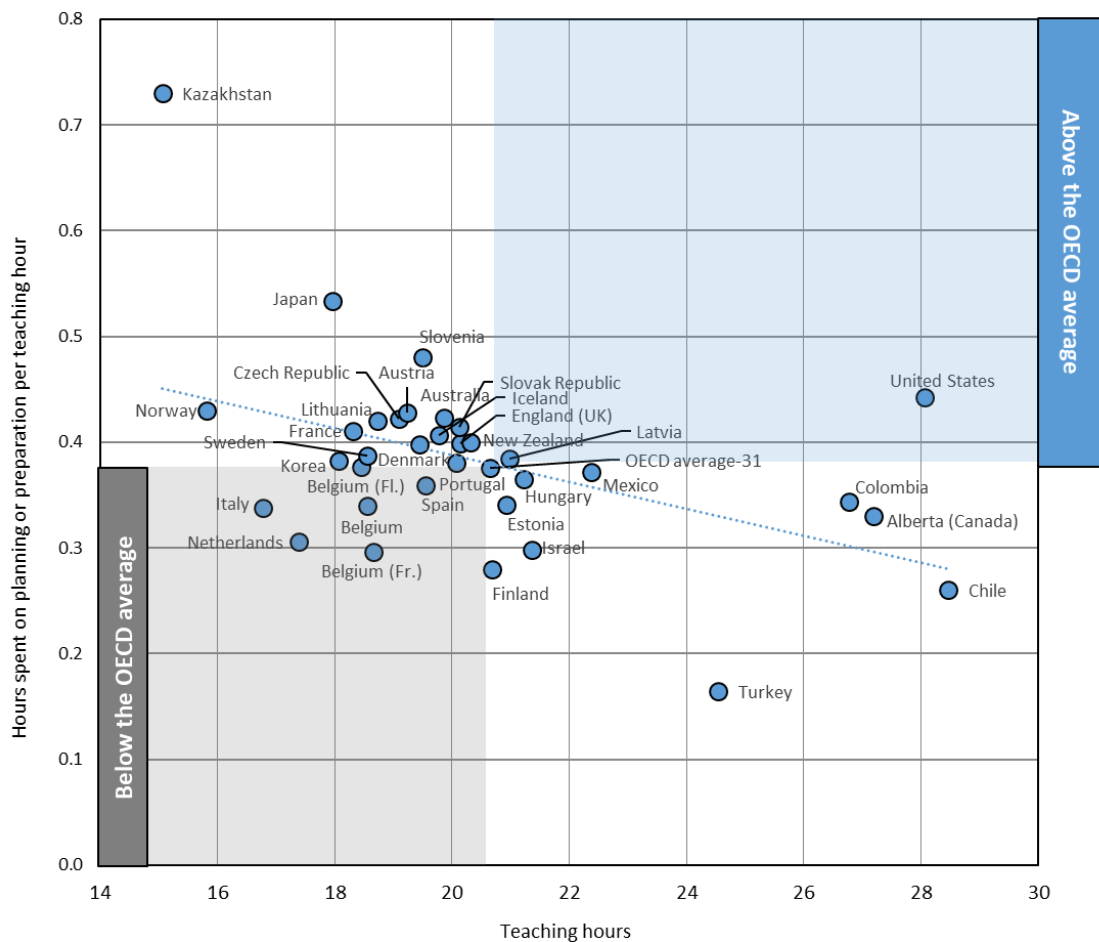
trends, e.g. if increased teaching loads and other time pressures have forced teachers to cut back on lesson preparations. It is not possible to disentangle which of these age, period or cohort effects have contributed to the reduction in planning time and it may well have been a combination of all of them.

2.4.1. How does teachers' preparation time per teaching hour vary based on teacher and school characteristics?

Since teachers' planning and preparation time is directly associated with the lessons whose quality it aims to enhance, it makes sense to consider not only teachers' total preparation time, but also the time they have to prepare each hour of instruction. As shown in Figure 2.14, countries differ significantly in the average time their lower secondary teachers report to spend on planning and preparation per teaching hour. On average across the OECD, teachers report to have spent about 23 minutes planning per hour of teaching during the preceding week, but this ranged from 10 minutes in Turkey to 32 minutes in Japan.¹

Figure 2.14. Teaching hours and planning time per teaching hour

Results based on responses of all lower secondary teachers (including part-time teachers).



¹ These figures are country-level averages of the ratios of the times individual teachers report to have spent on teaching and planning. They may therefore diverge from the ratios of the country-level averages of the times spent on teaching and planning, as reported elsewhere in this paper.

Note: Teachers' time spent planning per teaching hour is calculated as the country-level average of individual-level ratios.

Source: OECD (2019), *TALIS 2018 Results* (database), <https://www.oecd.org/education/talis/talis-2018-data.htm> (accessed on 12 January 2021).

Figure 2.14 also points to the trade-off that countries face between the hours that each teacher is expected to teach and the time they have for preparing each lesson. In systems with a high teaching load (such as the United States, Alberta [Canada] and Chile), teachers have less time to prepare each lesson, whereas the opposite is the case in countries with fewer teaching hours (e.g. Kazakhstan and Norway). Finding the right balance between teaching and preparation time is not trivial and, in practice, resource constraints, the role of collective bargaining and various stakeholders' interests mean that considerations of educational effectiveness are rarely the only factor that determine this balance.

While thorough preparation will arguably increase the quality of a lesson, one would expect the marginal returns to diminish (not least since the uncertainties inherent in classroom instruction limit the extent to which a lesson *can* be planned). At the same time, there are strategies that may provide teachers with additional preparation time without compromising their ability to offer instruction, e.g. by enabling teachers to focus on core tasks during their non-teaching time or by increasing class sizes. For example, despite similar teaching hours, teachers in Slovenia have more time to prepare their lessons than those in Spain, and teachers in Japan have more time for preparation than their colleagues in the Netherlands.

This pattern also appears when comparing part-time and full-time teachers. On average, part-time teachers spend significantly more time preparing lessons (4.4 minutes) and marking students' work (1.1 minutes) per hour of instruction across the OECD. The opposite was the case in only a small number of TALIS countries. Analyses at the individual-level further corroborate these results. Across the OECD – net of differences across education systems – teachers with longer teaching hours tend to spend less time preparing lessons. Bivariate regressions with country-level fixed effects, as specified in Price and Carstens (2020_[63]), suggest that every additional hour of teaching is associated with a 1.2 minute reduction in the preparation time per lesson – the equivalent of 5% of the average preparation time. The individual-level association between overall teaching hours and the time for lesson preparation per teaching hour is negative in all 47 TALIS countries with available data and statistically significant in all but one of them.² As discussed further below, this association may be the result of different mechanisms: On the one hand, the trade-offs teachers face when distributing a limited amount of time across different activities. On the other hand, the diminishing marginal need for preparation for each additional lesson (assuming that there is some positive spill-over of preparatory work across lessons).

The overall time that teachers need to prepare their lessons (or, the point at which this time would be more productively used elsewhere) will vary based on a number of factors. Highly heterogeneous student populations and mixed classes, for example, might necessitate differentiated teaching approaches that require more meticulous preparation (Sellen, 2016_[55]). Novice teachers are also likely to require more time to prepare their lesson up to a given standard than experienced teachers are. Likewise, assigning a new course for teachers to prepare (or requiring them to adapt to a new curriculum) will take more preparation time (Bastian and Janda, 2018_[64]). Finally, teachers offering a number of

² Authors' analysis of TALIS 2018 data.

unique courses (e.g. for classes at different levels) will require more preparation time than those who offer the same number of identical courses in a given semester.

In an observational study of secondary mathematics teachers in North Carolina, Bastian and Janda (2018^[64]) found that teachers who were assigned new courses to prepare experienced a significant drop in their overall effectiveness. This might be a result of the time required to prepare new courses (developing course materials and familiarising themselves with the course content), as well as the time it takes to build course-specific human capital. To reduce the (unequal) burden of preparation time, the authors suggest that principals could aim to assign courses to teachers who have previously taught them where possible and ensure that teachers collaborate to share relevant course-specific materials (Bastian and Janda, 2018, p. 553^[64]). School-level management and an intelligent assignment of courses might therefore reduce the preparation time needed for high-quality instruction. (The role of school management is discussed in more depth in Section 6).

TALIS 2018 data suggests that – in some countries – teachers’ preparation time does indeed vary based on the presumed difficulty of their teaching environment, as well as teachers’ needs. In many other countries, however, this does not appear to be the case. One of the most consistent findings in TALIS 2018 is that female full-time teachers spend more time on planning and preparing lessons than men do, which is consistent with their longer overall working hours. Although the difference is statistically significant in almost half of the countries with available data, it is comparatively small and only amounts to a few additional minutes of preparation time per teaching hour (see Table A.6).

In about a third of the countries with available data, novice teachers also spend more time on preparation per teaching hour than their mid-career peers with 6-15 years of experience. Although the difference only amounts to two minutes per teaching hour on average, novice teachers in Latvia and CABA (Argentina) spend 10 minutes per teaching hour more than their mid-career peers (see Table A.6). This is consistent with more experienced teachers optimising their resources by saving time on lesson preparation as they get more efficient (Philipp and Kunter, 2013^[51]), or the fact that novice teachers are more likely to teach and prepare a lesson for the first time. In some countries, novice teachers may be given fewer teaching hours to account for their additional planning time needs, while in others they may engage in this work at the expense of other activities or leisure time.

Studying the assignment of Los Angeles novice teachers over the course of 10 years, Bruno, Rabovsky and Strunk (2019^[65]) found that new teachers were placed in more challenging schools and classrooms, but assigned fewer distinct courses to prepare. Yet, a study by Blazar (2015^[66]) found novice teachers in California to be more prone to being reassigned to new grades than their more experienced peers, which presumably adds to their preparation load. While there may be benefits to reassigning novice teachers across grades and to new courses (because it gives them varied experiences that may pay off later), the author demonstrates that this instability can reduce teachers’ effectiveness to an extent that wipes out their gains from experience, especially if teachers switch frequently to non-adjacent grades (Blazar, 2015^[66]). In any case, it can be assumed that novice teachers need more time to prepare an assigned course than their more experienced peers.

Table A.5 shows how teachers’ preparation time per teaching hour varies across schools based on their location, public or private management, and their student intake. While there is no systematic variation across the OECD, there are some significant differences at the country level. For example, in 6 of 37 countries with sufficient data, teachers in disadvantaged schools reported less preparation time per hour of teaching. In Georgia, Austria, Alberta (Canada), Denmark, Belgium and the United Arab Emirates, this deficit in preparation time ranged from 5 to 2 minutes per hour of instruction. Notably, in Austria, teachers also reported less preparation time in schools with high proportions of students

with SEN and students with an immigrant background. This might be surprising since one could assume that teachers need more time to prepare lessons for student groups with heterogeneous learning needs.

Given the particular demands faced by teachers in very small rural schools, they might also be assumed to require additional time to prepare their lessons. Some rural teachers need to engage in multi-grade instruction or cover a wide range of subjects and TALIS 2013 data suggests that they are more likely to lack formal training on the content, pedagogy or classroom practice for some of the subjects they teach (Echazarra and Radinger, 2019_[67]). However, as can be seen in Table A.5, in most countries there are no significant differences in the preparation time of rural and urban teachers. In Estonia, Italy, Sweden, the Czech Republic, Lithuania, Russia, Romania and Kazakhstan, rural teachers spend more time to prepare each lesson than their colleagues in cities, while the opposite is the case in Austria, New Zealand and the United States (with differences ranging from 3 to 16 minutes per hour of instruction).

Across subjects, the time that teachers spend planning and preparing their lesson is remarkably similar in most countries. Across the OECD, single-subject teachers in social studies or foreign languages spend somewhat more time on their preparation than single-subject teachers in the main language of instruction, although this difference is only significant in Austria, CABA (Argentina), Estonia and France. Teachers teaching none of the main subjects³ spend less time on preparation in about a third of the countries with available data. Overall, though, differences are modest and on average amount to less than three minutes per hour of instruction Table A.10.

2.4.2. How does teachers' time for student feedback and corrections vary based on school and teacher characteristics?

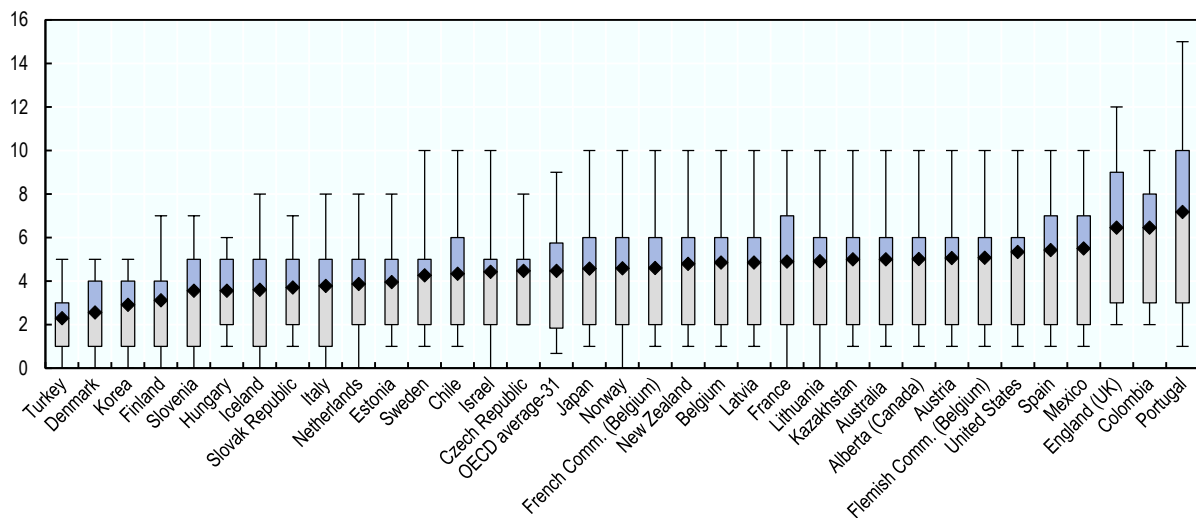
The ongoing and interactive assessment of students' learning is critical for teachers to provide students with feedback on their progress and to adjust their instruction to meet identified learning needs. Although this ongoing cycle of assessment and feedback can be incorporated into regular lessons, some of it usually takes the form of written feedback on students' homework or exams (OECD, 2013_[68]). Providing thoughtful and effective feedback is a deliberate process that requires resources, support and time (Hattie and Timperley, 2007_[69]).

³ "Main subjects" here refers to reading, writing and literature, mathematics, science, social studies and foreign languages.

On average across the OECD, full-time teachers spend about 4.5 hours on marking and correcting students' work during the preceding week, ranging from 2 hours in Turkey to more than 6 hours in England (United Kingdom), Colombia and Portugal (see Figure 2.15). In a typical OECD country, this average conceals that more than 25% of teachers spent 2 hours or less on marking, while a smaller proportion of at least 10% spent at least 10 hours on marking. This suggests that marking time is either unevenly distributed across teachers (with few teachers bearing an outsized amount of this burden) or that much of teachers' marking work comes in bulk and is concentrated in time, e.g. after exams.

Figure 2.15. Variability in hours spent marking and correcting students' work, 2018

Hours spent marking and correcting by full-time lower secondary teachers



Notes: The boundaries of boxes and whiskers represent values at the 10th, 25th, 75th and 90th percentiles. Countries are sorted in ascending order of the means.

Source: OECD (2019), *TALIS 2018 Results* (database), <https://www.oecd.org/education/talis/talis-2018-data.htm> (accessed on 12 January 2021).

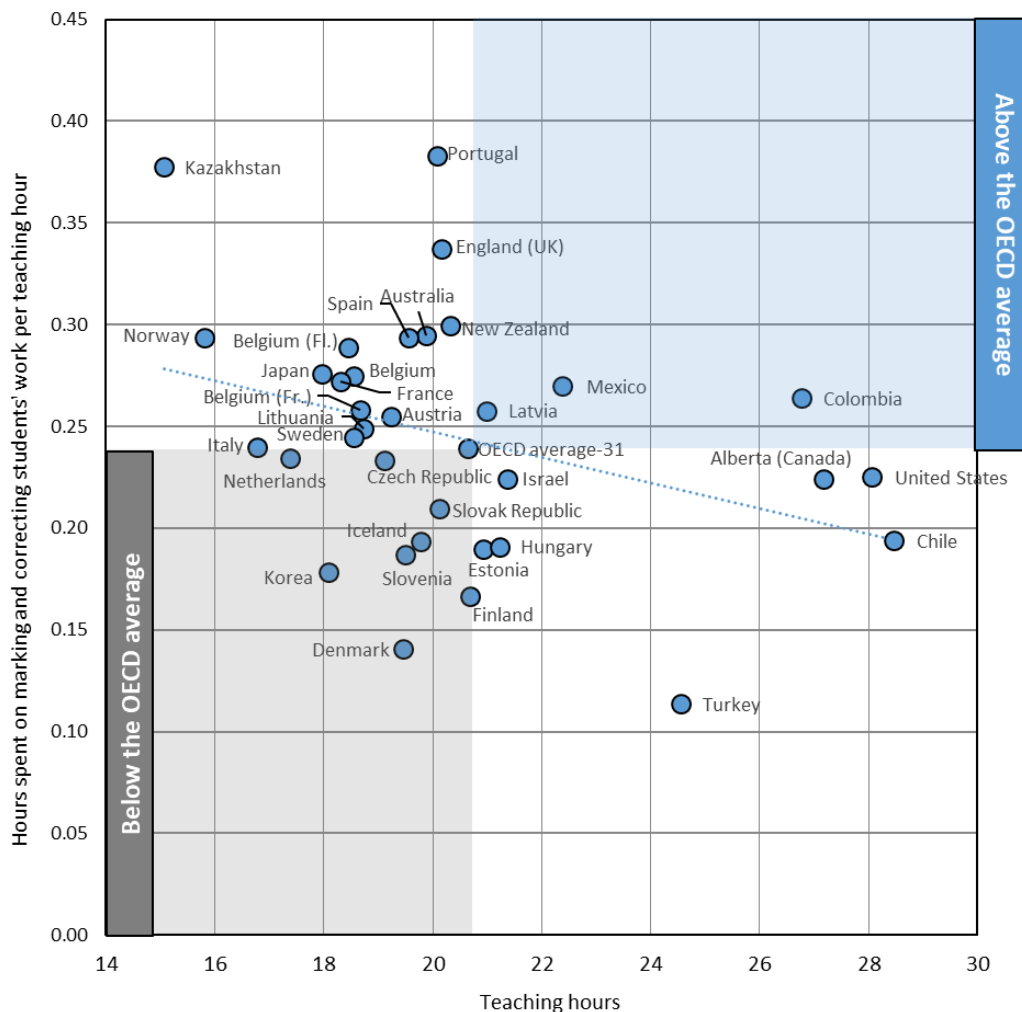
Some of the choices that school systems make around the organisation of instruction have an impact on the time teachers have for activities outside of the classroom. For example, comparing OECD countries, it seems that those with long teaching hours tend to leave their teachers with less time per lesson for marking students' work (see Figure 2.16). Compared with Chile, where teachers teach 28 hours per week and spend on average 12 minutes per 1-hour lesson to correct students' work, teachers in Japan only teach 18 hours per week while spending 17 minutes per lesson to correct students' work.⁴ Although the association between longer teaching hours and reduced time for marking and correcting per teaching hours is not very strong, it also holds within countries. Across the OECD, every additional hour of teaching is associated with a reduction in the marking time per lesson that is equivalent to 3% of the OECD average. This individual-level association is negative and statistically significant in all 47 TALIS countries with available data.⁵

⁴ These figures are country-level averages of the ratios of the times individual teachers report to have spent on teaching and marking. They may therefore diverge from the ratios of the country-level averages of the times spent on teaching and marking, as reported elsewhere in this paper.

⁵ Authors' analysis of TALIS 2018 data.

Figure 2.16. Teaching hours and marking / correcting time per teaching hour

Results based on responses of all lower secondary teachers (including part-time teachers).



Note: Teachers' time spent marking/correcting per teaching hour is calculated as the country-level average of individual-level ratios.

Source: OECD (2019), *TALIS 2018 Results* (database), <https://www.oecd.org/education/talis/talis-2018-data.htm> (accessed on 12 January 2021).

Among TALIS countries, there are, however, quite a few examples of systems, such as Korea, Denmark and Iceland, where teachers' spend comparatively little time to mark or correct students' work despite below-average teaching hours. Various factors may explain these differences in marking and correcting times. Some countries emphasise detailed feedback on assigned homework and regular assessment, while others rely more heavily on formative feedback during the lessons, which may reduce the time needed for corrections. Likewise, one might expect that – all else being equal – larger classes would require teachers to spend more time correcting their students' work. Across countries, however, there is no relationship between class sizes or students-teacher ratios and the time spent on marking students' work.

The time teachers spend on marking and correcting students' work varies based on their level of experience. While the time teachers spend on lesson preparation per hour of instruction drops significantly in many countries after the first years on the job, the same is

not true for the time teachers spend on marking and correcting students' work. On the contrary, across the OECD, highly experienced teachers and those over the age of 50 spend *more* time correcting students' work than their mid-career peers (see Table A.8). Among the 19 systems where teachers above the age of 50 spend more time marking than teachers below the age of 30, the difference ranges from 1.9 minutes per hour of instruction in the French Community of Belgium to 6.9 minutes in the Flemish Community of Belgium (this corresponds to increases of 15% and 46% respectively). Separate studies of teachers in Germany have produced similar results, showing that the proportion of time that teachers spend on corrections increased consistently with their age, while their preparation time dropped sharply during the first few years and remained low thereafter (Philipp and Kunter, 2013^[51]).

It is not clear why teachers' marking and correcting time increases over the course of their careers while their preparation time drops. It might be that teachers become more efficient at planning their lessons as they acquire subject-related human capital or re-use teaching materials, while the same efficiency gains are not possible in correcting students' work. Since all teachers are required to engage in trade-offs when allocating their limited time between competing tasks, teachers might shift their attention to corrections once they get more efficient in lesson planning.

Another explanation for the observed trend could be that teachers become less efficient in correcting their student' work as they age, or that more experienced teachers' instruction and assessment practices require more time for corrections (e.g. due to more frequent exams or elaborate homework). Sellen (2016^[55]) has investigated the latter hypothesis using TALIS 2013 data for England. Although teachers who report to frequently provide written feedback on their students' work were found to spend more time on marking, no in-class teaching practices were associated with a change in marking time (e.g. providing students with immediate feedback in class, giving them differentiated tasks or letting students evaluate their own progress). Neither were these teaching practices associated with an increase or reduction in the overall weekly planning time. (Further analyses would be needed to see whether these results hold for marking and planning time per hour of instruction, and whether the same is true in other OECD countries).

Across the OECD, lower secondary teachers employed on short (< 1 year) fixed-term contracts also spend significantly less time on marking and correcting per teaching hour than their colleagues on permanent contracts (the opposite was the case for planning and instruction). These differences might reflect that novice teachers are more frequently employed on fixed-term contracts, or that fixed-term teachers are given different tasks (e.g. that they are more frequently assigned new courses to prepare) (see Table A.8).

Table A.7 presents how teachers' marking and correcting time per teaching hours varies based on school characteristics. In about a third of the cases, comparisons are not possible due to an insufficient number of schools in the sub-groups (e.g. because there are not enough schools with a high share of immigrant students in the sample) and in the majority of the remaining cases, the differences are insignificant. Nevertheless, in contrast to teachers' preparation time, the differences in marking time appear to be more systematic. In 15 countries, teachers in cities spent significantly more time on marking students' work than their peers in rural areas (on average across the OECD, the difference amounts to 2.4 minutes per hour, or about 18%). At the same time, in about a third of the countries with available data, teachers spend significantly less marking time per teaching hour in schools with a high proportion of disadvantaged students and students with SEN (in both cases, around 6% less across the OECD). It is unclear what explains these differences in marking time since teachers in disadvantaged schools do not have a higher teaching load

in most countries, but they could exacerbate inequities if their teachers do not have sufficient time to provide disadvantaged students with thorough feedback on their work.

As one might expect, the time that teachers spend on marking and correcting students' work varies considerably based on the subjects they teach. As seen in Table A.10, the general pattern observed in nearly all countries with available data is that single-subject teachers in the main language of instruction spend the most time on marking and correcting their students work (about 19 minutes per hour of instruction, on average across the OECD). Single-subject teachers in mathematics or science, social studies or languages and those teaching a combination of subjects including one of the aforementioned spend less time on marking (on average between 12-24% less, with no clear pattern of systematic differences between them).

In nearly all countries with available data, teachers who do not teach any of the main subjects (but only physical education, arts, religion/ethics, VET or technology) spend the least time on marking – on average nearly 45% less per hour of instruction than teachers of reading, writing and literature. This may be one of the factors explaining the shorter working hours observed among this group of teachers in most OECD countries. Although sub-samples for teachers with specific subject combinations are small, it appears as though particularly teachers of more practical subjects, like physical education and the arts, spend less time on marking students' work. Teachers who teach these subjects alongside one of the main subjects (like the language of instruction, social studies or mathematics) tend to spend less time marking than those who exclusively teach one of the main subjects. Of course, these observations cannot be generalised to all teachers since there is considerable heterogeneity in the time that teachers of any given subject spend correcting their students' work.

2.5. Time for professional learning

Supporting teachers to engage in effective forms of continuing professional learning (CPL) from the beginning to the end of their career is critical to help them refresh, develop and broaden their knowledge and skills, to keep up with changing research, tools, practices and students' needs (OECD, 2019^[3]; OECD, 2005^[70]; Boeskens, Nusche and Yurita, 2020^[71]). Empirical research has occasionally raised doubts about the effectiveness of traditional formats of professional development, which often rely on large-scale, one-off externally provided courses (Yoon et al., 2007^[71]; TNPT, 2015^[72]). Yet, recent evidence has provided cause for optimism and generated convincing evidence that some forms of professional learning can increase teachers' effectiveness. This includes school-based, teacher-led improvement projects that focus on classroom practices and emerge directly from teachers' needs, but also different forms of collaboration (Opfer, 2016^[73]) and individualised instructional coaching (Papay et al., 2016^[74]; Powell et al., 2010^[75]; Kraft and Blazar, 2017^[76]). Another feature shared by many successful forms of professional development is their sustained duration (Darling-Hammond, Hylar and Gardner, 2017^[77]; Garet et al., 2001^[78]). While time alone is therefore not a sufficient condition for effective professional learning (or likely to be the most important factor determining its impact), having sufficient time is certainly a necessary condition to promote teachers' engagement both in formal and informal forms of professional learning.

Ensuring that teachers have the resources, are motivated and have sufficient time to engage in professional learning is a challenge for many school systems. Scheduling conflicts and a lack of time are the most widely reported barriers to CPL participation in TALIS countries, next to a perceived lack of incentives and prohibitive participation costs (OECD, 2019^[2]). In the 2018 TALIS survey, lower secondary teachers across the OECD reported to have spent on average 1.7 hours on professional learning during their most recent

calendar week. Across countries, this time ranged widely from less than one hour in Japan, France, the Flemish Community of Belgium, Finland and Denmark to more than three hours, for example, in Shanghai (China), Mexico and Colombia (OECD, 2019, pp. 205, Table I.2.27_[2]). However, since professional development activities are not evenly distributed over the school year and since some systems organise professional development in a concentrated format (e.g. at the beginning of each term), international comparisons based on this data should be treated with caution.

Time constraints and scheduling conflicts may present a greater barrier for some schools and teachers than for others. Schools with staff or resource shortages, for example, may experience challenges in securing substitute teachers to permit staff to leave their classrooms for professional learning activities, even where they may be formally entitled to a given amount of CPL. Part-time workers in many occupations are known to report greater difficulties accessing professional learning opportunities. Across the EU, only 19% of part-time employees working 11-20 hours and 10% of those working less than 10 hours reported access to opportunities for training in 2005 (compared to 28% of full-time workers) (Sandor, 2011_[79]).

By contrast, part-time teachers' barriers to engage in professional development do not appear to be very pronounced in most OECD countries. In TALIS 2018, part-time lower secondary teachers reported to have spent on average 1.6 hours on professional development during the previous week – only a little less than the 1.8 hours reported by full-time teachers. Relative to their teaching hours, part-time teachers reported to have spent marginally more time on professional development than their full-time colleagues in all but a few OECD countries. On average across the OECD, part-time teachers were also less likely to report that professional development activities conflicted with their work schedules, which suggests that a lighter teaching schedule might explain their relatively high participation rate. By contrast, part-time teachers more frequently reported that family responsibilities present a barrier to their participation, possibly due to the higher proportion of female teachers on part-time contracts.⁶

2.6. Time for administrative duties and other non-teaching-related tasks

Teachers' administrative work, both in and outside the classroom, is frequently cited as a source of frustration and an unproductive use of teachers' time (OECD, 2019, p. 172_[3]). Accordingly, on average across the OECD, 55% of teachers considered "reducing teachers' administration load by recruiting more support staff" to be of high importance and ranked it among their top three spending priorities in 24 of the 48 countries and economies participating in TALIS (OECD, 2019, pp. 110, Table I.3.66_[2]). Teachers were also asked how many hours they had spent on general administrative work (including communication, paperwork and other clerical duties) during the last week. On average across the OECD, teachers reported to spend 2.7 hours on administrative work, ranging from under 1.5 hours in Finland, Romania, CABA (Argentina), Brazil and France to over 4 hours in Australia, New Zealand, Chinese Taipei, Korea and Japan.

Anecdotal reports suggest that some teachers feel as though their administrative workload has increased over time – a development that is sometimes linked to wider trends, such as an increasing focus on accountability in schools. A study of teachers' time in North Carolina elementary schools, for example, found that a federally supported school turnaround programme had led to an increase in teachers' paperwork and administrative burden (Heissel and Ladd, 2018_[14]). However, between the 2013 and 2018 TALIS waves,

⁶ Authors' analysis of TALIS 2018 data

16 of 34 systems with available data recorded a statistically significant (although mostly modest) decrease in the time spent on administrative work, while only four recorded an increase (OECD, 2019, pp. 205, Table I.2.30.^[2]).

Several factors could explain why individual teachers' experience of increased administrative work diverge from the results of the TALIS survey. It might be that teachers' administrative workload is increasing with their age or experience (a hypothesis investigated further below), while at the same time decreasing across cohorts. This could explain both the aggregate reduction and individual teachers' experience of increasing administrative work. It could also be that the recent reduction in administrative work has followed a longer period of increasing administrative burden that cannot be observed in the data at hand.

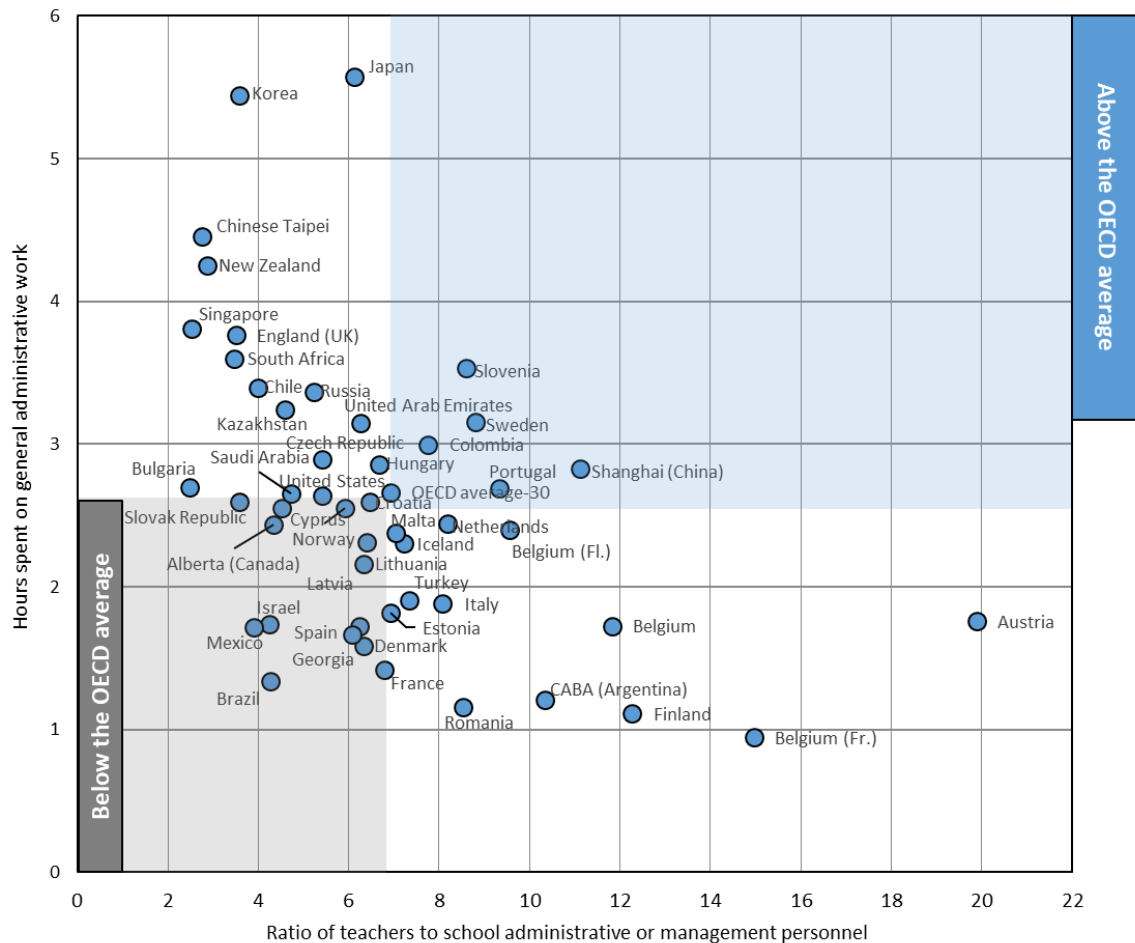
Different strategies have been invoked to alleviate teachers' administrative workload and to help them focus on their core pedagogical work. One of them is to increase the administrative support in schools or to use existing support staff more effectively. Yet, the marginal impact of hiring more staff to support teachers in their administrative duties is contested (OECD, 2019, p. 173 f.^[3]) and international comparison suggests that the hiring of support staff might be neither sufficient nor necessary to ease teachers' administrative burden. As can be seen in Figure 2.17, teachers in countries that employ fewer administrative support staff (towards the right side of the graph) do not appear to spend more time on administrative work. If anything, the opposite appears to be the case since some of the countries that employ the most administrative support staff, such as Chinese Taipei, Korea and New Zealand, are also the ones where teachers spend the most time on administrative work. (The pattern is similar when considering the share of reported overall working time spent on administrative work, rather than the absolute hours).

Within most countries, the association between the share of administrative and management staff in schools and teachers' time spent on administrative work is as weak as it is across countries (OECD, 2019, p. 174^[3]). In 39 of 48 countries and economies with available TALIS 2018 data, there was no statistically significant correlation between schools' administrative and management personnel per teacher and the time their teachers reported to spend on administrative work. In the remaining nine countries and economies, the correlation was significant, but in the opposite direction of what one might expect, i.e. teachers in schools with less administrative and management staff per teacher spent less time on administrative work.⁷ Of course, these cross-sectional associations need to be interpreted with great care, both across and within countries. Even if they were to be indicative of a causal relationship, it would not be clear in which direction the causation would run. Efforts to reduce teachers' administrative burden are discussed in more detail in Section 6.

⁷ Authors' analysis of TALIS 2018 data.

Figure 2.17. Teachers' administrative work and support personnel, 2018

Results based on responses of all lower secondary teachers (including part-time teachers)



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^[21]), *TALIS 2018 Results (Volume I): Teachers and School Leaders as Lifelong Learners*, <https://doi.org/10.1787/1d0bc92a-en>, Tables I.3.74 and I.2.27.

As mentioned before, teachers' administrative workload can change over the course of their careers, as teachers assume new roles and responsibilities. Analyses of German teachers found that older teachers spend more time on administrative tasks than their younger colleagues do (Philipp and Kunter, 2013^[51]). Across the OECD, this observation appears to hold at least to the extent that teachers at the age of 50 or above spend significantly more time on administrative work than those under the age of 30 (about 0.4 hours, or 17% more). However, the point in teachers' careers at which they experience the most significant increase in administrative work appears to vary across countries. In 16 of 50 countries, mid-career teachers with 6-15 years of experience have significantly more administrative work than novice teachers and in all but one of these, there appears to be no further increase as teachers enter the last stages of their career (i.e. their 25th year of experience). In another seven countries, the increase in administrative work can only be observed between mid-career and end-career teachers.

Philipp and Kunter (2013^[51]) hypothesised that the increase in administrative work among more experienced teachers in Germany might be explained by their desire to reduce more exhausting tasks as they approach retirement age (the proportion of time spent on administrative tasks was associated with lower levels of exhaustion in the German study). It could also reflect the increase in teachers' administrative responsibilities as they take on more managerial positions. Rather than the result of active decisions, the findings could also reflect younger teachers' superior efficiency in handling administrative tasks (for example, due to their greater familiarity with information and communications technology (ICT)), or that they are protected from some of these duties during the first years on the job.

2.7. The context-dependency of “effective time use” and lack of one-size-fits-all patterns

Although teachers' time plays a critical role in students' education, the literature on the subject is relatively fragmented and often only implicitly addresses the effectiveness of its use as a resource. In the economics of education, for example, education production functions (EPF) serve to model the relationship between various kinds of inputs and educational outputs (usually student achievement). By identifying which inputs matter the most for the desired outcome, EPF can help policy makers in weighing different policy options and judging the effectiveness and efficiency of educational investments (Hanushek, 2020^[80]).

EPF have considered a wide range of inputs, including various school resources, family attributes and teacher characteristics, such as their level of education, experience, certification status or salaries. Teachers' time, by contrast, tends to enter the equations only implicitly and from the students' perspective, i.e. in the form of instruction time or the number of teachers per student (De Witte and Kortelainen, 2013^[81]; Agasisti and Zoido, 2015^[82]; Woessmann, 2016^[83]; Agasisti, Munda and Hippe, 2019^[84]). To illustrate how we might think about effectiveness in the context of teachers' time use and the various factors that influence its contribution to student learning, the following section proposes a production function focused on this particular educational resource.

One highly stylised way to think about the efficiency of teachers' time use is illustrated by the function in Figure 2.18. It assumes that the challenge for teachers and school leaders is to distribute the working time of L teachers (i) in a given school (s) across M distinct tasks (j) in order to maximise a desired output (Q), such as student learning. The function assumes that the output depends on the sum of the outcomes of each teacher's activities. These are dependent on each teacher's overall productivity A , the time x that they spend on each individual task and their effectiveness α in performing each task. This task-specific effectiveness will vary from teacher to teacher, depending on their abilities, the nature of their work and other factors described below.

Figure 2.18. A production function for teachers' use of time

$$\max Q_s = \sum_{i=1}^L \left(A_{is} \times \prod_{j=1}^M x_{ij}^{\alpha_{ij}} \right) \quad \text{s. t.} \quad \sum_{j=1}^M x_{ji} \leq X_i, \quad 0 < \alpha_{ij} < 1 \quad \text{for all } i, j$$

In practice, this relationship between teachers' use of time and student outcomes is subject to various constraints at the levels of the individual teacher, the school and the system as a whole. The amount of time each teacher can spend on different tasks, for example, is constrained by their overall working time X , just like the overall time available at the school

and system level may be limited by budget constraints and trade-offs between teacher salaries and other resources.

The structural relationship sketched above helps to illustrate some of the complexities involved in the efficient allocation of teachers' time. First of all, teachers differ in their overall productivity (A), depending on their general ability and training, as well as the context in which they teach (e.g. their schools' resources and leadership, their peers and students). Even more importantly, however, teachers also differ in their adeptness at the different tasks their work entails. Some teachers are highly proficient in the classroom while others excel at peer mentoring or the design of assessments. This relative ability affects how each teacher's time might best be distribution across different tasks, which is captured in their relative elasticity a_{ij} .

Other factors that may affect a_{ij} – and thus the optimal distribution of teachers' time – include, for example, the content they teach since some subjects require more preparation than others. Likewise, teachers who are assigned new courses or a greater number of unique courses may require more preparation time relative to their teaching time (Bastian and Janda, 2018_[64]). Students' needs and the teacher's classroom composition can also play a role since classes with more diverse learner profiles may require more individualised counselling or after-class support (Fine-Davis and Faas, 2014_[60]). Other factors, such as class size, also matter since teaching a larger class may require more time for marking students' work, but not necessarily more time to plan their lessons. Furthermore, the outcome of one teacher's time-use may interact with that of their colleagues – a complexity that is not addressed in this model. If one teacher spends additional time to provide students with feedback to improve transversal skills (such as spelling or focussing in class), other teachers may need to spend less time to correct students' writing or to maintain classroom discipline.

The production function assumes that each activity is essential for student learning and that there are diminishing returns to the time teachers spend on each activity. This assumption follows the intuition that – even though teachers' instruction is arguably their most important input for student learning – the quality of teachers' instruction would suffer dramatically if all of their time were spent in the classroom and none on preparation, marking or professional learning. Of course, this model has limits and, in reality, some tasks may well be divided between teachers or handed to other professionals. It is also plausible to expect that the marginal returns to teachers' time diminish more quickly for some tasks (e.g. administrative work) than for others (e.g. instruction).

The returns to scale for teachers' overall working time are given by the sum of different tasks' output elasticities α_j . In practice, one might assume that the returns to working time vary across different ranges, e.g. that teachers' productivity increases up to a certain amount of working hours before plateauing and eventually diminishing due to stress or fatigue. The point at which returns stop to increase or start to decrease can depend on individual and organisational factors (e.g. the work intensity, job resources etc.) and are important to consider when designing regulations concerning maximum working hours, overtime compensation, part-time regulations etc.

Even based on the model's simplified assumptions, it is clear that there is no one-size-fits-all pattern of effective time use for teachers. The optimal use of time would vary from one teacher to the next, based on their school context, their students, their specific teaching assignment and their skills concerning different aspects of their work. This also suggests that students would benefit from some degree of flexibility in the way individual teachers can allocate their time across tasks. Alternatively, teachers' productivity could be increased if their work was adjusted to ensure that the complexity of their tasks is commensurate with

their ability in that area (e.g. by assigning teachers who are more proficient in instruction to larger or more challenging classes).

In practice, neither school leaders nor policy makers fully control teachers' use of their time and the levers they have at their disposal to influence how teachers spend their time tend to be more indirect. Acknowledging teachers' relative autonomy, Phipps and Wiseman (2019^[85]) therefore propose an alternative model that takes as its starting point not the maximisation of an external outcome, like student learning, but each teachers' attempt to maximise their own utility. Phipps and Wiseman thus shift their attention to the important role played by incentives and the behavioural responses elicited by evaluations that reward teachers for engaging in specific activities.

In theory, the use of classroom evaluations that reward high-quality teaching should lead to improved teacher practices and incentivise teachers to engage in activities that maximise student learning (the Q of the function above). Yet, Phipps and Wiseman's model demonstrates that – due to the non-continuous nature of evaluations and the natural limitations of rubrics – they can influence teachers' use of time in unintended ways. If some of the behaviours rewarded by the rubric are disproportionately less costly or time-consuming to implement than others, teachers may allocate more time to them than would otherwise be justified (Phipps and Wiseman, 2019^[85]). Using incentives to align teachers' own utility with that of their students is therefore not a trivial task and there may be better ways to encourage the effective use of time as part of a holistic teaching practice.

Yet, even though the factors described above are often assumed to have an impact on teachers' effective use of time, there are few empirical studies that explicitly investigate the relative returns to teachers spending their time on different tasks. For many activities that teachers spend time on, such as lesson planning, it is very difficult to isolate and measure their effect on student learning, despite their unquestionable relevance. Even for activities, such as high-quality mentoring and professional learning, that we know can improve teachers' performance (Kraft, Blazar and Hogan, 2018^[86]), little is known about the amount of time teachers should devote to them and its relative effectiveness compared to time spent on other activities.

3. How do school systems regulate teachers' time use? A review of time use regulations and reforms in OECD countries

As was demonstrated in Section 4, there is significant variation across and within countries in the way teachers spend their time. One of the reasons for these observed differences are central policies and regulatory frameworks that govern teachers' time use in OECD countries. Drawing on international indicators collected through the OECD's NESLI network and examples of country practices, this section discusses different approaches to regulating teachers' overall working time, their teaching and non-teaching hours, their recovery time and their on-site presence. Other regulations, policies and practices that have an indirect influence on teachers' time use are considered in Section 6.

3.1. Overall working time

As seen in Section 4, there is considerable variation in the average working hours reported by full-time teachers across OECD countries, ranging from just over 30 hours to nearly 60 hours. Although multiple factors are likely to contribute to these differences, countries' statutory working time and their approach to governing it are undoubtedly one. In 21 of the 37 OECD countries and economies with available data, decisions on teachers' conditions

of service are taken at the school level (16) or at the local level (5). This includes decisions on teachers' weekly hours, their time schedule and the classes they teach (OECD, 2012, p. 479^[87]). In nearly all of these cases, however, schools and local authorities take these decisions within a central framework that governs at least some aspects of teachers' time use. One element of these higher-level frameworks are usually legal documents or collective agreements specifying a statutory working time for full-time teachers (see supplementary [Table 1](#))⁸.

Among OECD countries, one can broadly distinguish between those that regulate teachers' working time in terms of their overall workload and those that regulate it in terms of their teaching load. In 29 of the 35 OECD countries and economies with available data, teachers' statutory working time specifies the overall number of annual hours they are expected to work, including the time spent on teaching as well as non-teaching tasks. This workload ranged widely from less than 1 000 hours for primary school teachers in the French Community of Belgium to more than 2 000 hours for teachers in the United States (a similarly wide range can be observed in the statutory teaching times, as discussed below).

By contrast, 6 of the 35 countries only specify the number of hours that teachers are expected to teach, rather than their overall working hours. This is the case in Finland, Greece, Ireland, Italy, Mexico and the Flemish Community of Belgium, as well as for secondary school teachers in the French Community of Belgium and New Zealand, and for upper secondary school teachers in Austria (see supplementary [Tables 1 and 3](#)).

Within countries, there are few differences in the statutory working times between general and vocational programmes or across levels of education (from primary to upper secondary). Exceptions include the United States (longer working hours at higher levels of education), Israel and Portugal (shorter working hours and fewer weeks of instruction at the secondary level), as well as Poland (shorter working hours at the upper secondary level).

The work that teachers perform outside of the classroom is increasingly recognised as an integral part of their professional role and it is acknowledged that activities such as lesson preparation, peer collaboration and professional learning demand a substantial amount of teachers' time. As noted in the OECD School Resources Review's 2019 report *Working and Learning Together*, failing to account explicitly for these responsibilities within and outside the classroom can be detrimental to teachers' use of time and the status of their profession. On the one hand, it does not formally recognise the time that teachers spend on important tasks outside their teaching hours. On the other hand, it can diminish school leaders' capacity to plan their teachers' time based on a holistic conception of their work. 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 (OECD, 2019, p. 162^[3]).

Already in 1966, the ILO/UNESCO Recommendation concerning the Status of Teachers suggested that all factors contributing to teachers' workload – including their non-teaching obligations – should be taken into account when determining their teaching hours (ILO/UNESCO, 2016, pp. 36, §§ 90-93^[88]). Moving towards such a workload-based conception of teachers' working time can also provide a basis for granting schools more flexibility to create diversity in teachers' roles. For example, more of individual teachers' might be allocated to instructional or non-instructional activities, depending on the functions they perform at their school. In recognition of these advantages, some OECD

⁸ The supplementary online tables are available at:

http://www.oecd.org/education/school-resources-review/Working_Paper_Teacher_Time.xlsx .

countries, including Estonia, have reformed their regulation of teachers' working time (see Box 3.1).

Box 3.1. Implementing a workload-based regulation of teachers' working time 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-based system that specifies the total number of working hours and defines the full range of tasks that teachers are expected to perform. The reform defined teachers' total annual workload to be 1 610 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. The total annual working hours specified under the new system exceed the previously defined teaching hours by 290 hours in pre-primary education, 921 in primary and lower secondary education and 972 in upper secondary education. Given that the new regulations no longer specify teaching hours, the precise distribution of teachers' overall workload across 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^[89]), *OECD Reviews of School Resources: Estonia 2016*, <http://dx.doi.org/10.1787/9789264251731-en>. Reproduced from OECD (2019^[3]), *Working and Learning Together: Rethinking Human Resource Policies for Schools*, <https://doi.org/10.1787/b7aaf050-en>.

Another way in which policy frameworks can affect teachers' working time is through contract incentives. Beyond the contractually agreed working hours, salaried professionals' working time is usually assumed to respond to incentives that promise reward for greater performance or exerted effort. Over the past decades, some education systems have introduced legislation aimed to increase accountability and raise performance through school choice reforms or performance-related pay. In the United States, for example, the implementation of many such reforms has coincided with a steady rise of teachers' working hours since the early 1980s. Nevertheless, a study of school choice and accountability reforms across US states, has found their passage to have no effect on the general rise in teachers' working hours. (Student test scores did respond to the reforms, though, which might imply that teachers and schools respond to incentives in ways that improve student performance without requiring an increase in working time) (Stoddard and Kuhn, 2008^[10]).

3.2. Teaching and non-teaching time

Finding the right balance between teaching and non-teaching time is critical to ensure that teachers have sufficient time outside of the classroom to engage in effective instruction inside of it. Of course, conventional instruction is only one way in which teachers can contribute to their students' cognitive, social and emotional development and some systems with a more holistic conception of teachers' responsibilities place a lot of emphasis on the time that teachers spend with students and their families outside of the classroom. Nevertheless, teaching hours remain at the centre of most OECD countries' regulatory frameworks around teachers' time. Although countries have found different ways to articulate the relationship between the two, the regulation of teaching and non-teaching

time is closely connected: First, because teachers' non-teaching time is frequently defined as the difference between teachers' overall working hours and their teaching time. Second, because the adjustment of teaching hours is a common means to acknowledge that some teachers require additional time for non-teaching activities (e.g. due to additional responsibilities). Third, because any reform of teaching hours has consequences for teachers' non-teaching time and is likely to shift the balance between the two.

3.2.1. *The regulation of teaching time*

Statutory teaching time remains the central – and, in some OECD countries, the only – means by which central authorities regulate teachers' working time. The supplementary [Table 2](#) provides an overview of teachers' annual statutory teaching hours in OECD countries at different levels of education, as well as trends between 2008 and 2018. It shows significant cross-country differences at all levels of education. In primary education, annual statutory teaching hours in most countries range from 561 to 1063 around an OECD average of 783 hours. In lower secondary education, teaching hours range from 481 to 1063 around an OECD average of 709. In upper secondary education, they range from 405 to 1063 around an OECD average of 667.

International comparisons of teaching hours should be treated with caution. Although most countries report *typical* statutory teaching times, about one-quarter of them report maximum or minimum times (see Table notes). Likewise, it was not always possible to deduct the time spent on professional development or student examinations from these statutory teaching hours (OECD, 2019, p. 420_[1]). Nevertheless, the data shows that, in most systems, teachers at the lower or upper secondary level are expected to teach fewer hours than their colleagues at the primary level (and even more so than those at the pre-primary level). This suggests that they are expected to spend more time on activities like lesson preparation.

Although statutory teaching hours have been relatively stable over time on average across the OECD, a few countries have experienced significant changes between 2008 and 2018. (see supplementary [Table 2](#)). Following its New Horizon reform, Israel has seen a significant increase in the statutory working time of primary teachers, which was increased from 30 to 36 hours to include additional hours of small-group teaching as well as work that had previously been performed at home, in exchange for higher compensation (Hemmings, 2010_[90]). Teaching hours for Israeli secondary school teachers were also increased by around 20% during this period (OECD, 2019, p. 420_[1]) (see Box 3.4 for more information on the reform). Latvia has also seen a sharp increase in teaching hours when they were raised by more than 40% between 2016 and 2017 across all levels of education. Likewise, between 2008 and 2018, Japan saw annual teaching hours increase by 31 hours at the primary level and by 10 hours at the upper secondary level, following increases of even larger magnitude during the preceding decade (OECD, 2019, p. 420_[1]).

In contrast, some countries have significantly reduced their annual teaching hours between 2008 and 2018. Korea, for example, saw annual teachings hours drop by 20% (166 hours) at the primary level, by 15% (91 hours) at the lower secondary level and by 10% (56 hours) at the primary level. Significant decreases of more than 10% were also observed at the upper secondary level in Turkey (by 11% or 63 hours) and Iceland (by 16% or 88 hours), and at the primary level in the Czech Republic (by 27% or 232 hours) (see supplementary [Table 2](#)). In 2016, Chile also took steps to shift the balance between teaching and non-teaching hours. In order to create more time for professional development and other activities that could raise the quality of instruction, the country enacted a law to reduce the very high proportion of overall working time devoted to instruction to 70% by 2017 and 65% by 2019 (Santiago et al., 2017, p. 273_[91]).

As mentioned above, in some countries, statutory teaching times are the only means by which teachers' overall workload is defined. This makes it more difficult to regulate the balance between teachers' time inside and outside the classroom. For example, prior to the implementation of new regulations in 2015, the service code for Austrian federal schools gave teachers a basic teaching assignment of 20 hours but did not specify their overall working time (Nusche et al., 2016, p. 151^[92]). Likewise, teachers' contracts in Uruguay are based exclusively on teaching hours, which range anywhere from 20 to 48 hours in secondary education. In some cases, this has had negative consequences, leading teachers in Uruguay to supplement low wages with additional teaching hours in a second or third school, leaving little room for important non-teaching tasks or professional learning (Santiago et al., 2016, p. 230^[93]); (OECD, 2019, p. 162^[3]).

Similar dynamics could be observed in Kazakhstan, where teachers' employment contracts and basic compensation are solely based on their teaching load (the *stavka* system) (OECD/The World Bank, 2015, p. 115^[94]). According to a 2011 UNICEF report, this system, in combination with a low base salary, has encouraged some teachers to take on an excessively heavy teaching load. Other teachers sought to compensate their income by engaging in activities like private tutoring after regular school hours. This limits teachers' time to collaborate with colleagues, reflect on their practices, mentor less experienced teachers, engage in professional development projects and communicate with parents or students (UNICEF, 2011^[95]).

3.2.2. Teaching load adjustments

Teaching requirements may evolve over the course of teachers' careers. In a number of countries, for example, novice teachers have a reduced teaching load as part of their induction programmes. This provides them with more time to prepare their lessons, engage in professional learning or observe colleagues while they develop their teaching skills and improve their effectiveness (Kraft and Papay, 2014^[96]). Yet, induction programmes do not typically extend beyond the first year of teaching (OECD, 2019^[58]) and since the first round of TALIS in 2008, the teaching hours of new teachers with 5 years of experience or less have been remarkably similar to those of more experienced teachers (Jensen et al., 2012^[56]). Data from 2018 suggests that their teaching load is even higher in some cases. Although there is no data on systematic teaching load adjustments for new teachers, responses from TALIS confirm the perception that – in contrast to other professionals, like doctors or lawyers – teachers are routinely asked to perform in much the same way as their more experienced colleagues from the beginning of their careers (Paniagua and Sánchez-Martí, 2018, p. 41^[57]).

On the opposite end of teachers' careers, some countries encourage teachers to stay in the teaching profession by diversifying their duties and reducing their teaching hours as they approach retirement. For example, in Greece, teaching hours – but not working hours – are decreased with teachers' age (OECD, 2019, p. 373^[43]). Teachers in Portugal are also eligible for reduced teaching hours based on their age or their assumption of formal leadership roles such as school co-ordinator or department head (Liebowitz et al., 2018^[59]) (see also Box 3.3).

A reduced teaching load may not only benefit beginning teachers, but also those who serve as their mentors. In Korea, for example, teachers with at least 15 years of work experience can apply to serve as “master teachers” whose main role is to consult new teachers. Applicants need to be recommended by their school and selected following an evaluation of written materials, a peer evaluation, an in-depth capacity evaluation and training (they are evaluated for reappointment every four years). Master teachers benefit from reduced

teaching hours and can access research funds in addition to their salaries (OECD, 2019, p. 422^[43]).

Nevertheless, in 2018, 26 of 34 OECD countries and economies with available data did not compensate secondary teachers who engaged in mentoring and induction activities with reduced teaching hours (see supplementary [Table 3](#)). A 2009 survey of the United States school system found that only 14 of 50 states provided mentors and beginning teachers with release time to facilitate their collaboration on an ongoing basis, and only one state reduced their overall workload (Loeb, Miller and Strunk, 2009^[97]). Even where mentors do benefit from reduced teaching hours, the release time may not be sufficient for them to provide novice teachers with adequate support. The OECD's Initial Teacher Preparation Study found that mentors frequently face a heavy workload and find it difficult to make sufficient time to help their peers, which can reduce the effectiveness of their support, as well as the attractiveness of mentoring roles (OECD, 2019, p. 107^[58]).

As seen in the preceding section, teachers' use of time varies substantially based on the subjects they teach (e.g. with some subjects requiring less time to correct students' work). Although it is the exception, not the rule, some countries centrally adjust teaching requirements to reflect these differences across subjects. Prior to a reform in 2019, for example, Austrian federal schools adjusted teachers' basic teaching time of 20 hours depending on the subjects they taught (e.g. German language instruction received a higher weighting than physical education, resulting in a range of about 17 to 21 teaching hours) (Nusche et al., 2016, p. 151^[92]). (Since 2019, all new teachers entering Austrian federal or provincial schools are expected to teach 22 hours per week, with the exception of upper secondary core subject teachers, who teach 20 hours). Iceland also employed a sophisticated system to determine teaching hours based on a wide range of factors that are assumed to determine how much time teachers need for preparation and other non-instruction tasks, including their subject area (see Box 3.2) (Icelandic Ministry of Education Science and Culture, 2014, p. 80^[98]).

Box 3.2. Balancing teaching and non-teaching time in Iceland

A collective labour agreement for compulsory school teachers signed in May 2014 sets full-time teachers' working hours to 1 800 per annum, or 40 hours per week. Within this envelope, teachers' time is divided into three variable components: Part A covers teachers' core tasks of teaching, preparation and follow-up. Part B covers all other non-teaching activities, including professional development, meetings with parents, record keeping, collaboration with peers and breaks. Part C covers special assignments.

In the baseline model, full-time teachers spend about 641 hours per year on teaching and 395 on preparation (Part A), 150 hours on professional development and 614 on other tasks (Part B). Special assignments (Part C) are proposed by the head teacher in agreement with the teacher. This can include, for example, the management of school projects or special initiatives. Any time spent on Part C is supposed to be compensated by a reduction in the time spent on teaching and other tasks (Part A and B).

In practice, the teaching hours and precise distribution of time between Part A and Part B are determined at the school level based on a holistic assessment of each teacher's work. This causes de-facto teaching hours to range from about 13 hours to 19 hours per week. The assessment takes into account a range of factors, including: the teacher's subject, the number of subjects, class size and composition, required preparation and marking time, student assessments, the maintenance of equipment and facilities, the amount of teacher co-operation required, the use of new teaching methods and development of study materials, communication with parents, and exceptional record keeping duties. In addition, teachers receive a reduction of time spent on Part A (and complementary increase in Part B) from the ages of 55 and 60, and additional holiday allowances from the ages of 30 and 38.

Source: Icelandic Ministry of Education, S. (2014^[98]), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools: Country Background Report for Iceland*, Iceland Ministry of Education, Science and Culture, <http://www.oecd.org/education/schoolresourcesreview.htm> (accessed on 12 January 2021).

Other systems have taken a decentralised approach to teaching load adjustments, giving local actors more flexibility in managing teachers' time based on their own criteria and assessments of teachers' tasks, competency or experience. In Denmark, for example, the implementation of Act no. 409 gave school leaders greater discretion to adjust the teaching hours and preparation time for individual teachers, e.g. to re-distribute the teaching load between experienced and inexperienced teachers or across subjects (Nusche et al., 2016, pp. 52, 88^[99]). However, the implementation of Denmark's new framework demonstrated that local actors need time to learn how to use this flexibility effectively and support teachers in changing their practices in ways that takes full advantage of the new arrangements. For example, the new Danish system was intended to encourage teachers to move from individual lesson planning to more collaborative preparation, knowledge sharing and the use of digital learning resources (Bjørnholt et al., 2015^[100]). Portugal's use of credit hours – explained in Box 3.3 – is another example for giving local actors a role in managing teaching load adjustments.

Box 3.3. Adjusting teaching loads using a system of credit hours in Portugal

In Portugal, regular full-time teachers in the 2nd cycle of primary education and at the lower or upper secondary level have 35 weekly working hours, comprised of 22 teaching hours, 2.5 hours to engage in other work at school (incl. meetings with colleagues, parents or the board) and 10.5 hours for autonomous work (e.g. to prepare lessons and student assessments). Teachers with sufficient work experience benefit from a progressive reduction of their teaching hours at age 50, 55 and 60, matched by a corresponding increase in the time they are expected to dedicate to other tasks at the school. In line with the school leader's instructions, this time can be used, for example, to co-ordinate school projects, to mentor teachers, design pedagogical resources or to build partnerships with the local community. Teachers serving in leadership roles (e.g. as school co-ordinators or department heads) also benefit from a reduced teaching load.

Beyond this basic time allocation, each school in Portugal receives a given number of credit hours based on a formula that takes into account the school's size, its socio-economic profile and the number of teachers with reduced teaching hours. School leaders can freely allocate these credit hours to reduce the teaching load of selected teachers and provide them with more time to engage in other activities, particularly those aimed at promoting the success of all learners. The credit hours system helps to adjust individual teachers' use of time to match the demands of their roles, but also to foster schools' autonomy in reflecting on their educational priorities and how to make the most of their teachers' skills. For example, school leaders might recognise a teacher's organisational talent by providing them with release time to design and supervise innovative pedagogical projects. During the COVID-19 crisis of 2020, all schools were provided with additional credit hours to provide them with greater flexibility in adapting their teachers' time since many schools reorganised their schedules to accommodate social distancing measures.

Source: Liebowitz, D., et al. (2018^[59]), *OECD Reviews of School Resources: Portugal 2018*, OECD Reviews of School Resources, , <https://doi.org/10.1787/9789264308411-en>.

As discussed in Section 4, there are few appreciable differences in the teaching hours of teachers in advantaged and disadvantaged schools or those with a higher share of immigrant students and students with SEN. This does not necessarily imply that countries fail to recognise that disadvantaged students benefit from additional instruction time, after-school activities or other forms of teacher attention. In most cases, however, these are allocated in the form of additional funding or “in-kind” staff resources, which may be used to reduce class sizes, rather than to change how individual teachers use their time (OECD, 2017^[4]). According to principals' reports in the PISA 2015 survey, disadvantaged schools had more teachers per student or smaller classes than advantaged schools in 49 out of 70 systems (OECD, 2019^[3]).

Although it does not show up in the TALIS data, one of the countries that does provide teachers in disadvantaged schools with additional time outside the classroom is France. As part of its 2014 Priority Education Plan, teachers in schools with a high proportion of disadvantaged students (*réseaux d'éducation prioritaire*, REP) were, among other initiatives, provided with modified schedules that allowed for more non-teaching time to spend on teamwork, professional learning, communication with parents and the design of innovative lessons. This dedicated time amounts to an hour and a half per week at the lower secondary level and nine days per year in primary schools (OECD, 2019, p. 210 f.^[43]).

Statutory teaching times may be binding to different degrees and teachers' actual teaching time can diverge from these statutory hours for a variety of reasons, for example when teachers work overtime. In 26 of 32 OECD countries and economies with available data, teachers receive additional payments at least some of the time if they teach more classes or hours than required by their contracts (see supplementary [Table 2](#)). In 10 OECD countries, national data from administrative records or principal surveys permitted comparisons between statutory and actual teaching hours. In most cases (Australia, Estonia, Finland and Slovenia), actual teaching hours slightly exceeded the statutory hours (by less than 10%). In Poland and at the primary level in Latvia, the actual teaching hours exceeded statutory hours by more than 10%. In Portugal and at the secondary level in France, actual teaching hours were lower than statutory teaching hours.

3.2.3. The regulation of non-teaching time

Even though teachers spend a substantial amount of time in the classroom, the majority of their working time is spent on other activities in most countries (see Section 4). Many factors at the system, the school and the individual level influence the amount of time that teachers spend on non-teaching tasks. These include the availability of support staff, administrative duties and accountability measures, organisational practices, the use of efficiency-enhancing tools and others (see Section 6 for a more in-depth discussion).

As far as central statutory regulations are concerned, teachers' non-teaching time is often not defined directly – if it is regulated at all – but rather indirectly, i.e. as the difference between teachers' overall statutory working hours and their teaching time. Based on these regulations alone, it is evident that countries take different views on the time that teachers should spend on non-teaching activities. Among countries that regulate both overall working time and teaching time, the proportion of time to be spent on non-teaching activities ranges from 37% in Scotland (United Kingdom) to 65% or more in Austria, Iceland, Japan, Korea, Poland and Turkey (OECD, 2019, p. 421^[1]).

A second way in which school systems indirectly regulate teachers' non-working time is by defining the tasks that teachers are expected to fulfil outside the classroom. It is important to keep in mind that asking teachers to assume an ever-growing number of responsibilities can add to their workload, even if their statutory working hours remain unchanged. Although teachers' task profiles are shaped by tradition, cultural norms and evolving practices, national service codes or professional standards can play a role in this process. According to information collected through the OECD's NESLI network, all but four of the 37 countries with available data centrally required lower secondary teachers to plan and prepare lessons and to correct students' work in 2018. At least 23 of the 37 countries also required teachers to engage in general administrative work, to communicate with parents and to engage in teamwork or dialogue with colleagues, and 21 required teachers to engage in professional development activities. Many of the remaining countries left the formulation of such requirements to the discretion of schools. In around half of the countries, teachers are required to counsel students and supervise them during their breaks. By contrast, not more than five countries required teachers to engage in school management tasks, in teacher mentoring or in extra-curricular activities. In all other countries, teachers' engagement in these activities is voluntary or left to school leaders to mandate (see supplementary [Table 3](#)).

In general, the number of countries that define teachers' task profiles and mandated activities at the central level appears to have increased between 2012 and 2018. Where these profiles exist, they vary little across levels of education. However, several systems including France, Mexico, Portugal and the French Community of Belgium only require teachers at lower levels of education to supervise students during their breaks. Likewise,

primary and lower secondary teachers in Sweden and Switzerland are required to work with their colleagues, whereas comparable requirements are at schools' discretion at the upper secondary level.

Although many OECD countries specify which non-teaching tasks are required of teachers in their working conditions, the data presented here does not capture whether regulations at the central or local level explicitly state how much time teachers should allocate to each of them (OECD, 2019, p. 162_[3]). The precise division of teachers' non-teaching time between these activities is, in many cases, beyond the realm of central regulations, although some systems provide school leaders with a formal, if limited, role in this process. In Portugal, for example, principals can define the content of up to 2.5 of the 10 weekly non-teaching hours that teachers are expected to spend at school (Liebowitz et al., 2018_[59]). Likewise, in the Flemish Community of Belgium, school leaders are responsible for defining which tasks teachers are expected to perform in their non-teaching time. This may include teamwork and dialogue with colleagues, supervising students during breaks, providing counselling and guidance to students, participating in school management, communicating with parents or guardians and engaging in professional development activities (Nusche et al., 2015, p. 143_[101]).

Adding to the list of tasks teachers are expected to engage in during their non-teaching time can lead to time pressures unless teachers are supported in making time elsewhere. Taking the example of professional learning, more than half of OECD countries require teachers to engage in some amount of training or provide strong incentives, e.g. by making it a condition for career progression. Yet, not all of these systems systematically integrate time for professional learning in teachers' schedules. Since 2007, for example, teachers in Japan have to complete more than 30 hours of professional learning in order to renew their teaching certification every 10 years. Teachers are expected to cover the cost and make time outside of their regular working hours to complete these recertification requirements (MEXT, 2019_[102]).

To address these issues, and in recognition of the trade-offs between non-teaching and teaching time, some school systems provide a framework to regulate how teachers' instruction hours should adapt if they are assigned additional tasks outside the classroom. Of the 35 countries and economies with available data, 16 always or sometimes reduce the teaching time of teachers who engage in school management activities (see supplementary [Table 3](#)). In eight systems, this was the case for student counselling and mentoring activities and another seven systems sometimes reduced instruction hours for teachers engaged in extra-curricular or professional development activities. Reductions in teaching hours are less common to compensate for tasks directly related to teaching, such as planning and preparation, marking and correcting, teamwork with colleagues, but also for the supervision of students and general administrative work. For the most part, these regulations applied to teachers across all levels of instruction. Eleven systems did not centrally mandate any non-instruction tasks to be compensated with reduced teaching hours. Unless alternative mechanisms exist at the local or school level or non-teaching duties are limited and evenly shared, there is a risk that assigning additional tasks to teachers could increase their working hours or crowd out other important non-teaching activities.

3.3. On-site presence

As noted in the OECD School Resources Review's 2019 report *Working and Learning Together*, teachers have traditionally enjoyed a high degree of autonomy over the use of their non-teaching time and many appreciate this flexibility. It is therefore frequently left to teachers to decide how to use a substantial proportion of their non-teaching time and whether to spend it at school or work from home (OECD, 2019, p. 166_[3]). In Austria, for

example, the teacher service code does not regulate how many hours teachers are expected to be present at school (Nusche et al., 2016, p. 151^[92]) and teachers in countries like Ireland or Mexico are only required to be present for a few hours beyond their regular teaching time each week.

Nevertheless, the time teachers spend at school beyond their teaching hours can have several benefits. It can provide teachers with an appropriate environment to work in and make it easier for them to work on collaborative projects, engage in informal professional exchange, observe each other's practice, engage in collective knowledge creation and innovate (Paniagua and Istance, 2018^[61]). TALIS also suggests that a collaborative school culture, team teaching, peer observation and collaborative professional learning are 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^[54]). Some countries therefore require teachers to spend a significant proportion of their time at school and – as discussed further below – several school systems have more strongly emphasised the importance of teachers' on-site presence in recent years. In Colombia, for example, full-time teachers are required to spend at least six of their eight daily working hours on school premises (Radinger et al., 2018, p. 235^[103]). Israel also extended the time teachers are expected to spend on site as part of its wider 2007 New Horizon reform project (see Box 3.4) (Hemmings, 2010^[90]).

Box 3.4. Israel's "New Horizon" reform and the extension of teachers' on-site working time

Based on a collective agreement between the Israeli government and the teacher union, the "New Horizon" reform aimed to raise the professional status and skills of teachers, to increase student achievement and equity, to improve the school climate and to reinforce the authority of school leaders. The reform was gradually implemented over a period of six years starting in 2007 and encompassed changes to the working time and salaries of primary and lower secondary teachers, as well as the development of new teaching standards. As part of the reform, teachers' statutory working time and on-site presence was increased to 36 hours per week. (Previously teachers' statutory working time had only covered their teaching obligations, which were typically set at 30 hours per week at the primary level and 24 at the secondary level). The increase in working time served to accommodate additional time for small-group teaching as well as staff and parents' meetings, lesson preparation and marking, which had previously been performed outside of teachers' statutory working time and largely at home. The reform was accompanied by a revised salary scale to compensate for the increase in teachers' statutory working hours and to raise the attractiveness of the profession. According to national data, teachers' actual salaries increased by 80% on average between 2006 and 2017 (compared to a 40% increase among tertiary-educated workers).

The time for small-group instruction was intended to raise student achievement across the board, but also provided teachers with dedicated time to support gifted students and those with learning difficulties. While some teachers had already engaged in small-group teaching prior to the reform, institutionalising it by means of a collective agreement helped school leaders to use it more systematically and frequently. An early evaluation suggests that – two years into its implementation – the New Horizon reform had had a positive effect on student achievements in English and mathematics. The effects were particularly pronounced for disadvantaged students and appeared to be primarily driven by their participation in small-group teaching (Reingewertz and Shany, 2016^[104]). Qualitative evaluations conducted periodically during the reform's

implementation highlighted its wide acceptance among both teachers and principals and their perceived effectiveness of small-group teaching. Teachers also noted that the reform had increased their workload at school and at home. (Since much of teachers' added on-site time was taken up staff and parents' meetings, many teachers continued to do most of their lesson preparation work outside of their statutory working hours and usually outside of the school). At the same time, many teachers and principals complained that the physical conditions in schools remained unsuited for teachers to effectively perform their non-teaching work (National Authority for Measurement and Evaluation in Education (RAMA), 2012_[105]).

Sources: Israeli Ministry of Finance (2020) "A brief on the New Horizon reform" prepared for the 7th Meeting of the GNE on School Resources, MOF - Wages and Labour Agreements Division; Hemmings (2010), "Israeli Education Policy: How to Move Ahead in Reform", *OECD Economics Department Working Papers*, <https://dx.doi.org/10.1787/5kmd3khjff0-en>.

Across the OECD, more than half of the countries and economies with available data specify how much time teachers should spend at school beyond their regular teaching hours for at least one level of education. The number of non-teaching hours that teachers are expected to be present varies considerably though, ranging from less than 100 hours per year in France (ISCED 1), Ireland (ISCED 2/3), Latvia and Mexico (ISCED 1) to more than 600 hours in Chile, Iceland, New Zealand (ISCED 1) and Norway (ISCED 3) (see supplementary [Table 4](#)).

In addition to the cross-national variation in teachers' on-site presence, there are some significant differences across levels of education. In eight of the 18 OECD countries that regulate teachers' presence at school, primary school teachers spend fewer non-teaching hours at school than upper secondary teachers. In four countries, the opposite is the case. In some systems, the required hours of presence are the same across all levels, while in others they track the hours of instruction (which tend to be lower at the secondary level), or the overall non-teaching time (which tends to be higher at the secondary level) (see supplementary [Table 4](#)). In other systems, teachers' on-site presence is only regulated at selected levels of education. The Flemish Community of Belgium, for example, only requires teachers at the pre-primary and primary levels to spend any non-teaching time at school (although school leaders have flexibility in defining the required hours of presence), while no such requirements exist at the secondary level (Nusche et al., 2015, p. 157_[101]).

Of course, centrally mandating teachers to spend time at school is not the only way to increase their on-site presence and it does not guarantee to reap the benefits of their co-presence. Some systems, including the Flemish Community of Belgium mentioned above, leave it to school leaders rather than to national service codes to decide when, for whom and how much on-site presence is needed. Furthermore, rather than mandating on-site presence, school- or system-level policies can also provide incentives, such as high-quality workspaces, or implicitly encourage teachers to spend time at school, e.g. through professional standards. Some of these methods are discussed in more detail in Section 6.

It is also worth stressing that not all schools can provide teachers with adequate physical spaces to work and that the potential for collaboration with colleagues may be limited by a lack of shared non-teaching time in teachers' timetables. In addition, creating space and time in teachers' schedules alone is not sufficient to foster collaborative professional learning practices if they are not accompanied by supportive structures, teacher leadership, protocols and attention to school culture (Kraft and Papay, 2014_[96]; OECD, 2019_[3]). Finally, teachers may perceive requirements for on-site presence as patronising or as a means to exert control. Building a collaborative culture in schools requires more than teachers' shared presence and attempts to impose professional collaboration may be

counter-productive and lead to what Hargreaves and Dawe characterised as “contrived collegiality” (Hargreaves and Dawe, 1990^[106]). Reforms of teachers’ on-site presence in OECD countries have often been met with significant resistance, which underlines the importance of ensuring buy-in from teachers and stakeholder support lest reforms of teachers’ working hours are perceived as an infringement on their autonomy.

Denmark, for example, decentralised the governance of teachers’ time by providing school leaders with greater scope and flexibility in determining the use of teachers’ working hours and their presence at school. Following the passage of the law in 2013, the majority of municipalities issued guidelines concerning teachers’ use of time, which were generally followed by school leaders. More than half of them included requirements for teachers to be present at school for a certain duration each day irrespective of their number of teaching hours in order to facilitate teachers’ collaboration and increase accountability around their non-teaching time. The passage of the law had been preceded by significant resistance from teachers, a four-week long lockout and the failure to reach a collective agreement between trade unions and employers – the customary way to decide on teachers’ working conditions in Denmark (Nusche et al., 2016, p. 52^[99]).

3.4. Recovery time

To balance the demands of a stressful job, teachers need time to recover which they may find during the school day, between working days and during more extended periods throughout the school year and at different points of their careers. At the most granular level, many countries regulate the timing and length of regular breaks between lessons or groups of lessons. In Austria, for example, schools are required to provide breaks of at least 5 minutes between teaching hours. In the Czech Republic and the Slovak Republic, regular lesson breaks last 10 minutes and 15 or 20 minutes between every other lesson (Nusche et al., 2016^[92]; Shewbridge et al., 2016^[107]; Educational Policy Institute, 2015^[108]). A longer break is often mandated if lessons run into the afternoon or the school day exceeds a given number of hours. In some systems, for example in Lithuania, the timing and duration of breaks are established by the school leader but may be informed by central guidelines (NASE (National Agency for School Evaluation), 2015^[109]).

However, teachers may not benefit from breaks between lessons in the same way that students do. They often need to move between classrooms, prepare the next lesson, print materials and – particularly at lower levels of education – supervise their students during breaks. In the OECD’s Education at a Glance (EAG) data collection, short breaks of ten minutes or less are therefore counted as part of teaching time at the pre-primary and primary levels if the classroom teacher is responsible for the class during these breaks (OECD, 2019, p. 420^[11]). While teachers’ schedules may be organised in such a way as to provide them with non-teaching time throughout the day, this time may also be taken up by various non-teaching duties, collaboration with peers, committee meetings etc.

Unlike employees in most other occupations, whose annual leave is distributed over the entire calendar year, teachers’ time off work tends to be concentrated during the school holidays. Students in OECD countries receive anywhere between 33 and 41 weeks of instruction over the course of the school year. Teaching is generally suspended during a long break at the end of the school year, which lasts from 5 weeks in Switzerland and Australia to 13 weeks in Latvia, Lithuania and Turkey (for lower secondary education). In addition, the regular teaching schedule is interrupted by two to five shorter breaks over the course of the school year, usually lasting one or two weeks (OECD, 2019, pp. 361, Figure D1.a^[11]). Correspondingly, the annual weeks without teaching in OECD countries range from 17 weeks or more in Estonia, Ireland (ISCED 2/3), Latvia and Lithuania (ISCED 1)

to 12 weeks or less in Australia (ISCED 2/3), Colombia, Germany, Japan (ISCED 1/2), Mexico (ISCED 1/2) and the Netherlands (ISCED 1) (see supplementary [Table 5](#)).

However, while teachers tend (and may be required) to take their annual leave during the school holidays, the two are not equivalent. In Slovenia, for example, annual school holidays last 14 weeks, while full-time teachers are only entitled to 5 to 7 weeks of annual leave, depending on their level of qualifications, years of service and how demanding their work is (e.g. whether they work with students with SEN) (Slovenian Ministry of Education Science and Sport, 2016_[110]). While the discrepancy between students' and teachers' time off may be particularly large in the case of Slovenia, it is common for teachers in any system to work at least during part of the school holidays. This may involve the preparation of the upcoming term's lessons, the correction of students' work, contributions to school development projects, the participation in independent or school-based professional development, or teaching summer school. Although teachers usually have some discretion over how they organise their work during the holidays, some systems let school leaders dedicate specific weeks or days to work or professional development during the holidays.

Time diary data for teachers in the United States shows a significant drop in their working hours during the summer months, but they continue to work 21.5 hours on average during the months of June, July and August (West, 2014_[46]). Although vacation time offers an opportunity to replenish resources and recover from the demands of a stressful job, it is also important to note that its effects are transitory and cannot necessarily substitute for a lack of recovery time during teachers' regular working weeks. The positive effects of vacation on indicators of exhaustion and work engagement are generally found to return to pre-vacation levels after only a few weeks. Importantly, a survey of German teachers has found the effects of vacation to vanish even more quickly if teachers face high levels of job demands (incl. time pressure and pupil misconduct) following their return (Kühnel and Sonntag, 2011_[111]).

Recognising that teachers may require more recovery time as their career progresses, some systems increase experienced teachers' annual leave. Iceland, for example, provides teachers with three additional days of additional leave from the age of 30 and six days from the age of 38, in addition to reducing the teaching time for upper secondary teachers aged 55 or above (OECD, 2019_[1]).

4. How to support teachers in making time for core activities? Rethinking priorities, roles and responsibilities

Even though teachers spend a substantial amount of time teaching in the classroom, the majority of their working time is spent on other activities. Ensuring that teachers can spend this time effectively to complement their teaching activities and support their students, is an important objective for the management of teachers' time. Building on the human resource policy strand of the OECD School Resources Review, this section explores policies and practices that can help teachers make the most of their working time. This includes striking a good balance between system-level regulations and teacher autonomy, building a common understanding of priorities, and supporting effective collaboration within and across schools.

4.1. Balanced policy frameworks

One of the central difficulties in the governance of teachers' time is to find the right balance between the role of central regulations, adjustments at the school level and teachers'

autonomy. Actors at each level of the system can make important contributions in helping teachers allocate their time across competing priorities to support student learning and well-being, while also supporting teachers' own professional growth and well-being. Developing policy frameworks that respond to the needs and priorities of actors at different levels is a key challenge for schools systems.

4.1.1. The case for higher-level frameworks regulating teachers' time use

One of the most basic arguments for higher-level frameworks to govern teachers' time is the importance of ensuring decent working conditions that protect teachers' well-being and the basic conditions that allow them to provide their students with high-quality instruction, regardless of where they teach. In addition, some of the most fundamental decisions concerning teachers' use of time – including how much time they spend in the classroom, but also the distribution of teachers' time across schools – are intimately connected to resource trade-offs and equity concerns. These may be considered the responsibility of central political decision-making or negotiations between social partners, rather than local actors or school management. Central frameworks for the governance of teachers' time can also be an effective means to promote evidence-informed practices around the allocation of teachers' time and provide local authorities, school leaders and teachers with helpful guidance, particularly if they do not have sufficient capacity to engage in these decisions themselves.

4.1.2. The promise of greater flexibility and the conditions for getting it right

Although higher-level frameworks are important means of governing teachers' time, there is a case to be made for allowing sufficient flexibility. Giving local authorities or school leaders some discretion in the management of individual teachers' tasks and teaching commitments could, in theory, lead to a more efficient use of their time. Arguments similar to those that are advanced to support decentralisation more generally can also apply to teachers' time (Barrios and Bovini, 2017^[112]). Given the intimate knowledge of their schools, principals might be in a good position to recognise – in a continuous dialogue with their staff – where adjustments to teachers' time use might generate benefits for their students' learning. Avoiding an overly prescriptive approach to teachers' time and retaining sufficient room for school leaders' discretion can, under the right conditions, also promote innovation. Barrios and Bovini, for example, find that charter schools in Chile benefited more than public schools from an increase in primary school instruction time. Although their study design cannot establish the cause for these differences, the authors hypothesise that they *might* be explained by charter schools' greater autonomy over staff and budgetary decisions, as well as the design of the course offer and content (2017^[112]).

Yet, increased local or school-level decision making in the allocation of school resources requires capacity building (OECD, 2017^[4]) and the experience of countries like Denmark (see discussion above) show that the same is true for teachers' time. While Denmark's reforms provided 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 them. 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^[99]). At the same time, Denmark's reform has prompted some concerns since it led to an overall increase in teaching hours. To ensure that teachers' work outside the classroom does not suffer, many Danish municipalities have therefore felt the need to (re)introduce upper limits for teachers' weekly teaching hours (Nusche et al., 2016, p. 52^[99]).

Whether or not expanding school leaders' scope for adjustments can lead to a more efficient allocation of tasks and responsibilities in practice thus seems to depend 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, as well as central frameworks that safeguard teachers' working conditions (OECD, 2019, p. 165^[3]).

4.1.3. The limits of administrative control and the place for teacher autonomy

Although teachers' autonomy tends to be conceptualised with respect to the object of their decisions (e.g. their control over course content, teaching methods, discipline practices, assessment and homework assignments in the TALIS 2018 survey), an important dimension of workplace autonomy is the ability to regulate one's use of time (OECD, 2013^[113]). There are both intrinsic and extrinsic arguments for strengthening teachers' working-time autonomy.

In practice, the boundaries of teachers' autonomy over their use of time are defined by regulations, but also constantly redrawn in teachers' interaction with various actors balancing autonomy, capacity and accountability. Teachers' autonomy is also shaped by transparency at the system and school level, the earned trust in their professional competence, as well as the evolving expectations of different stakeholders and accountability mechanisms related to both the processes and outcomes of teachers' work. There is a strong argument for the educational benefits of working-time autonomy, if teachers are sufficiently equipped and supported to make the most of it. In theory, teachers' experience and granular information about their routine tasks and responsibilities should put them in an ideal position to weigh the various factors that determine where their time can be most productively employed at any given moment. Micro-managing teachers' time beyond a reasonable limit not only risks impairing their ability to act upon this professional judgement, but also places an inefficient burden on school leaders.

Of course, autonomy should not be confused with an absence of support. To enable teachers to make effective use of their autonomy, it needs to be complemented by support and adequate capacity, opportunities for professional exchange, regular feedback and mentoring (OECD, 2019^[3]). Autonomy and the effective use of time can also be integrated into teachers' professional learning. In Finland, for example, professional autonomy and agency are a key component of the national curriculum's implementation and efforts are made to preserve it throughout teachers' initial education and continuing professional learning (OECD, 2019, p. 50^[2]). Furthermore, some activities – particularly those involving groups of teachers – can benefit from higher-level co-ordination (e.g. making time in teachers' timetables to allow for their collaboration).

Beyond its direct effects on teachers' practice, 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^[113]; Hackman and Oldham, 1976^[114]). This applies to teachers' autonomy in the classroom, which is a central component of professionalism (OECD, 2016, p. 33^[115]) and what many teachers value in their job (Ingersoll and May, 2012^[116]), but also to other domains of teachers' work, including how they structure their time outside the classroom (OECD, 2019, p. 167 f.^[3]).

Hargreaves (1990^[6]) points to another risk involved in over-regulating and micro-managing teachers' time, namely to neglect the importance of unstructured time. Physical spaces and times in which teachers are no longer required to "keep up appearances" can be an important vehicle to relax, relieve stress, build trust and solidarity with their peers and temporarily withdraw from the demands of the classroom and their job. Analogous to the "back stage behaviour" that Goffman (1959^[117]) described as critical for employees in

performative and client-facing occupations, what characterises these periods is primarily teachers' flexibility and control over how they are used, i.e. their withdrawal from supervision, accountability and other forms of administrative control.

The importance of supporting teachers in their autonomous use of time is underlined by the natural limits of policy makers' and school leaders' ability to impose structure and meaning onto teachers' time. As Hargreaves (1990_[6]) points out, underestimating these limits is one of the risks inherent in what he calls the predominant "technical-rational" conception of time, which focuses on its efficient allocation, planning and scheduling. For example, simply extending teachers' non-teaching time – while a necessary condition – is not guaranteed to lead to increased collaboration and collegiality. The administrators' approach to teachers' time, Hargreaves argues, often lacks sensitivity to teachers' subjective experience of time and the micro-political significance that its distribution can take on within schools. Moving towards a more effective use of teachers' time depends on bridging the gulf that often divides administrators', school leaders' and teachers' perception of time – between, for example, the technical development of timetables or curricula and their implementation. Providing teachers with greater control over their time and greater responsibilities for what they use it to develop can be part of this solution (Hargreaves, 1990_[6]).

4.2. A common understanding of priorities

4.2.1. *Building a shared understanding of teachers' core tasks*

Whether teachers are using their time effectively needs to be evaluated in relation to the goals that school systems set for their teachers and those that the teaching profession sets for itself. Only if there is clarity around these goals can teachers be effectively supported in prioritising their time around them. The main reference documents to define teachers' role in a school system typically comprise teacher professional standards or profiles, descriptions of general and professional duties of teachers, as well as school-level development, activity and improvement plans.

A fundamental precondition for defining the core tasks of teachers is that objectives for their students' learning and well-being are clear. Teachers' core tasks and the competences that they need to be effective should reflect the student outcomes that a school system is aiming to achieve. In addition, as teachers work in diverse contexts, any system-level definition of teachers' core tasks needs to be refined based on an assessment of the particular needs of the students that they teach.

The *OECD Reviews on Evaluation and Assessment in Education* highlight the importance for teachers and their professional organisations to take a lead role in developing and taking responsibility for the definition of teachers' core tasks in whatever form they may be defined (OECD, 2013_[68]). Such standards or task descriptions will only have an impact on teachers' actual time use if they are conceived as "living documents" that are regularly reviewed and used by relevant actors as a reference point in evaluating, developing and improving teachers' work (OECD, 2013_[68]). Goal-oriented leadership at the school and system level can play a key role in ensuring that the desired outcomes set for students at the system, school and classroom levels become the main rationale for making choices in allocating teacher time use.

4.2.2. *Broadening the definition of what matters*

There can be considerable variation across countries as to what is considered the "core" of teachers' responsibilities and where the line is drawn between the work of teachers and that

of other school staff (see the section on staff collaboration below). While it is widely acknowledged that administrative paper work is not the best use of teachers' time, things are less clear-cut when it comes to other tasks. Some countries have more holistic conceptions of teachers' role including the cultivation of students' well-rounded development and well-being whereas others aim for more task specialisation among the different staff in school (OECD, 2019^[3]).

A key challenge in delimiting teachers' responsibilities is that some non-teaching tasks that are less directly related to classroom instruction (e.g. counselling, pastoral care, communication with parents, and coordination of social support services) might still be more effectively accomplished by teachers themselves, as they know their students from daily classroom interactions. Conversely, having an understanding of and caring about their students' broader living situation is likely to help teachers in developing trusting relationships with their students and devising relevant strategies for their classroom teaching.

In many countries, the 2020 disruption of schooling caused by the COVID-19 pandemic has highlighted the key role of teachers in the holistic learning, development and well-being of their students, beyond the transmission of knowledge and skills. It has revealed many aspects of teaching that cannot easily be replaced by online teaching platforms, in particular the facilitation of learning and the coordination of resources such as parental engagement, socio-emotional support, instructional tools and materials for students' engagement in learning. In a context where technology plays an increasing role in many aspects of schooling that were considered the core of teachers' work throughout the 20th century – such as lesson preparation, knowledge transmission and assessment – the more interpersonal aspects of teachers' work are likely to move further to the core of their responsibilities.

Even in systems where the teacher's role is more narrowly defined, collaboration and co-ordination with other adults working with their students will need to be among their core tasks (see further below). Collaboration can help all staff be more knowledgeable about the academic, social and emotional needs of their students. Based on shared knowledge of their students' holistic needs, teachers, school leaders and others can then decide collectively how best to address them. If collaboration is well-functioning, students are likely to benefit from the combined skills and experiences of all several reference persons working in and with schools rather than the unique strengths and limitations of an individual teacher (OECD, 2019^[3]).

4.2.3. Making time to support continuous improvement

Goal-oriented leadership can play a key role in focussing the attention of all school staff on core strategies to improve student learning, development and well-being. Such leadership requires strong focus on setting relevant objectives in terms of desired student outcomes, monitoring progress towards school (and system) goals, and promoting teachers' professional learning to support improvements (Pont, Nusche and Moorman, 2008^[118]).

As discussed above, teachers' continuing professional learning (CPL) is essential to help teachers improve their practice and accomplish their core tasks effectively, but to be impactful it requires substantial time investments (Boeskens, Nusche and Yurita, 2020^[7]). Many school systems struggle to find the time and resources necessary for teachers to engage in time-intensive professional learning. Securing substitute teachers to cover for teachers on training leave can be particularly challenging. While some systems invest in a pool of substitute teachers to step in when teachers are on professional learning leave, others may rely on student teachers, other staff in school, parents or volunteers from the school community to supervise or teach students during that time.

Since the 1990s, there has been growing attention in the United States and other school systems to ensuring that there is at least some formal time for professional learning reserved in teachers' schedules. Strategies include encouraging teachers' participation in different forms of professional learning through time and leave entitlements and making specific arrangements in the school calendar, such as a set number of professional learning days on which schools may suspend classes. Some systems have set non-instruction days in their school calendars whereas others leave it to sub-national entities or schools to define such days. Others may allow schools to "bank" time by adding extra hours to the regular school schedule, which they can accumulate to release students for a corresponding block of time (Watts and Castle, 1992^[119]; Bull, Buechler and Didley, 1994^[120]). Increasing class size can be another way to reduce teachers' time in the classroom and include time requirements or entitlements for professional learning in teachers' task descriptions.

Yet, as highlighted above, most competences required of teachers to improve their practice are not easily transmitted in a set number of training days but require regular engagement in activities such as coaching, mentoring, collaboration, engagements in learning communities, self-study and reflection. Research indicates that not only the number of contact hours but also the overall time span of teachers' engagement in learning activities make a difference in their learning experience and outcomes (Garet et al., 2001^[121]). Although there is little evidence on the optimal amount of professional learning time, longer engagement that is sustained over time with substantial contact hours and with feedback loops to classroom practice is likely to offer more opportunities for reflection and active learning practice through which teachers can obtain coherence in their learning (Yoon et al., 2007^[71]).

There is therefore a key role for school leaders to structure school activities so that professional learning time can be embedded in the regular, ongoing activities of the school. This involves seeking ways to reduce non-essential or unproductive activities in schools and to restructure arrangements for grading, administrative and other requirements to provide additional time opportunities to engage in professional learning (Jensen et al., 2014^[122]). Where schools have autonomy in this area, class size modifications can also be a strategy to be used occasionally at the school level by creating larger groups of students to free some teachers' time for other tasks. At the policy level, it is important to ensure that leading professional learning is among the core tasks of school leaders and that they receive time, resources and learning opportunities to engage in this role (OECD, 2019^[3]).

4.3. Collaboration with other staff in schools

The availability of different types of staff in schools, the responsibilities they assume and the way in which their collaboration with teachers is managed can have profound implications for teachers' use of time. This includes teacher aides who support teachers in providing instruction to students, as well as professional support staff who provide health and social services to students or support the instructional programme in other ways. Many schools also rely on the work of guidance counsellors and school librarians, as well as doctors, nurses, psychologists, social workers, social pedagogues and SEN specialists who work in or with schools.

Almost all schools also employ administrative and maintenance staff to support their management and operation. Yet, in some countries, OECD review teams observed that teachers had to assume a significant share of administrative and secretarial tasks due to a lack of sufficient support (sometimes in return for a reduced teaching load) (Nusche et al., 2016^[92]). In 24 of the 48 countries participating in TALIS 2018, teachers ranked the reduction of "administration load by recruiting more support staff" as one of their top three spending priorities (OECD, 2019, pp. 110, Table I.3.66^[2]). As discussed in Section 4,

teachers in OECD countries reported to spend on average 2.7 hours per week on communication, paperwork and other clerical and administrative duties. In some countries, including Australia, New Zealand, Korea and Japan, however, teachers spent more than 4 hours on these tasks on average, as does a sizeable share of teachers in most countries in any given week. These figures are a cause for concern, since an excessive administrative workload reduces the time that teachers can spend on improving their instruction. It is also inefficient since teachers' time tends to be more highly remunerated than that of administrative staff. The promise of alleviating teachers' administrative burden and helping them focus on their core activities by delegating some of their tasks to support staff, as well as the limits of these efforts are discussed further below.

Countries differ in their definition of teachers' responsibilities with some defining teachers' roles more holistically and expansively, while others have a more specialised conception of teachers' responsibilities. Teachers sometimes feel as though their responsibilities are being expanded to the detriment of their core responsibilities, which can create a sense of "intensification" or overwork (Bartlett, 2007^[13]; Ingvarson et al., 2005^[12]). However, a more broadly defined pedagogical role of teachers can include a wider range of responsibilities beyond classroom instruction. In Japan, for example, teachers are expected to perform a range of non-teaching tasks that are nevertheless considered to be of pedagogical importance and in line with a holistic vision of education. According to the Japanese Ministry of Education, Culture, Sports, Science and Technology, this includes supervising children as they clean the school and help serve school lunches to classmates, all of which seeks to cultivate balanced life skills, including a solid academic ability, richness in mind, and a healthy body (OECD, 2018, p. 53^[123]). What may be considered a burden best delegated to other staff in some countries, may therefore be seen as a central element of teachers' work in others. Likewise, the boundaries of teachers' roles are subject to change and may be shifted in response to events, new policy priorities and the changing staff mix in schools (see Box 4.1 and Box 4.2 for examples).

Box 4.1. Adjusting the staff mix in Japanese schools during the COVID-19 crisis

To respond to the increased demands on teachers' time during the COVID-19 crisis, Japan has taken significant steps to adjust the staff mix in schools and hire additional support staff to alleviate teachers' workload. In the context of a system that is characterised by a very holistic approach to the teacher's role, the crisis has prompted a rethinking around the distribution of responsibilities between teachers and other staff. In the course of the COVID-19 crisis, most schools in Japan were closed for two to three months in early 2020 and although most had reopened by late June, many were still forced to use shortened or staggered timetables. In the 2018 TALIS survey, teachers in Japan reported the longest average working hours across OECD countries and the shift to distance education and blended learning during the crisis has – as in many countries – required them to take up new and additional tasks.

To avoid a further intensification of teachers' working time, a supplementary budget was secured in June 2020 to hire 84 900 additional staff in elementary and junior high schools (3 per school, on average) through March 2021. It is envisaged that the process will lead to the hiring of 3 100 new teachers (to offer smaller class size for the last year of primary and middle schools), 61 200 learning instructors, and 20,600 school support staff. Prefectural and municipal governments are responsible for the hiring and employment process. The ministry covers the full cost of learning instructors and school support staff, while local governments are expected to supply two-thirds of the cost of newly hired teachers. Support staff and learning instructors are expected to take up some

of the new tasks related to distance education and infection prevention measures in order to allow teachers to concentrate on their instruction and other school duties. Specifically, learning instructors are expected to prepare home learning assignments, to mark students' submitted work and to assist classroom teachers with their lesson preparation. In addition, school support staff perform disinfection work, ensure the ventilation of school buildings, print learning materials and liaise with parents to assist classroom teachers during the reopening phase.

Source: MEXT (2020^[124]), *Reiwa 2 nendo Monbukagakusho dai2ji hoseiyosan (an) jigyobetsu shiryoshu* (MEXT proposal for 2nd supplementary budget: Project documents), https://www.mext.go.jp/a_menu/yosan/r01/1420672.htm.

4.3.1. Potential and limits of task specialisation and delegation in schools

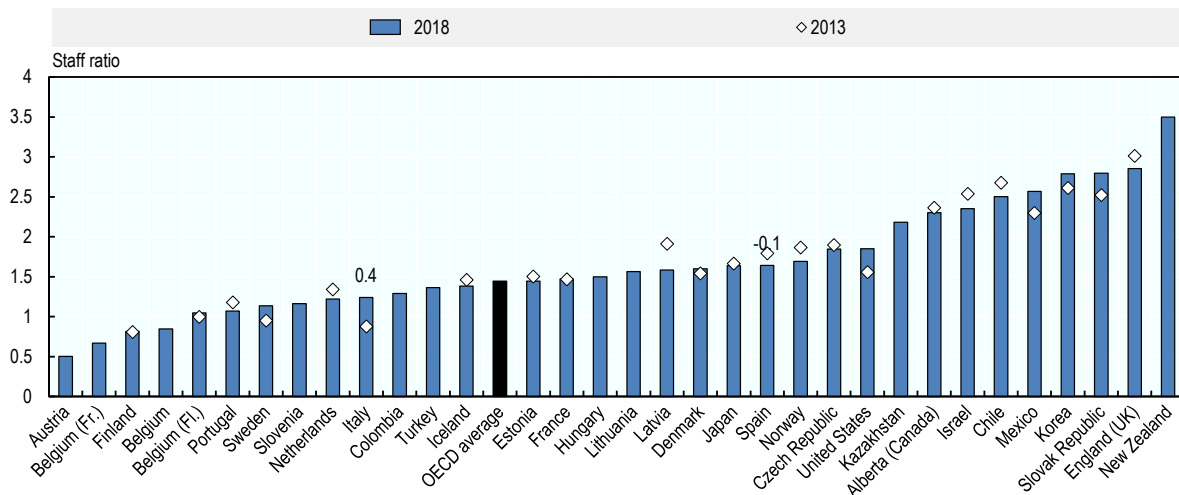
Regardless of how school systems define the boundaries of teachers' responsibilities, there will always be activities that are less essential to teachers' work than others. Delegating some of these non-instruction tasks to other professionals may therefore be a promising strategy to help teachers make better use of their time and focus on the activities that allow them to have the greatest positive impact on student learning. Two types of staff are particularly important when it comes to delegating elements of teachers' work in order to help them spend more time on their core activities: pedagogical support staff (including teacher aides or other non-teaching professionals who provide instruction or support teachers) and administrative staff. OECD countries differ with respect to the number of pedagogical and administrative support staff employed in schools, as well as the extent to which their work is designed to relieve teachers' of non-instruction tasks and improve their use of time.

Division of labour between teachers and administrative support staff

As discussed in Section 4, one of the strategies both policy makers and teachers frequently invoke to alleviate teachers' administrative workload is to increase the number administrative support staff (i.e. receptionists, secretaries and administration assistants). Figure 4.1 shows that some countries employ a far greater number of administrative and managerial staff than others. Schools in Austria have on average one administrative and managerial staff position for 20 teachers, compared to one position for every four teachers or less in Chile, Mexico, Korea, the Slovak Republic, England (United Kingdom) and New Zealand. Across countries, the share of administrative support staff per teacher has remained relatively stable over time.

Figure 4.1. Change in administrative and managerial staff (ISCED 2), 2013-2018

Number of administrative and managerial personnel per ten teachers.



Notes: School administrative staff includes receptionists, secretaries and administration assistants, while management staff includes principals, assistant principals and other management staff whose main activity is management. Statistically significant changes are indicated above the bars. The OECD average corresponds to the arithmetic mean of the estimates for OECD countries or economies with available data. As for most figures in this working paper, results are reported for OECD countries and those that participated in the OECD School Resources Review.

Sources: OECD (2019^[2]), *TALIS 2018 Results (Volume I): Teachers and School Leaders as Lifelong Learners*, <https://doi.org/10.1787/1d0bc92a-en>, Table I.3.74; OECD (2014^[54]), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, <https://doi.org/10.1787/9789264196261-en>, Table 2.18; Adapted from OECD (2019^[3]), *Working and Learning Together: Rethinking Human Resource Policies for Schools*, <https://doi.org/10.1787/b7aaf050-e>, Figure 1.1.

The marginal impact and effectiveness of hiring more staff to support teachers in their administrative duties is contested (OECD, 2019, p. 173 f.^[3]) and many countries manage to limit the time teachers spend on paperwork despite a low number of administrative staff (see Figure 2.17). By contrast, some of the countries that employ the most administrative support staff per teacher, such as Chinese Taipei, Korea and New Zealand, are also the ones where the teachers spend the most time on administrative work. Across schools within countries, the relationship between the teacher-administrative staff ratio and the time spent on administrative work was equally non-significant in 40 of the 49 OECD countries and economies with available data for TALIS 2018 (OECD, 2019, p. 174^[3]). It may well be that the number of administrative staff is less important than the way their work is organised or the amount of administrative work that is created by the wider organisation of the school system. Likewise, it may be that many administrative tasks cannot easily be delegated by teachers or that the process of doing so involves high transaction costs.

As argued in OECD (2019^[3]), for support staff to have an effect on alleviating teachers' administrative burden, it is essential to consider how their tasks are defined and how they collaborate and co-ordinate their work with that of teachers (Masdeu Navarro, 2015^[125]). 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 (these include task compression or intensification, stress and interpersonal relationships). To reduce teachers' administrative workload, hiring additional personnel is unlikely to be an efficient strategy unless it is accompanied by a reflection on practices at the school level (e.g. to streamline regular meetings (Jensen et al., 2014^[122]) and data management protocols (Allen and

Teacher Workload Advisory Group, 2018_[126]), and at the system level (e.g. to evaluate the administrative work generated by accountability and bureaucratic procedures).

Division of labour between teachers and learning support staff

Learning support staff, including teacher aides and other para-professional personnel, can fulfil a range of tasks to support teachers and students. The qualifications, roles and tasks assumed by learning support staff vary considerably across countries and range from helping teachers with routine and non-teaching tasks to engaging in pedagogical activities with students in the classroom. Their support promises to help teachers better meet individual students' academic, social and emotional needs and can, in theory, also help teachers to make more effective use of their time by taking over selected tasks and helping them focus on other responsibilities (Masdeu Navarro, 2015_[125]).

Some of the duties that may be delegated to learning support staff include such non-pedagogical teaching-related tasks as photocopying classroom materials, administering examinations, or collecting and reporting administrative student data. Yet, in practice, the line between teaching and non-teaching tasks, as well as the boundaries between the responsibilities that should be carried out by teachers those that may be assumed by support staff are frequently blurred. In light of these ambiguities, the gradual transformation that some countries have seen in the role of learning support staff has been a subject of controversial debate (Masdeu Navarro, 2015_[125]; Blatchford et al., 2002_[127]).

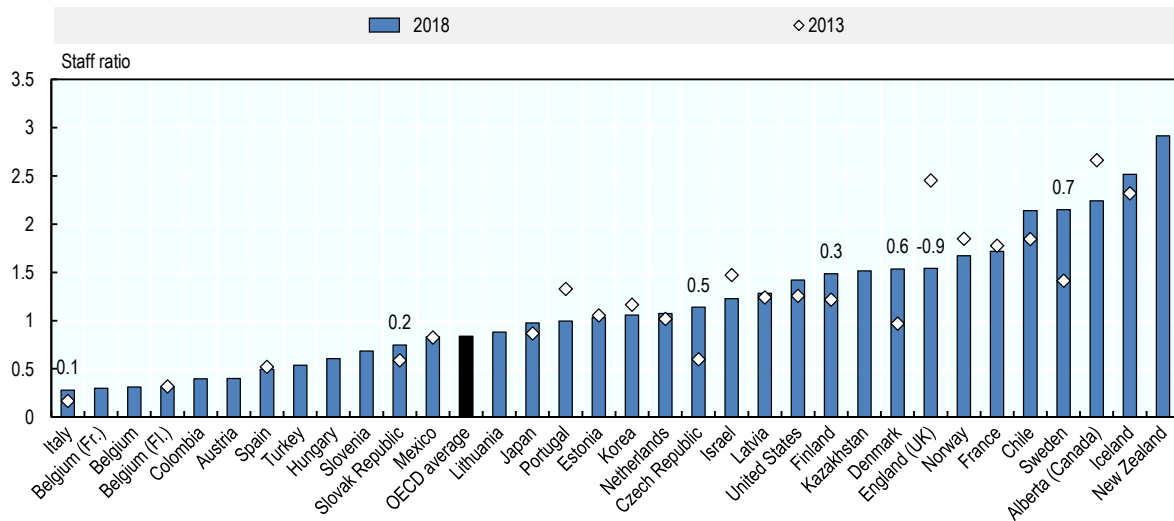
Beyond teaching-related tasks, a case study of Australian schools also found that a typical teacher spends almost 60 hours per year supervising extra-curricular sport activities, 27 hours taking students to swimming and gymnastics, 29 hours on yard and bus duty, in addition to time spent supervising students during breaks. Assigning at least some of these tasks to other people, the authors argue, could go a long way to find more time for teachers to engage in activities that improve their teaching (Jensen et al., 2014, p. 15_[122]).

As discussed in OECD (2019_[3]), the evidence on the educational benefits of learning support staff is mixed. While some forms of support, such as student guidance counsellors, have been shown to improve teachers' perceptions of the school climate and reduce misbehaviour (Reback, 2010_[128]), there is no conclusive evidence on the relative effectiveness of different staff types. For example, benefits were found for the use of community teacher assistants in India by Banerjee et al. (2007_[129]) and for the use of ancillary teaching staff in Australia by Cobb-Clark and Jha (2016_[130]), but no impact was found related to the deployment of teacher aides in the United States (Mosteller, 1997_[131]). Even if pedagogical support staff help to reduce teachers' time spent on non-essential activities, its impact on student learning thus remains unclear.

As for administrative staff, countries differ considerably in their reliance on learning support staff. While Alberta (Canada), Chile, Iceland, New Zealand and Sweden employ more than two pedagogical support staff for every ten teachers, there is less than one pedagogical support staff position for every twenty teachers in Austria, Belgium, Colombia and Italy. In a number of school systems, the presence of pedagogical support staff has increased significantly over recent years, notably in the Czech Republic, Denmark, Finland, Sweden, and the Slovak Republic. As Figure 4.2 shows, England (United Kingdom) was one of two systems that saw a significant drop in the number of pedagogical support personnel from 4.1 teachers per pedagogical support staff in 2013 (the second highest level among TALIS countries) to 6.5 five years later.

Figure 4.2. Change in pedagogical support staff (ISCED 2), 2013-2018

Number of pedagogical support staff per ten teachers.



Notes: Pedagogical support staff includes all teacher aides or other non-teaching professionals who provide instruction or support teachers. Statistically significant changes between 2013 and 2018 are indicated above the bars. The OECD average corresponds to the arithmetic mean of the estimates for OECD countries or economies with available data.

Sources: OECD (2019^[2]), *TALIS 2018 Results (Volume I): Teachers and School Leaders as Lifelong Learners*, <https://doi.org/10.1787/1d0bc92a-en>, Table I.3.74.; OECD (2014^[54]), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, <https://doi.org/10.1787/9789264196261-en>, Table 2.18; Adapted from OECD (2019^[3]), *Working and Learning Together: Rethinking Human Resource Policies for Schools*, <https://doi.org/10.1787/b7aaf050-e>, Figure 1.1.

The marked reduction in pedagogical support personnel in England, particularly between 2013 and 2015, followed a large workforce remodelling reform that started in 2003 and raised the number and administrative responsibilities of teaching assistants (OECD, 2019^[3]). The aim of the reform, which is described in more detail in Box 4.1, was to ease teachers' workload and permit them to spend more time on pedagogical tasks like lesson planning, preparation and assessment. Despite the reform's high cost of implementation, an early evaluation showed mixed results. The majority of school leaders interviewed by Hutching et al. (2009^[132]) reported that the remodelling had reduced the workload and stress among teachers, but also observed a deterioration in the working conditions of teaching assistants and administrative staff. By contrast, teachers – particularly at the secondary level – were less likely to report a reduced workload, and the impact on the time they spent on administrative tasks appears to have been limited. This experience demonstrates that increasing the effectiveness of teachers' working time (and that of their colleagues) requires a careful reflection on the roles of different staff in schools and the division of tasks between them.

Box 4.2. Workforce remodelling in England

Following England's National Agreement on "Raising Standards and Tackling Workload" in 2003, a series of policy changes led to a significant increase in the number of teaching assistants (TAs) in English schools through a process known as "workforce remodelling" (Masdeu Navarro, 2015^[125]). The policy aimed to reduce teachers' workload by transferring their administrative and clerical tasks to support staff, by

limiting the time which teachers may be required to cover for colleagues and by introducing guaranteed time for planning, preparation and assessment (PPA). These measures sought to enable teachers to spend more time on “core teaching tasks” and support the policy’s stated aim to raise teaching standards and reduce teachers’ workload in order to address problems related to teacher supply and retention (Hutchings et al., 2009^[132]). The reform process received support from employers and most, although not all, teacher unions, which actively engaged in the Workforce Agreement Monitoring Group (WAMG) that advised on and monitored the implementation of the reform.

As a consequence of the reforms, the number of teaching assistants tripled (from 79k to 240k) between 2000 and 2013 while the number of teachers increased by 14% (from 405k to 465k) and the number of students slightly decreased (Masdeu Navarro, 2015^[125]). Evaluations of the reform’s impact were decidedly mixed. Some evaluations perceived the reform to be too costly to sustain (Hutchings et al., 2009^[132]), particularly given that there was no clear evidence of its positive impact on student achievement or teacher recruitment and retention (Blatchford et al., 2010^[133]; Sharples, Webster and Blatchford, 2016^[134]). There is evidence to suggest that the transfer of routine administrative tasks to support staff has – in some schools – alleviated teachers’ workload and helped them focus more on their core tasks. Early evaluations of the reform’s pilot phase reported a decrease in teachers’ working hours (Gunter et al., 2005^[135]) and the majority of school leaders had the impression that the reform eased their teachers’ workload and helped them focus on (Hutchings et al., 2009^[132]). At the same time, many teachers, particularly in secondary schools, did not feel like their work-life balance had improved and the reduction in their time spent on administrative tasks appears to have been limited (Hutchings et al., 2009^[132]).

The challenges encountered during the implementation of the workforce remodelling reform provide important lessons for policy makers. Although the introduction of protected PPA time particularly benefited primary teachers (who previously had no allocated time to focus on lesson planning), some schools lacked adequate working spaces and ICT facilities for staff to use this time effectively (Hutchings et al., 2009^[132]). In some schools, there appears to have been uncertainty about the roles and responsibilities of support staff and difficulties for teachers and senior staff members to co-ordinate their work with that of teaching assistants. The reform highlighted the importance of providing schools and staff with guidance and support to reduce transaction costs when delegating tasks and to ensure that support staff are well-prepared to add value to teachers’ work (Hutchings et al., 2009^[132]; Sharples, Webster and Blatchford, 2016^[134]). Another important debate during the remodelling process was how to delimit TAs’ responsibilities for the teaching and learning process and align it with their compensation, professionalisation and career progression opportunities (Hutchings et al., 2009^[132]; Masdeu Navarro, 2015^[125]; Stevenson, 2007^[136]; Carter and Stevenson, 2012^[137]).

Sources: OECD (2019^[3]), *Working and Learning Together: Rethinking Human Resource Policies for Schools*, <https://doi.org/10.1787/b7aaf050-en>; Hutchings (2009^[132]), Hutchings, M. et al. (2009), *Aspects of School Workforce Remodelling: Strategies Used and Impact on Workload and Standards*, Department for Children, Schools and Families.

A significant proportion of teachers’ time is taken up by lesson planning and marking. While there may be some scope to delegate certain aspects of these non-teaching activities to other staff (as seen in the case of England), they are closely related to teachers’ core duties. Engaging in these tasks arguably constitutes an important opportunity for teachers

to reflect on their students' needs and progress, as well as their own practice and to improve their instruction in the process. Delegating tasks more closely related to teachers' instruction has raised concerns around the risk of de-professionalisation and an erosion of the teacher's role (Stevenson, 2007^[136]). In order to make teachers' planning and marking time more productive, structured collaboration with peers may be a more promising strategy to save teachers' time than disengaging from these tasks altogether. The importance of teacher collaboration on these and other tasks for their continuing professional growth is explored in a separate OECD paper on policies to support teachers' professional learning (Boeskens, Nusche and Yurita, 2020^[7]). The powerful role that technology can play in helping teachers save time on routine tasks and use their time more efficiently for core tasks is discussed in a separate paper on the use of ICT resources in school education as well as a policy brief (OECD, 2021^[138]), also prepared in the context of the OECD School Resources Review.

5. Conclusion

How teachers use their working time is likely to influence their own motivation and well-being as well as their students' education experience and outcomes. This paper brings together data and analysis from various strands of OECD work to provide an international perspective on teachers' use of time. Based on data from the OECD's Teaching and Learning International Survey (TALIS), the paper analyses how teachers from different countries divide their time between various types of activities and relates these findings to research evidence about effective time use in schools. It highlights that different approaches to distributing teachers' time across tasks can be effective in contributing to education system goals, depending on teachers' competences and career stage, their students' characteristics and the context in which they teach. This includes differences in teachers' use of time at the lower secondary level (the focus of this paper's empirical analyses) and those at the primary and upper secondary levels.

The paper also provides relevant insights for policy makers. Building on international indicators collected through the OECD's NESLI network, it offers a systematic overview of policy frameworks that regulate teachers' time use across countries. Drawing on findings and country examples from the OECD's School Resources Review, it explores different policies and practices that can help teachers make an effective use of their non-teaching time and prioritise core activities most likely to support student learning and well-being. Balanced policy frameworks, learning-centred leadership and effective divisions of labour in schools are considered as key levers to help teachers focus their time on the activities that contribute to achieving education system goals.

While this paper focusses on the potential of human resource policies to support an effective use of time in schools, it recognises that other factors within and beyond the school system can have profound effects on teachers' time use as well. The massive school closures related to the COVID-19, for example, required teachers to rapidly adapt their use of time in order to acquire new skills, teach in virtual learning environments and coordinate support and resources for their students. Policies promoting an effective use of technology are another important lever to support teachers (and other school staff) in saving time on routine tasks and amplifying effective teaching approaches. The effective use of ICT resources to support teachers and teaching will be considered as part of the OECD's 2021-22 project on Schooling, Teachers and Teaching.

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Annex A. Additional tables

Table A.1. Teachers' working hours by school characteristics

Results based on responses of full-time lower secondary teachers

Country	Mean	Difference by school characteristics				
		City - rural area	Private - public schools	High - low prop. of disadv. students ¹	High - low prop. of immigrant students ²	High - low prop. of SEN students ³
Georgia	28.1					
Saudi Arabia	28.6					
Italy	31.7		+		+	
Turkey	32.4		+			
Korea	34.2		-			
French Comm. (Belgium)	35.0			-		-
South Africa	35.1	+				
Finland	35.1	+	+		+	
Brazil	35.7					
Cyprus	35.8		+			
Chinese Taipei	36.0		+		-	
Israel	36.1					
Romania	37.1					
Malta	37.2					
CABA (Argentina)	37.2			+	+	
Belgium	37.5		+	-		
Slovak Republic	38.5					
Spain	38.6					
France	38.9			-		
Bulgaria	39.4					
Flemish Comm. (Belgium)	39.7		+			
United Arab Emirates	40.1		+			
Denmark	40.1					
Slovenia	40.3					
Chile	40.3					
Estonia	40.6		-			
Latvia	40.9					+
Portugal	40.9			-		
Iceland	41.1					
Czech Republic	41.1					
Austria	41.1		+	-	-	
Colombia	41.2		+			
OECD average-31	41.5		+	-		
Lithuania	41.6					
Hungary	41.6			-		
Norway	42.1	+			+	
Netherlands	42.2					
Croatia	42.6					
Sweden	44.0					
Mexico	44.5		-			
Russia	44.5	+				
Shanghai (China)	45.5					
Singapore	46.3					
United States	46.7					-
Australia *	46.9		+	-		
Viet Nam	47.0					
New Zealand	47.8					
Alberta (Canada)	48.7	-				
England (UK)	50.3			-		
Kazakhstan	50.4	+				
Japan	59.1					
Systems with a positive difference		5	11	1	4	1
Systems with no difference		33	24	28	24	38
Systems with negative difference		1	3	8	2	2

Notes: *For this country, estimates for sub-groups and estimated differences between sub-groups need to be interpreted with great care; 1. High concentration of disadvantaged students refers to schools with more than 30% of students from socio-economically disadvantaged homes; 2. High concentration of immigrant students refers to schools with more than 10% of immigrant students; 3. High concentration of students with special needs refers to schools with more than 10% of students with special needs; Countries and economies are ranked in descending order of the average working hours of full-time teachers.

Source: OECD (2019), *TALIS 2018 Results* (database), <https://www.oecd.org/education/talis/talis-2018-data.htm> (accessed on 12 January 2021).

Table A.2. Teachers' working hours by teacher characteristics

Results based on responses of full-time lower secondary teachers

Difference by teacher characteristics						
Country	Mean	Male - female	Age 50 and above - under age 30	Novice - mid-career teacher ¹	Highly experienced - mid-career teacher ¹	<1 year fixed-term - permanent contract
Georgia	28.1	-				
Saudi Arabia	28.6	-				
Italy	31.7	-				-
Turkey	32.4	+	-		-	+
Korea	34.2	-	-		-	
French Comm. (Belgium)	35.0					+
South Africa	35.1					+
Finland	35.1	-		+		
Brazil	35.7					-
Cyprus	35.8	-				
Chinese Taipei	36.0	-	-		-	
Israel	36.1					
Romania	37.1	-	+			-
Malta	37.2	-				
CABA (Argentina)	37.2	-		-		
Belgium	37.5	-		+		+
Slovak Republic	38.5	-				
Spain	38.6	-				
France	38.9	-		-		
Bulgaria	39.4	-				
Flemish Comm. (Belgium)	39.7	-		+	+	+
United Arab Emirates	40.1	-		-		+
Denmark	40.1					
Slovenia	40.3	-				
Chile	40.3					
Estonia	40.6	-				-
Latvia	40.9	-				
Portugal	40.9	-				
Iceland	41.1					
Czech Republic	41.1	-				
Austria	41.1		-			+
Colombia	41.2	-				
OECD average-31	41.5	-	-			
Lithuania	41.6	-				
Hungary	41.6	-			+	-
Norway	42.1	-	-		-	
Netherlands	42.2	-				
Croatia	42.6	-				
Sweden	44.0	-				
Mexico	44.5					
Russia	44.5	-	+			
Shanghai (China)	45.5	-	-		-	
Singapore	46.3			+		
United States	46.7	-	-	+		
Australia	46.9		+		+	-
Viet Nam	47.0	-	-		-	
New Zealand	47.8	-				-
Alberta (Canada)	48.7		-	+		
England (UK)	50.3		+	-		+
Kazakhstan	50.4	-		-		
Japan	59.1		-		-	-
Systems with a positive difference		1	4	6	3	8
Systems with no difference		14	34	39	40	28
Systems with negative difference		35	10	5	7	8

Note: 1. Novice teachers are those with 5 years of teaching experience or less, Mid-career teachers are those with 6-15 years of experience, Highly experienced teachers are those with 25 or more years of experience; Countries and economies are ranked in descending order of the average working hours of full-time teachers.

Source: OECD (2019), *TALIS 2018 Results* (database), <https://www.oecd.org/education/talis/talis-2018-data.htm> (accessed on 12 January 2021).

Table A.3. Teachers' teaching hours by school characteristics

Results based on responses of full-time lower secondary teachers

Country	Mean	Difference by school characteristics				
		City - rural area	Private - public schools	High - low prop. of disadv. students ¹	High - low prop. of immigrant students ²	High - low prop. of SEN students ³
Kazakhstan	16.2	+	+	-		
Norway	16.6					
Chinese Taipei	17.2		+		-	
Italy	17.9					
Cyprus	18.0		+			-
Korea	18.1					
Singapore	18.1		+			
Viet Nam	18.3					
Japan	18.5		-			
Malta	18.8		+			
Romania	18.9					
France	19.4					
Sweden	19.5					
Slovenia	20.0					
Denmark	20.1	+	-		+	+
Georgia	20.1					
Bulgaria	20.1	+				
Netherlands	20.2					
Saudi Arabia	20.3					
Czech Republic	20.3	+				
French Comm. (Belgium)	20.3					
Belgium	20.3	+	-			
Flemish Comm. (Belgium)	20.3		-			
Spain	20.5		+			
Australia *	20.6				+	
Portugal	20.6		+			
New Zealand	21.0					
Iceland	21.1					
England (UK)	21.2				-	
Slovak Republic	21.3					
Austria	21.6	-				
Croatia	21.7					
Finland	21.9		-			
OECD average-31	22.1					
Lithuania	22.4					
CABA (Argentina)	22.5		-	+	+	
Hungary	22.6	-				
Israel	23.7					
United Arab Emirates	23.8	+	+			-
Latvia	24.0					
Estonia	24.2			-		-
Turkey	24.9					
South Africa	25.7	+				
Russia	25.8	+			+	
Colombia	26.9		+			
Alberta (Canada)	28.0					
Brazil	28.1		-			
United States	28.3	-		+		-
Mexico	29.6		-			
Chile	30.6					
Shanghai (China)	a					
Systems with a positive difference		8	9	2	4	1
Systems with no difference		28	19	32	24	36
Systems with negative difference		3	9	2	2	4

Notes: * For this country, estimates for sub-groups and estimated differences between sub-groups need to be interpreted with great care; 1. High concentration of disadvantaged students refers to schools with more than 30% of students from socio-economically disadvantaged homes; 2. High concentration of immigrant students refers to schools with more than 10% of immigrant students; 3. High concentration of students with special needs refers to schools with more than 10% of students with special needs; Countries and economies are ranked in descending order of the average teaching hours of full-time teachers.

Source: OECD (2019), *TALIS 2018 Results* (database), <https://www.oecd.org/education/talis/talis-2018-data.htm> (accessed on 12 January 2021).

Table A.4. Teachers' teaching hours by teacher characteristics

Results based on responses of full-time lower secondary teachers

		+	Positive difference	-	Negative difference		Difference is not significant		Missing values
Difference by teacher characteristics									
Country	Mean	Male - female	Age 50 and above - under age 30	Novice - mid-career teacher ¹	Highly experienced - mid-career teacher ¹	<1 year fixed-term - permanent contract			
Kazakhstan	16.2	-	-	+					
Norway	16.6	+	-	+					
Chinese Taipei	17.2								
Italy	17.9								
Cyprus	18.0		-		-				
Korea	18.1	-	-		-				
Singapore	18.1		+	-					
Viet Nam	18.3								
Japan	18.5		-	-	-				
Malta	18.8		-						
Romania	18.9				-				
France	19.4	+							
Sweden	19.5	+							
Slovenia	20.0								
Denmark	20.1								
Georgia	20.1	-			-				
Bulgaria	20.1								
Netherlands	20.2		-	+					
Saudi Arabia	20.3	-			-				
Czech Republic	20.3		-	+					
French Comm. (Belgium)	20.3								
Belgium	20.3			+					
Flemish Comm. (Belgium)	20.3			+					
Spain	20.5								
Australia	20.6		-	+					
Portugal	20.6	-			-				
New Zealand	21.0		+						
Iceland	21.1	+	-		-				
England (UK)	21.2			+					
Slovak Republic	21.3				-				
Austria	21.6		-						
Croatia	21.7								
Finland	21.9	+							
OECD average-31	22.1		-	+	-				
Lithuania	22.4								
CABA (Argentina)	22.5		+	-					
Hungary	22.6								
Israel	23.7				-				
United Arab Emirates	23.8								
Latvia	24.0								
Estonia	24.2								
Turkey	24.9		-	+	-				
South Africa	25.7								
Russia	25.8								
Colombia	26.9								
Alberta (Canada)	28.0		-						
Brazil	28.1								
United States	28.3		-						
Mexico	29.6		+						
Chile	30.6								
Shanghai (China)	a								
Systems with a positive difference		5	4	8	0	8			
Systems with no difference		39	30	38	38	33			
Systems with negative difference		5	13	3	11	2			

Note: 1. Novice teachers are those with 5 years of teaching experience or less, Mid-career teachers are those with 6-15 years of experience, Highly experienced teachers are those with 25 or more years of experience; Countries and economies are ranked in descending order of the average teaching hours of full-time teachers.

Source: OECD (2019), *TALIS 2018 Results* (database), <https://www.oecd.org/education/talis/talis-2018-data.htm> (accessed on 12 January 2021).

Table A.5. Teachers' planning/preparation time per teaching hour by school characteristics

Results based on responses of all lower secondary teachers

		+	Positive difference		Difference is not significant		Missing values
		-	Negative difference		Difference is not significant		Missing values
Difference by school characteristics							
Country	Mean	City - rural area	Private - public schools	High - low prop. of disadv. students ¹	High - low prop. of immigrant students ²	High - low prop. of SEN students ³	
Turkey	0.2						-
Chile	0.3						
Finland	0.3		+				
French Comm. (Belgium)	0.3						
Israel	0.3						
Netherlands	0.3						-
South Africa	0.3						
Alberta (Canada)	0.3			-			
Saudi Arabia	0.3						
Italy	0.3	-					
Belgium	0.3			-			
Estonia	0.3	-	+				
Brazil	0.3						
Colombia	0.3						
CABA (Argentina)	0.4						
Spain	0.4		-	+			
United Arab Emirates	0.4		+	-		+	
Hungary	0.4						
Mexico	0.4		+				
OECD average-31	0.4						
Georgia	0.4			-			
Flemish Comm. (Belgium)	0.4						
Portugal	0.4		-				
Korea	0.4						
Latvia	0.4						
Sweden	0.4	-	-				
Denmark	0.4			-			
England (UK)	0.4						
New Zealand	0.4	+					
Iceland	0.4						
France	0.4						
Slovak Republic	0.4						
Lithuania	0.4	-					
Czech Republic	0.4	-					
Australia *	0.4						
Austria	0.4	+	+	-	-	-	
Bulgaria	0.4						
Norway	0.4						
Russia	0.4	-					
United States	0.4	+					
Romania	0.5	-					
Croatia	0.5					+	
Singapore	0.5		-			-	
Cyprus	0.5		-				
Slovenia	0.5						
Chinese Taipei	0.5		-				
Japan	0.5		+				
Malta	0.6		-				-
Viet Nam	0.7		-				
Kazakhstan	0.7	-	-				
Shanghai (China)	a						
Systems with a positive difference		3	6	1	0	2	
Systems with no difference		28	22	29	29	34	
Systems with negative difference		8	9	6	1	5	

Notes: * For this country, estimates for sub-groups and estimated differences between sub-groups need to be interpreted with great care; 1. High concentration of disadvantaged students refers to schools with more than 30% of students from socio-economically disadvantaged homes; 2. High concentration of immigrant students refers to schools with more than 10% of immigrant students; 3. High concentration of students with special needs refers to schools with more than 10% of students with special needs; Countries and economies are ranked in descending order of the average planning or preparation time per teaching hour.

Source: OECD (2019), *TALIS 2018 Results* (database), <https://www.oecd.org/education/talis/talis-2018-data.htm> (accessed on 12 January 2021).

Table A.6. Teachers' planning/preparation time per teaching hour by teacher characteristics

Results based on responses of all lower secondary teachers

		+	Positive difference		Difference is not significant		Missing values
		-	Negative difference				
Difference by teacher characteristics							
Country	Mean	Male - female	Age 50 and above - under age 30	Novice - mid-career teacher ¹	Highly experienced - mid-career teacher ¹	<1 year fixed-term - permanent contract	
Turkey	0.2		+		+		
Chile	0.3						
Finland	0.3	-		+		+	
French Comm. (Belgium)	0.3	-		+		+	
Israel	0.3						
Netherlands	0.3						
South Africa	0.3	+				-	
Alberta (Canada)	0.3		-		-	+	
Saudi Arabia	0.3	-					
Italy	0.3						
Belgium	0.3	-		+		+	
Estonia	0.3	-		+			
Brazil	0.3						
Colombia	0.3		+			-	
CABA (Argentina)	0.4		-	+			
Spain	0.4			+		+	
United Arab Emirates	0.4	-	+				
Hungary	0.4	-			+		
Mexico	0.4					+	
OECD average-31	0.4	-		+		+	
Georgia	0.4						
Flemish Comm. (Belgium)	0.4	-		+		+	
Portugal	0.4				+		
Korea	0.4	-			+		
Latvia	0.4						
Sweden	0.4	-					
Denmark	0.4						
England (UK)	0.4			+		+	
New Zealand	0.4	-					
Iceland	0.4						
France	0.4			+	+		
Slovak Republic	0.4		-	+			
Lithuania	0.4	-					
Czech Republic	0.4	-		+		+	
Australia	0.4	-			+		
Austria	0.4					+	
Bulgaria	0.4	-					
Norway	0.4	-					
Russia	0.4	-	+				
United States	0.4		+				
Romania	0.5		+				
Croatia	0.5	-					
Singapore	0.5	-	-	+			
Cyprus	0.5	-			+	-	
Slovenia	0.5			+		+	
Chinese Taipei	0.5	-		+			
Japan	0.5			+		+	
Malta	0.6	-		+			
Viet Nam	0.7	-					
Kazakhstan	0.7						
Shanghai (China)	a						
Systems with a positive difference		1	6	16	7	12	
Systems with no difference		25	37	33	41	28	
Systems with negative difference		23	4	0	1	3	

Note: 1. Novice teachers are those with 5 years of teaching experience or less, Mid-career teachers are those with 6-15 years of experience, Highly experienced teachers are those with 25 or more years of experience; Countries and economies are ranked in descending order of the average planning or preparation time per teaching hour.

Source: OECD (2019), *TALIS 2018 Results* (database), <https://www.oecd.org/education/talis/talis-2018-data.htm> (accessed on 12 January 2021).

Table A.7. Teachers' marking/correcting time per teaching hour by school characteristics

Results based on responses of all lower secondary teachers

Country	Mean	Difference by school characteristics				
		City - rural area	Private - public schools	High - low prop. of disadv. students ¹	High - low prop. of immigrant students ²	High - low prop. of SEN students ³
Turkey	0.1					
Denmark	0.1		+	-		-
Finland	0.2	+	+			
Korea	0.2					
Slovenia	0.2					
Estonia	0.2	+				
Hungary	0.2	+		-		-
Iceland	0.2				-	
Chile	0.2	+	+			
Croatia	0.2					
Slovak Republic	0.2					
Russia	0.2					
Alberta (Canada)	0.2					
Israel	0.2					
United States	0.2	+				
Czech Republic	0.2					-
Bulgaria	0.2			-		
Netherlands	0.2					
OECD average-31	0.2	+	+	-		-
Romania	0.2					
Italy	0.2				+	
Sweden	0.2					-
Brazil	0.2	+				
Lithuania	0.2					
Austria	0.3		+	-	-	-
Latvia	0.3	+				-
French Comm. (Belgium)	0.3			-		
United Arab Emirates	0.3		+	-		+
Georgia	0.3	+		-		
Colombia	0.3	+				-
Mexico	0.3		+			
France	0.3			-		-
Belgium	0.3		+	-		
Japan	0.3		+			
Flemish Comm. (Belgium)	0.3		+			
Norway	0.3	+	-			
Spain	0.3		-			
Australia	0.3	+	+	-	+	
Chinese Taipei	0.3	+	-			
New Zealand	0.3	+				
Saudi Arabia	0.3					
CABA (Argentina)	0.3			-	-	
Viet Nam	0.3			-		
England (UK)	0.3			-		
Malta	0.3					
Cyprus	0.3	+				-
Kazakhstan	0.4	-	-			
Portugal	0.4		-			
South Africa	0.4					-
Singapore	0.5		-			-
Shanghai (China)	a					
Systems with a positive difference		14	10	0	2	1
Systems with no difference		24	21	23	25	29
Systems with negative difference		1	6	13	3	11

Notes: * For this country, estimates for sub-groups and estimated differences between sub-groups need to be interpreted with great care; 1. High concentration of disadvantaged students refers to schools with more than 30% of students from socio-economically disadvantaged homes; 2. High concentration of immigrant students refers to schools with more than 10% of immigrant students; 3. High concentration of students with special needs refers to schools with more than 10% of students with special needs; Countries and economies are ranked in descending order of the average planning or preparation time per teaching hour.

Source: OECD (2019), *TALIS 2018 Results* (database), <https://www.oecd.org/education/talis/talis-2018-data.htm> (accessed on 12 January 2021).

Table A.8. Teachers' marking/correcting time per teaching hour by teacher characteristics

Results based on responses of all lower secondary teachers

		+	Positive difference	-	Negative difference	Difference is not significant	Missing values
Difference by teacher characteristics							
Country	Mean	Male - female	Age 50 and above - under age 30	Novice - mid-career teacher ¹	Highly experienced - mid-career teacher ¹	<1 year fixed-term - permanent contract	
Turkey	0.1		+				
Denmark	0.1		+				
Finland	0.2						
Korea	0.2	-	+		+		
Slovenia	0.2	-					
Estonia	0.2	-					
Hungary	0.2	-	+		+		
Iceland	0.2	-	+				
Chile	0.2						
Croatia	0.2	-	+				-
Slovak Republic	0.2						-
Russia	0.2	-	+				
Alberta (Canada)	0.2						
Israel	0.2						-
United States	0.2		+				
Czech Republic	0.2	-	+	-	+		-
Bulgaria	0.2	-					
Netherlands	0.2						
OECD average-31	0.2	-	+		+		-
Romania	0.2	-	+	-	+		
Italy	0.2	-			+		-
Sweden	0.2						
Brazil	0.2						
Lithuania	0.2	-					
Austria	0.3	-					
Latvia	0.3	-					
French Comm. (Belgium)	0.3	-	+				
United Arab Emirates	0.3	-	+	-			-
Georgia	0.3	-					
Colombia	0.3						
Mexico	0.3	-					
France	0.3	-	+		+		
Belgium	0.3	-	+		+		
Japan	0.3	-					
Flemish Comm. (Belgium)	0.3	-	+		+		
Norway	0.3	-					
Spain	0.3	-	+		+		
Australia	0.3	-	+				
Chinese Taipei	0.3	-	+		+		-
New Zealand	0.3	-					
Saudi Arabia	0.3	-					
CABA (Argentina)	0.3						
Viet Nam	0.3						
England (UK)	0.3	-	+	-			
Malta	0.3	-					
Cyprus	0.3	-			+		-
Kazakhstan	0.4	-					
Portugal	0.4				+		-
South Africa	0.4						-
Singapore	0.5	-	-	+	+		
Shanghai (China)	a						
Systems with a positive difference		0	19	1	13	0	
Systems with no difference		14	27	44	36	33	
Systems with negative difference		35	1	4	0	10	

Note: 1. Novice teachers are those with 5 years of teaching experience or less, Mid-career teachers are those with 6-15 years of experience, Highly experienced teachers are those with 25 or more years of experience; Countries and economies are ranked in descending order of the average planning or preparation time per teaching hour.

Source: OECD (2019), *TALIS 2018 Results* (database), <https://www.oecd.org/education/talis/talis-2018-data.htm> (accessed on 12 January 2021).

Table A.9. Teachers' working and teaching time by subject taught

Results based on responses of full-time lower secondary teachers

Country	Teachers' working time					Teachers' teaching time				
	1 subject: Reading, writing & literature	1 subject: Mathematics or science	1 subject: Social studies or languages	Combination of subjects, incl. a main subject	Combination of tech, religion, arts, PE or VET	1 subject: Reading, writing & literature	1 subject: Mathematics or science	1 subject: Social studies or languages	Combination of subjects, incl. a main subject	Combination of tech, religion, arts, PE or VET
Alberta (Canada)	46.7					25.6				
Australia	48.6					20.5				
Austria	43.9				-	20.4		+	+	
Belgium	37.5			+	-	19.8		+		+
Brazil	39.1	-			-	28.4				
Bulgaria	42.5		-		-	19.3				
CABA (Argentina)	40.0					22.0		-		
Chile	39.7					30.9				
Chinese Taipei	38.6	-			-	16.9			+	
Colombia	37.6	+				26.0				
Croatia	43.5				-	21.5				
Cyprus	39.2				-	19.9	-	-		-
Czech Republic	42.4				-	21.4	-			
Denmark	39.9					18.8				+
England (UK)	50.2					20.9				
Estonia	41.8				-	24.3		-		
Finland	37.3				-	19.3		+	+	+
Flemish Comm. (Bel.)	42.2				-	19.6				
France	38.5	+			-	19.0				+
French Comm. (Bel.)	34.8				-	19.8			+	
Georgia	32.0		-	-	-	21.4				-
Hungary	42.0				-	20.6		+	+	+
Iceland	44.2	-			-	19.7			+	+
Italy	31.9		+	+	-	17.8		+	+	-
Kazakhstan	52.6				-	16.6		-	+	-
Korea	34.1	+				19.7				
Latvia	41.8	+			-	24.4				-
Lithuania	46.2	-			-	22.4				
Malta	37.2					18.9	-			
Mexico	43.0					30.6				-
Netherlands	44.7				-	19.6			+	
New Zealand	47.9	-				18.2			+	
Norway	41.5					13.8			+	+
Portugal	44.2			-	-	21.1				-
Romania	41.4		-	-	-	19.5				
Russia	47.4				-	26.4				
Saudi Arabia	27.5					23.4		-		
Singapore	47.4				-	17.5				
Slovak Republic	42.0				-	19.4		+	+	
Slovenia	41.2				-	20.8	-			
South Africa	39.0	-			-	26.8	-			
Spain	38.5					20.3			+	
Sweden	44.1					17.5		+	+	+
Turkey	33.2				-	25.6				-
United Arab Emirates	40.4	+	+			23.1			+	
United States	48.9				-	30.5	-	-		
Viet Nam	49.8	-				19.2	-			-
OECD average-31	41.8	+			-	21.7			+	
Systems with a positive difference	5	2	2	0		0	6	15	9	
Systems with no difference	34	41	41	16		39	34	32	29	
Systems with negative difference	7	3	4	31		7	6	0	9	

Notes: Countries and economies are ordered alphabetically; Teachers are classified based on the subjects they report to teach to lower secondary students during the current school year; Reported differences are with respect to the reference category (reading, writing and literature); "Main subject" refers to subjects from the first three categories.

Source: OECD (2019), *TALIS 2018 Results* (database), <https://www.oecd.org/education/talis/talis-2018-data.htm> (accessed on 12 January 2021).

Table A.10. Teachers' planning and marking time by subject taught

Results based on responses all lower secondary teachers

Country	Teachers' preparation time per teaching hour					Teachers' marking time per teaching hour				
	1 subject: Reading, writing & literature	1 subject: Mathematics or science	1 subject: Social studies or languages	Combination of subjects, incl. a main subject	Combination of tech, religion, arts, PE or VET	1 subject: Reading, writing & literature	1 subject: Mathematics or science	1 subject: Social studies or languages	Combination of subjects, incl. a main subject	Combination of tech, religion, arts, PE or VET
Alberta (Canada)	0.23			+		0.28				
Australia	0.46				-	0.40	-		-	-
Austria	0.40	+	+			0.48	-		-	-
Belgium	0.29					0.31			-	-
Brazil	0.29					0.22				
Bulgaria	0.49				-	0.36	-	-	-	-
CABA (Argentina)	0.27		+			0.36				-
Chile	0.25					0.19				
Chinese Taipei	0.56	-				0.38	-	-	-	-
Colombia	0.39					0.28				
Croatia	0.42					0.26	-	-	-	-
Cyprus	0.46			+	-	0.40		-		-
Czech Republic	0.40					0.25				-
Denmark	0.40					0.17				-
England (UK)	0.40				-	0.40			-	-
Estonia	0.28		+			0.24		-	-	-
Finland	0.30			-	-	0.34	-	-	-	-
Flemish Comm. (Bel.)	0.33					0.34			-	-
France	0.37		+		-	0.34			-	-
French Comm. (Bel.)	0.26					0.29				-
Georgia	0.35					0.22				
Hungary	0.41				-	0.25		-	-	-
Iceland	0.38					0.28			-	-
Italy	0.35			-	-	0.30			-	-
Kazakhstan	0.69					0.42		-	-	-
Korea	0.37					0.20				
Latvia	0.35					0.32	-		-	
Lithuania	0.46	-		-	-	0.40	-	-	-	-
Malta	0.52					0.42		-		-
Mexico	0.20			+		0.19				
Netherlands	0.31			-		0.29			-	-
New Zealand	0.46			-		0.49	-	-	-	-
Norway	0.46					0.44	-		-	-
Portugal	0.39					0.46	-			-
Romania	0.37					0.30		-	-	-
Russia	0.46				-	0.33	-	-	-	-
Saudi Arabia	0.21			+		0.23				
Singapore	0.51				-	0.67	-		-	-
Slovak Republic	0.44					0.29		-	-	-
Slovenia	0.42			+		0.24	-	-		-
South Africa	0.23	+		+		0.35				
Spain	0.34					0.34	-		-	-
Sweden	0.43					0.45				-
Turkey	0.14				+	0.11				
United Arab Emirates	0.37				-	0.29	-		-	-
United States	0.32					0.28				-
Viet Nam	0.70					0.36				-
OECD average-31	0.36		+		-	0.31	-	-	-	-
Systems with a positive difference	2	4	6	1	0	0	0	0	0	0
Systems with no difference	42	42	36	34	30	31	21	11		
Systems with negative difference	2	0	5	12	16	15	26	36		

Notes: Countries and economies are ordered alphabetically; Teachers are classified based on the subjects they report to teach to lower secondary students during the current school year; Reported differences are with respect to the reference category (reading, writing and literature); "Main subject" refers to subjects from the first three categories.

Source: OECD (2019), *TALIS 2018 Results* (database), <https://www.oecd.org/education/talis/talis-2018-data.htm> (accessed on 12 January 2021).