



Attractiveness
of the Teaching Profession



**Towards a Framework of Action on the
Attractiveness of the Teaching Profession
through Effective Social Dialogue in Education**



**AALBORG
UNIVERSITY**



Towards a Framework of Action on the Attractiveness of the Teaching Profession through Effective Social Dialogue in Education

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Executive Summary

Introduction

The central importance of education in every aspect of our lives is well understood. Economic prosperity, social cohesion, democratic engagement, and the development of sustainable futures in Europe depend critically on the commitment and capabilities of European citizens, and education is central to the development of that potential. Developing potential is a core task of teachers, and teachers are foundational to achieving all the ambitious hopes and aspirations that the nations of Europe have for their education systems. It follows that ensuring an adequate supply of teachers, who have the skills and expertise to undertake the work required of them, is critical. Hence, the recruitment and, crucially, retention of sufficient teachers, who are appropriately qualified, is a key responsibility for those charged with managing education systems.

However, it is increasingly recognised that there are growing problems of teacher supply across Europe. Put simply, teaching as a profession appears insufficiently *attractive* to encourage an adequate supply of new entrants into its ranks, or to retain those already working in the sector. The problem is widely recognised, and has been described as a “crisis” in a recent Eurydice report:

The teaching profession has been going through a vocational crisis for some years now, attracting fewer young people and losing others trained to be teachers. Many European systems are now suffering from shortages. Moreover, the teaching profession is evolving and teachers have ‘increasing demands, responsibilities and expectations put before them’. (European Commission/EACEA/Eurydice, 2021a, p. 11)

In this report, we set out data relating to the scale of the teacher supply problems (in terms of size and form, and the changing patterns across Europe), and identify the key factors that can help explain current trends.

There are clearly significant immediate and short-term problems in teacher supply in Europe, and, in many countries, those problems are likely to intensify in the medium term (5-10 years). However, the real crisis in teacher supply may be further in the future as the attractiveness of teaching as a profession diminishes relative to the opportunities available to graduates elsewhere in the labour market. This trend reflects long-term changes in work and the labour market that have been accelerated by the pandemic, but which will shape work in the future.

Understanding teaching as a profession: making sense of *attractiveness*

The *attractiveness* of a profession must always be understood as a relative concept. Any profession competes with other occupations, both to attract new entrants, and to retain

current members. In this sense, it can be considered in purely economic terms (a labour market that seeks to bring demand and supply into some form of equilibrium) but is best understood by drawing on analyses from both economics and psychology in which financial rewards are part of a wider assessment of complex intrinsic and extrinsic motivations. That current labour markets for teachers are problematic can be reflected in data presented in the 2021 Eurydice Report on European¹ teachers' careers, development and well-being.

This report (on teacher supply in the lower secondary sector in 2019/20) highlighted no fewer than 27 jurisdictions with problems of teacher shortage, combined with a further six countries that were simultaneously experiencing teacher shortages and problems of over-supply (for example, having a surplus of teachers in some subject areas, but shortages of teachers in other subject areas) (see Table 1). Only three countries were identified as having problems of 'over-supply'.

Table. 1. Teacher shortages in lower secondary education in Europe 2019/2020

Problem	Country
Shortage	BEde, IE, HR, RO, UK-WLS, AL, MK, FR, UK-SCT, NO, DE, LV, LU, NL, CZ, AT, PL, CH, BG, EE, HU, SE, IS, BEfr, BEnl, DK, UK-ENG
Shortage + surplus	LI, EL, ES, IT, LT, PT
Surplus	CY, TR, UK-NIR

(Source: European Commission/EACEA/Eurydice, 2021a)

Further analysis reveals a complex mix of both recruitment and retention problems (see Table 2). Several countries face difficulties attracting people onto teacher preparation courses, but, then, supply problems can be compounded when trainee teachers either quit their programmes, do not transfer into teaching posts on completion of their course or enter teaching but leave soon after. In some countries, this rate of early attrition can be a serious problem.

Table. 2. Most significant problems associated with recruitment and retention in Europe

Problem	Country
Initial Teacher Education (ITE) shortages (low applications and/or high dropout)	FR, UK-SCT, NO, DE, LV, LU, NL, LT, PT, RS, MT
High teacher exit	BG, LI

¹ The report focuses on all 27 EU Member States, as well as the United Kingdom, Albania, Bosnia and Herzegovina, Switzerland, Iceland, Liechtenstein, Montenegro, North Macedonia, Norway, Serbia and Türkiye.

High teacher exit and ITE shortages	EE, HU, BE, IS, Befr, BEnl, DK, UK-ENG
An ageing teacher population	DE, LV, LU, NL, CZ, AT, PL, CH, BG, EE, HU, SE, IS, LI, EL, ES, IT, LT, PT

(Source: European Commission/EACEA/Eurydice, 2021a)

The data above point to a stark problem. This is often presented as an “ageing” teacher population – whereby it is estimated that several countries will have to replace 1/3 of their teachers in the next decade, rising to as much as 50% in some countries (European Commission/EACEA/Eurydice, 2021a). In the 2019 Education and Training Monitor, 32.8% of primary teachers and 39% of secondary teachers in Europe were aged over 50, with the figure for the primary sector exceeding 40% in Bulgaria, Czechia, Estonia, Greece, Italy, and Lithuania. Four countries (Estonia, Germany, Italy and Sweden) had more than 13% of primary teachers aged over 60 (European Commission, 2021).

Combined with difficulties recruiting potential teachers on to teacher preparation programmes, the problems appear clear.

However, the picture is more complex and needs to take account of not only the age profile of the teacher workforce but the gendered nature of the profession, which is overwhelmingly female at all levels (see Table 3).

Table 3. Percentage of women teachers by education sector in the European Union 2017

Sector	Percentage
Pre-primary	95.7%
Primary	85.5%
Secondary	64.7%

(Source: European Commission, 2019a)

Factors impacting teacher supply

A wide range of factors are identified in the research literature that can impact on teacher supply. These factors are identified below:

- Pay – pecuniary reward
- The nature of the work – including, for example, the balance between teaching and administration
- Public perception/societal status – including the role of media and policy representation
- Pupil behaviour and standards of discipline (real and perceived)

- Job security – including the prevalence of precarious contracts
- Access to professional development – including initial teacher education, induction and on-going professional development
- Collaborative work cultures
- Professional autonomy and the space to exercise professional judgement – scope for creativity, but also the absence of prescriptive practices
- Classroom conditions – including class size, but also wider issues of equipment and infrastructure
- Quality of school leadership – their capacity to support and develop teachers in their work
- Self-efficacy – teachers’ own self-confidence in their ability to undertake the work confidently and effectively

In the report, the above factors are clustered into a number of themes relating to support for practice (initial teacher education and professional development), working conditions (workload, pay, task discretion) and well-being and stress.

As would be expected, the way these particular issues are experienced across Europe differs considerably according to country context. For example, teacher education programmes differ significantly, and initial teacher education systems are becoming more diverse, partly in response to the need to increase teacher supply but also to attract more diverse applicants.

One challenge with assessing the impact of particular factors on teacher supply is that individual factors can have different impacts in different contexts. For example, in some contexts, and by some measures, teacher pay can appear relatively attractive, but those countries may still experience significant teacher shortage problems. Pay therefore is clearly an important factor, but it must be seen as one of several that can either work in a mutually supportive way or can work against each other.

In Europe, teachers’ pay is typically below average graduate earnings, with only a small number of countries demonstrating the reverse. In several countries, pay has fallen behind other graduate occupations since the 2008 economic crisis, particularly when compared to the private sector, but, in other instances, pay may be relatively poor but has not deteriorated in recent years. Pay alone therefore cannot explain the trend towards increasing teacher shortages but must be seen as part of the picture which should also include working conditions, broadly defined. Indeed, in the report, we discuss at length a single research study which suggests that teachers experience higher levels of *work strain* when compared to other occupations. *Work strain* is high levels of work intensity (effort expended within working hours) combined with low levels of task discretion. It may be that these issues will look different in different national contexts, but the study emphasises the need to look at quality of working life, broadly defined, focusing not only on traditional areas of concern (working hours), but also factors such as task discretion and the opportunity to work in collaborative environments.

Where these factors work in negative ways, there is the inevitable potential to impact teacher stress levels, and this is recognised as a distinctive problem in the teaching profession. For

example, the 2021 Eurydice report concluded that stress levels among teachers in Europe are “common”, having been reported by nearly half of all teachers.

What is also clear is that many factors that have caused problems for teacher supply (workload, stress) were exacerbated by the Covid-19 pandemic, and that many of these problems have been enduring post-pandemic. Indeed, these problems have been further compounded by high levels of inflation and the immediate impact on real pay.

These issues are clearly impacting on teacher supply, although what is less clear is the extent to which factors may have long-term, or only short-term, impact. Our concern is that it may be tempting to think that immediate crises (inflation, impacts of the Covid-19 pandemic) will ease, and an improved situation will return. In the next section, we explain why this analysis may be over-optimistic.

The attractiveness of the teaching profession: from short-term problems to long-term crisis

Data presented in this report highlight the problems currently experienced in teacher supply across many European countries. These problems are likely to worsen significantly in countries expecting large numbers of teacher retirements in the next 5-10 years. However, our view is that this analysis may still under-estimate the scale of the problem ahead, partly because it misunderstands it.

The reality is that problems of teacher shortage have long been a feature of many national education systems. Public education systems are large employers of graduate labour, but, typically, pay below average graduate earnings. This is always likely to create shortages, and, in particular, in moments of economic growth (when private sector salaries increase, but public sector salaries are often held down by governments struggling to manage competing demands). However, the cyclical nature of the economy, and its link to the teacher labour market, can, periodically, be expected to correct the problem as recessions encourage an increase in teacher applicants due to the scarcity of other job opportunities.

Nevertheless, this analysis is only a part of the picture. A fuller understanding makes it necessary to take account of the gendered nature of the labour market. As indicated above, the teacher workforce is dominated by women. There are many complex reasons for this, but an important factor is the perception that teaching is a job that has advantages for those involved in childcare (still, overwhelmingly, women). As long as this feature of teachers’ work was an important consideration, then it has been possible for these perceived advantages to be traded for lower pay. Here, we argue that teaching as a profession has often relied on women, and women’s labour, to be able to pay lower salaries (typically where teachers’ pay levels are higher, the gender imbalance is reduced). Put another way, and more starkly, women’s labour has acted as an artificial subsidy to public education systems by depressing pay levels below what would otherwise need to be paid as a competitive market salary.

This situation no longer applies. Over time, shifting employment patterns have led to a growth in jobs that compete for graduate labour. Much of this expansion has been in sectors such as

financial services, IT and the creative industries. Long before the Covid-19 pandemic, many of the businesses in these sectors recognised the need to offer “family-friendly” employment policies in order to attract the labour they needed. This often made combining work and caring for family more manageable, but this process accelerated rapidly when the Covid-19 pandemic encouraged home and remote working on a substantial scale.

Since the period of lockdowns has ended, teachers have returned to their schools, but many other workers have not had to return to their offices, or at least not on the same basis.

The serious and long-term problem that the teaching profession now needs to address is that teaching is becoming increasingly demanding - classrooms are more complex, hours of work are lengthening and teachers experience high levels of scheduling and timetabling rigidity. Increasing accountability demands can interfere with the core task of teaching, and what have been seen as the benefits of being able to work with young people, further adding to stress and decreasing job satisfaction. By contrast, employment opportunities elsewhere are providing increasing flexibilities with more home working and less timetabling/scheduling rigidity. Moreover, long-term trends in the economy point to an expansion of these types of jobs, with more opportunities for women graduates as employers compete to secure their labour.

The challenge for teaching as a profession therefore is to ensure teaching is an attractive career choice in a competitive graduate labour market, recognising that what made teaching attractive in the past is likely to be less and less effective in attracting teachers in the future. Unlike in the past, the system cannot rely on economic cycles to auto-correct teacher shortages, because the current source of the problem is more complex and more enduring.

What is required is a reconfiguration of teachers’ work that addresses three key areas:

1. The intrinsic nature of the work – ensuring that teachers can teach in a way that brings them high levels of satisfaction.
2. Wellbeing and quality of working life – ensuring that teachers have the working conditions to be effective in the classroom, and to experience an appropriate work-life balance.
3. Remuneration – ensuring that teachers have appropriate levels of pay without depending on hidden subsidies to suppress pay and avoid paying market-rate salaries.

Social dialogue and the attractiveness of the teaching profession

The scale of the problem we have outlined is considerable. Without serious, long-term solutions, the problem may even be existential. It presents what can be described as a “wicked problem”, that is, a problem that is enduring and appears to have an intractable element. Our argument is that such problems need to be addressed in a process that engages key stakeholders and is robust enough to be able to manage the inevitable and unavoidable tensions and conflicts. Social dialogue offers the most effective mechanisms to address these issues, precisely because such dialogue necessarily engages all key parties and is also predicated on a recognition and understanding of the underlying tensions. Decision-making

processes that seek to deny or wish away the underlying tensions are more likely to generate poor results because they fail to address stakeholder concerns. Solutions are less likely to command wide support and will be inclined to be short-term and, often, problematic.

However, for social dialogue to make an effective contribution to tackling these issues, we would highlight the importance of two considerations.

First, social dialogue needs to take place at all the levels where relevant decisions are being made. It may be that many key issues are determined at a national level and so national-level social dialogue is required – both in the form of collective bargaining and other forms of dialogue – to be able to make the necessary decisions and collective agreements. However, many key issues that can impact the quality of working life, and hence teacher supply at a micro-level, are the outcome of local, even school-level, decision-making. Developing robust social dialogue processes at all levels of the system is important if all key decisions are to benefit from effective dialogue between social partners. This is particularly important to avoid implementation gaps, whereby agreements reached at national or local/regional levels are not experienced as expected in the workplace.

Second, the agenda for social dialogue needs to be considered broadly to include both traditional *industrial* issues and wider so-called *professional* issues that have a significant potential to impact the quality of working life but are not always considered legitimate issues for social dialogue (sometimes from an employer side and sometimes from a trade union side). Drawing on the analysis presented in this report, we suggest that such an agenda for social dialogue focus on the following:

Rewards. The issue of pay is central to whether teaching is seen by potential recruits as an attractive profession and, also, critical to issues of retention. Pay relates not only to global levels but also to rates of progression during a career and how, and in what ways, remuneration might be linked to other issues such as geographical location, subject specialism or participation in professional development.

Well-being and quality of working life. Broadly defined, well-being has a significant impact on overall quality of working life and, therefore, both recruitment and retention. In this report, we have highlighted that well-being and the linked concept of stress are closely linked to the workload demands on teachers. Workload is often measured by hours worked, but it is important to recognise the possibility of work intensifying within hours worked. Much of this activity can in turn relate to the balance between time devoted to teaching and time devoted to activities other than teaching, with the latter further divided between activity that is more directly (preparation, marking) and that which is more indirectly (including much administration) related to teaching. In this area, we would highlight the issue of task discretion (see earlier discussion) in particular, and the need to ensure teachers experience agency in their work. The focus here is on the quality of working life. Social dialogue can make an important contribution to establishing the formal agreements that can shape the experience at work, but, also, and more difficult, is the role that social dialogue can play in ensuring adequate space for task discretion.

Equalities. The overwhelming majority of education employees are women and there remains a perception that teaching is “women’s work”, with this perception greater for teachers of younger age ranges. This may contribute to the suppression of teachers’ pay overall and support the imbalance in the workforce. For example, one argument is that teaching is a job that can more easily be reconciled with childcare and, as women remain the primary carers, it follows that the job may be more attractive to women. Social dialogue can make a major contribution to addressing these issues by pursuing policies that challenge stereotypes, tackle inequalities and confront discrimination (including institutionalised discriminatory practices). Here we refer to gender, but many of the same arguments apply to all groups that experience discrimination and structural inequalities. One challenge is to make teaching attractive to all given that any “flexibilities”, that, in the past, may have made teaching appear relatively attractive, are losing their comparative advantage.

Teacher support. Ensuring teachers have the professional self-confidence and self-efficacy to be effective in their jobs is a major contributor to teacher retention. This not only requires high-quality and appropriate teacher education and effective support for early career teachers (where the risk of dropout is greatest) but also on-going support throughout teachers’ careers. In this report, it has been argued that mid-career and veteran teachers can be neglected and taken for granted (because the opportunity cost of quitting is high, therefore, their retention is assumed) and so professional development needs to be appropriate to career stage. Earlier in this report, the notion of career breaks was identified as an important factor in supporting teachers who have longer service. All of these inputs can make a difference, but they are also legitimate issues for social dialogue. For example, ensuring access to professional development that is an entitlement, and is appropriately resourced, has contractual implications. Similarly, there may be tensions between employer and employee expectations, and these may be the focus of social dialogue. Moreover, and as with other issues identified, there can be significant implementation gaps between national agreements and workplace experience, and so social dialogue at all levels is important.

Main Report

1. Introduction

The central importance of education in every aspect of our lives is well understood. Economic prosperity, social cohesion, democratic engagement, and the development of sustainable futures in Europe depend critically on the commitment and capabilities of European citizens, and education is central to the development of that potential. Developing potential is a core task of teachers, and teachers are foundational to achieving all the ambitious hopes and aspirations that the nations of Europe have for their education systems. It follows that ensuring an adequate supply of teachers, who have the skills and expertise to undertake the work required of them, is critical. Hence, the recruitment and, crucially, retention of sufficient teachers, who are appropriately qualified, is a key responsibility for those charged with managing education systems.

The reality is that this responsibility has often also been a major challenge. Education systems, by their nature, rely on recruiting relatively large numbers of relatively well-qualified labour. This requires significant public investment, and this is part of the reason why teachers' salaries are typically below average graduate-level earnings. And this, inevitably, presents a challenge in terms of both teacher recruitment and retention. Nonetheless, it is important to recognise that there is nothing new about current problems of teacher supply. Teacher shortages and, sometimes, oversupply are recurrent problems that have existed for many years. To some extent, the patterns of teacher supply and demand have ebbed and flowed with economic cycles, with teaching being relatively attractive in times of recession and less attractive during periods of growth.

At the current time, there are clear signs of serious teacher shortages. These are experienced in different forms and to different degrees across Europe, but they are common and, indeed, the problem extends far beyond Europe and is visible globally. However, the concern is that current problems are not part of the usual ebb and flow of teacher supply, that can be relied on to auto-correct at some point in the future, but rather current problems reflect longer-term trends and potentially serious long-term challenges.

The scale of the problem is recognised by the attention devoted to this issue by major international bodies such as the Organisation for Economic Co-operation and Development (OECD) and the European Commission. For example, the OECD's 2018 TALIS report was not focused on teacher supply *per se* but highlighted many of the issues that could be expected to contribute to supply-side problems (OECD, 2019a, 2020). Frustration with pay levels was a key factor, but as were concerns about a wider set of professional issues. Since then, the European Commission focused its 2019 Education and Training Monitor specifically on teachers and the teaching profession, and, in 2021, collaborated towards a major Eurydice report on teachers in Europe and their careers, development and well-being (European Commission, 2019a; European Commission/EACEA/Eurydice, 2021a).

The scale of the issues was posed starkly by the Eurydice Report:

The teaching profession has been going through a vocational crisis for some years now, attracting fewer young people and losing others trained to be teachers. Many European systems are now suffering from shortages. Moreover, the teaching profession is evolving and teachers have 'increasing demands, responsibilities and expectations put before them'. (European Commission/EACEA/Eurydice, 2021a, p. 11)

The statement above highlights the longer-term trends that impact the issue of teacher supply. These problems extend beyond short-term cycles. Furthermore, since the publication of all the reports identified above, the Covid-19 pandemic has caused extraordinary levels of disruption across every aspect of our lives, not only having a dramatic impact on teachers and their work but also on work and employment beyond the education sector. At the current time, it is not possible to assess the long-term impacts of the pandemic on our social and economic lives, but what seems clear is that many short-term changes in working patterns will become long-lasting in their form, and this will further complicate the picture when assessing the attractiveness of the teaching profession.

Nevertheless, what appears clear is that the common problem (or “vocational crisis”, according to the Eurydice Report) of teacher shortages cannot be treated as something short-term and cyclical, that can be relied on to return to an equilibrium at some unidentified point in the future, but rather the issues of teacher supply require long-term and strategic responses that are capable of ensuring teaching remains attractive in relation to a wide and increasing range of competing opportunities.

We present this as a “wicked problem”; namely, a problem that is enduring, can appear intractable and generates tensions around potential outcomes. This is why social dialogue is central to tackling the issues because there can be no solution to these problems that do not recognise the challenges, difficulties and, sometimes, antagonisms that need to be worked through and resolved. There is always the potential for conflict, but the value of social dialogue is the capacity to try to resolve conflicts and tensions rather than to hope, mistakenly, that they do not exist.

In this report, we seek to develop a better understanding of the teachers’ labour market in Europe so as to be able to address, in a constructive way, the challenge of enhancing the attractiveness of the teaching profession. We also seek to demonstrate how social dialogue can play a key role – indeed, arguably, an essential role – in addressing these issues as it seeks to bring social partners together to tackle the major challenges.

The report begins by interrogating the question of the attractiveness of the teaching profession and framing it as both an economic and a psychological issue. It then provides an overview of the current position regarding teacher shortages, with some analysis of the trends within this data that help better understand the precise nature of the problem.

This is followed by a discussion of the key factors shaping teacher supply as identified in the literature. Our analysis highlights the broad range, and complex mix, of issues that contribute to framing the attractiveness of the teaching profession.

In the final sections, we focus on the potential contribution of social dialogue to addressing these issues, and present three country case studies from Ireland, Poland and Sweden. These cases show how teacher supply issues emerge in different forms in different contexts, and how social dialogue processes engage with the relevant issues.

Given the nature of the issues being researched, this report draws extensively on large-scale datasets that are presented in reports such as TALIS (OECD 2019a, 2020), the Education and Training Monitor (2019, 2021) and the aforementioned Eurydice report (European Commission/EACEA/Eurydice, 2021a). These reports clearly pre-date key health, humanitarian and economic crises (the Covid-19 pandemic and the current cost-of-living crisis) and are therefore supplemented by more recent material.

The focus of the report is on teachers in the school sector. There is some reference to issues in the early childhood education and care (ECEC) sector, but issues relating to higher education are not part of this study.

The case study material also draws on these data, with the addition of data from interviews with social partners and relevant others in the case countries.

2. Understanding teaching as a profession: making sense of *attractiveness*

In order to better understand the notion of the attractiveness of the teaching profession, it is necessary to set out some broad conceptual understandings to ensure an appropriate analysis of the key issues. Put simply, *attractiveness* refers to the extent to which the teaching profession is able to draw sufficient numbers of appropriately qualified personnel into its ranks. Broadly speaking, it is possible to take inspiration from two disciplinary traditions in order to describe and explain the concept of attractiveness: economics and psychology. An economic analysis focuses on the workings of the labour market and the extent to which demand- and supply-side factors can be brought into some form of alignment (or market equilibrium). By contrast, an approach grounded in psychology is concerned with the intrinsic and extrinsic motivations for undertaking work and particular forms of work such as teaching. It might be argued that an economic analysis is principally concerned with basic questions of pay and rewards, and that psychological approaches are interested in a range of affective factors more closely linked to personal motivations and job satisfaction. Our approach is to appreciate the different perspectives, but to argue that a sharp distinction between the two is unhelpful. Labour markets are not shaped only by questions of pay, and supply-side factors reflect a complex mix of financial and non-pecuniary factors (Chevalier & Dolton, 2004).

Here we outline a basic conceptual framework for analysing the attractiveness of the teaching profession, taking the labour market as its starting point.

2.1. The teachers' labour market: demand-side factors

In all the countries represented in this study, public education systems are the dominant form of educational provision in the school system, with governments (at national and/or local levels) managing schools and having responsibility for ensuring an adequate supply of school places relative to the numbers of students. This means that the demand for teachers derives largely from public sector sources, and can be identified as depending on:

- **Demographic factors.** The number of students in the school system, and the associated trends over time, can be identified as the single most important factor in determining the demand for teachers. These trends can be significant in scale and vary considerably between countries. For example, between 2013 and 2018, trends in secondary school pupil numbers across Europe varied between a decline of 18% and an increase of 28%.
- **Public investment commitments.** Demand for teachers is in part a function of the resources available to invest in education. This was clearly exposed following the economic crisis, when investment levels in education decreased dramatically across Europe, often with a linked impact on the demand for teachers. However, it is also important to highlight the significant differences in public investment levels in education that exist between European countries, ranging, for example, from 3.1% to 7.2% of GDP in 2020 (EU average = 5.0%) (Eurostat, 2022).

- **National education policy priorities.** These may be linked to both of the above factors, but also need to be considered separately. For example, a government commitment to decrease class size limits, or to expand a particular sector of the education system, need not be accompanied by a corresponding change in investment levels, but will inevitably impact the demand for teachers.

Finally, in addition to these internal factors (i.e., those generated within the national public education system), it is important to recognise that demand can also be generated from elsewhere. For example, an expansion of the private sector in a country may generate demand that draws teachers away from the public system. Similarly, it may be the case that demand emerges from outside the national system (i.e., from other countries). Several Eastern European countries have experienced an outflow of qualified teachers who have found work elsewhere in the European Union (EU), while the rapid expansion of the international schools market (in the Middle East and South East Asia principally) has also generated demand for European teachers (Brummitt, 2007; Brummitt & Keeling, 2013).

2.2. The teachers' labour market: supply-side factors

A very wide range of factors impact the willingness and ability of an individual to present themselves for a career in teaching or, even, a particular teaching position/post. Before identifying a range of factors associated with teacher supply, it is important to highlight some key issues relating to the labour market. First and foremost, teacher supply is both a quantitative and qualitative issue; that is, adequate supply requires sufficient numbers of *appropriately qualified* personnel. Linked to this factor is the notion of labour market lags, whereby many measures intended to increase the supply of teachers may take several years to generate the desired results. For example, an expansion of teacher education programmes will lead to an increase in supply, but this may take several years to materialise in terms of teacher numbers. It may also prove ineffective if other policies, such as relative pay levels, work in an opposite direction.

A key factor to acknowledge is that teacher supply is a composite of two elements: recruitment *and* retention. The former refers to those willing to present themselves for work as a teacher, firstly, by securing the necessary qualifications and, then, seeking employment as a teacher. The second relates to teachers' willingness, or otherwise, to remain in the job. These may be two sides of the same coin, but they present quite different issues and they may require quite different policy responses. It is important to note for example that a particular country may have no recruitment problems of note, but may experience significant retention challenges. Policy options would need to be framed accordingly.

The final point to make is that the attractiveness of teaching as a career, or of a particular post within a career, is always a relative concept. Attractiveness can only be judged relative to other possibilities, and teaching as a profession must compete against a great number of alternative occupations in order to attract and retain the required personnel.

Given the above, and drawing on a range of published sources that investigate teacher supply, the following factors can be identified in relevant research literature as impacting the supply side of the teachers' labour market. Later in this report, we discuss these issues, and their significance for teacher supply, in more detail:

- Pay – pecuniary reward
- The nature of the work – including, for example, the balance between teaching and administration
- Public perception/societal status – including the role of media and policy representation
- Pupil behaviour and standards of discipline (real and perceived)
- Job security – including the prevalence of precarious contracts
- Access to professional development – including initial teacher education, induction and on-going professional development
- Collaborative work cultures
- Professional autonomy and the space to exercise professional judgement – scope for creativity, but also the absence of prescriptive practices
- Classroom conditions – including class size, but also wider issues of equipment and infrastructure
- Quality of school leadership – their capacity to support and develop teachers in their work
- Self-efficacy – teachers' own self-confidence in their ability to undertake the work confidently and effectively

2.3. The teaching workforce in Europe: an assessment of teacher supply issues

Education is a labour-intensive occupational sector, in which the costs of employing staff account for a significant proportion of the total costs in the sector – typically, 65% of educational expenditure is on personnel (Eurostat 2022). Given this condition, and the size of the education sector generally, it follows that education systems typically employ large numbers of personnel in relative terms, and also need to recruit a significant proportion of graduates. In 2017, across Europe, the following numbers of personnel (see Table 1) were employed in different education sectors:

Table. 1. Number of teaching personnel by education sector in Europe 2017

Sector	Millions
Pre-primary	1.5
Primary	2.1
Secondary	3.6
Post-secondary (ISCED 4)	0.1
Tertiary (ISCED 5-8)	1.5

(Source: European Commission, 2019a)

One of the most striking features of the education workforce is the extent to which it is gendered, with a significant majority of staff being women (see Table 2). Typically, the younger the age range of students, then the higher the proportion of women teachers.

Table 2. Percentage of women teachers by education sector in the European Union 2017

Sector	Percentage
Pre-primary	95.7%
Primary	85.5%
Secondary	64.7%

(Source: European Commission, 2019a)

In the 2019 Education and Training Monitor, this pattern is explained by the relatively low attractiveness of the profession, low levels of pay and a popular perception that education is “women’s work”, while recognising that these stereotypes are more pervasive in early years and primary education (European Commission, 2019a; Sullivan et al., 2022). These are clearly complex issues, but understanding the importance of the gender balance in the education workforce, and the nature of teaching as a profession dominated by women, is critical (Acker, 2013). We discuss these issues later in the report because there is no doubt that the gendered nature of teaching – and exploration of this from a sociological and historical perspective – is central to understanding questions of teacher supply (Cochran-Smith, 2006). Indeed, it is important to recognise that some aspects of teaching as work (for instance, a perception that the teachers’ working day is compatible with caring and parenting roles) are shifting, and long-established perceptions of its advantages relative to other occupations may be diminishing, thus exacerbating supply-side problems.

Another important aspect of the teacher workforce is its ageing population. Across Europe, there is a general recognition that teachers are getting older with the consequence that, in relatively few years, the numbers exiting the profession due to retirement will increase considerably, and the need to accelerate recruitment will inevitably follow (it is estimated that several countries will have to replace 1/3 of their teachers in the next decade, rising to as much as 50% in some countries) (European Commission/EACEA/Eurydice, 2021a).

In 2017, and as reported in the 2019 Education and Training Monitor, 32.8% of primary teachers and 39% of secondary teachers in Europe were aged over 50, with the figure for the primary sector exceeding 40% in Bulgaria, Czechia, Estonia, Greece, Italy, and Lithuania. Four countries (Estonia, Germany, Italy and Sweden) had more than 13% of primary teachers aged over 60. Corresponding figures for secondary education indicated that Austria, Bulgaria, Czechia, Estonia, Finland, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Netherlands, Portugal and Sweden had more than 40% of teaching personnel aged over 50 (European Commission, 2019a).

Very few countries had the reverse experience. For example, Malta and the United Kingdom both reported that nearly 30% of teachers were aged under 30 years in the primary sector and over 20% of teachers were in this age group in the secondary sector. At first sight, this may appear to be an advantageous situation as it avoids the rapid increase in retirements that many countries will experience but, in reality, it could simply reflect a different set of problems. For example, the United Kingdom has a particular issue with teacher attrition and, therefore, the high proportion of young teachers actually masks the serious problems that schools face in retaining trained, qualified and experienced teachers (Worth & Faulkner-Ellis, 2022). The consequences are significant inefficiencies in the system as schools lose expertise, recruitment is costly, and investment in teacher training is wasted.

2.4. Teacher supply: an assessment

Our assessment of the evidence thus far is that teacher supply has often been a problem in the sense that many education systems function, and have functioned, with on-going supply-side problems and the recruitment and retention of adequate numbers of teachers has been of significant policy concern. However, that situation has deteriorated and is very likely to deteriorate considerably in the future. Some of these trends can be attributed to economic and related labour-market cycles whereby situations fluctuate over time and supply side problems improve and worsen. However, there is also a prospect that deep trends in work and employment, rather than short-term economic cycles, may have a long-term impact on teacher supply problems – and require longer-term and more radical solutions. These issues are discussed later in the report, but here we set out the current situation relating to teacher supply and the existence of teacher shortages.

As indicated previously, teacher supply issues need to be viewed from both a recruitment *and* retention perspective. For example, the 2021 Eurydice report on teacher supply in the lower secondary sector in 2019/20 highlighted no fewer than 27 jurisdictions with problems of teacher shortage, combined with a further six countries that were simultaneously experiencing teacher shortages and problems of over-supply (for example, having a surplus of teachers in some subject areas, but shortages of teachers in other subject areas) (see Table 3). Only three countries were identified as only have problems of ‘over-supply’.

Table 3. Teacher shortages in lower secondary education in Europe 2019/2020

Problem	Country
Shortage	BEde, IE, HR, RO, UK-WLS, AL, MK, FR, UK-SCT, NO, DE, LV, LU, NL, CZ, AT, PL, CH, BG, EE, HU, SE, IS, BEfr, BEnl, DK, UK-ENG
Shortage + surplus	LI, EL, ES, IT, LT, PT
Surplus	CY, TR, UK-NIR

(Source: European Commission/EACEA/Eurydice, 2021a)

Data published in the OECD 2018 TALIS reports (based on 23 EU Member States) indicated that an average of 24.6% of school principals reported problems with teacher shortages sufficient to impact the quality of education provision. Of these 23 countries, 11 reported a figure in excess of 20%, and four countries reported figures in excess of one-third of respondents (Belgium 46.5%, Italy 41.1%, UK-Eng 37.6% and France 36.2%) (OECD, 2019a, 2020).

Moreover, what emerges clearly from the data is that there are often significant within-country variations, with shortages being experienced more acutely in particular geographical areas (high cost urban areas, socially deprived communities and remote rural communities), across some subject disciplines (typically STEM subjects, but not exclusively) and among teachers with specific specialisms (most obviously special needs expertise, but also working with children with additional language needs). This can mean it is not always appropriate to refer to the labour market for teachers, but rather a set of “micro-markets” defined by geography, sector and subject discipline (Chevalier & Dolton, 2004).

Furthermore, when assessing the teaching workforce, it is important to look at the data within the global figures, rather than only look the aggregate figures of those in work or not in work. There are, for example, significant differences within the teaching workforce, and across countries, that can have an appreciable impact on teacher supply and the relative attractiveness of the profession. Many of these differences reveal inequalities in the labour market that point to the presence of structural and systematic forms of discrimination. For example, it is well understood that levels of pay in the teaching profession in many countries are not attractive when compared to average graduate-level earnings, but this situation is compounded for women teachers, and others (black and minority ethnic teachers, migrant teachers) who consistently receive lower levels of pay and poorer working conditions than their peers (Education Support, 2023). Young teachers and new entrants to the profession (not necessarily the same thing) also experience disadvantage in the labour market as the evidence clearly demonstrates that early career teachers are more likely to be located in schools in socially disadvantaged communities or in classes with high levels of social need (this is evidenced in the 2018 TALIS study and numerous Education and Training Monitor country reports). The paradox is that those who face the most challenging work contexts are often simultaneously those with the least experience.

These teachers are also the most likely to be employed on a fixed term contract. Across Europe, the 2019 Education and Training Monitor reported that 80% of teachers are on permanent contracts; however, one fifth are employed on some form of precarious contract, with the distribution skewed to those who experience the most discrimination in the labour market. For example, one third of teachers in Europe under 35 years are on fixed-term contracts, but women and black, minority ethnic and migrant teachers are also more likely to be on such contracts. The incidence of these contracts is also uneven across Europe, with their prevalence being much higher in some countries. Austria, Belgium (French speaking), Italy, Portugal, Romania and Spain all reported over 25% of lower secondary teachers on such contracts, with Italy and Portugal reporting more than 80% of 35-year-olds in this situation. The obvious risk for teacher supply is that those on temporary contracts experience greater stress, have lower levels of self-efficacy (closely linked to job satisfaction), are less likely to receive professional development support and, therefore, are likely to have a weaker

attachment to the profession. They are more likely to quit the profession because this is when the opportunity cost of a career change (or a move to teach out-of-country) is at its lowest (European Commission, 2019a).

The problem of quitting, and when this is most likely to happen, draws attention to the need to focus not only on recruitment but on retention because, in many systems, the problem of attractiveness is experienced as a difficulty retaining teachers who have already been attracted to the profession and who have qualified as teachers (see Table 4). Within this picture, the balance between recruitment and retention problems also begins to emerge more clearly.

Table 4. Most significant problems associated with teacher recruitment and retention in Europe

Problem	Country
Initial Teacher Education (ITE) shortages (low applications and/or high dropout)	FR, UK-SCT, NO, DE, LV, LU, NL, LT, PT, RS, MT
High teacher exit	BG, LI
High teacher exit and ITE shortages	EE, HU, BE, IS, Befr, BEnl, DK, UK-ENG
An ageing teacher population	DE, LV, LU, NL, CZ, AT, PL, CH, BG, EE, HU, SE, IS, LI, EL, ES, IT, LT, PT

(Source: European Commission/EACEA/Eurydice, 2021a)

2.5. Factors impacting teacher supply

Entrance to the profession and initial teacher education

When considering the relationship between entry into the teaching profession and questions of teacher supply, two related elements need to be considered: first, the nature of the pathway to qualified teacher status (the route into teaching) and, second, the pool of potential applicants (broadly, the range of people both able and willing to meet entry requirements). Both of these factors in turn have a significant potential impact on the quality of qualified teachers.

When assessing teacher education, it is useful to make a number of distinctions. For example, teacher education programmes have traditionally been divided between those that run concurrently (where students develop both subject and pedagogical expertise simultaneously as part of a single programme) and those that are described as consecutive (when students typically complete a discipline-specific qualification followed by a programme focused on the development of pedagogical skills and pedagogical content knowledge). More recently, there

has been an increase in “alternative routes” which may try to expedite the training process and/or include more ‘on-the-job’ training. Some of these alternative routes are aimed at traditional university graduates, but others have focused on recruiting mature entrants and “career switchers” (who transition into teaching from other professions).

Alongside the above distinction, it is also useful to distinguish between systems that require a Bachelor’s qualification and those that require a Master’s qualification for application. In some countries, both these requirements can co-exist with different levels of award required by different education sectors.

Finally, it is useful to distinguish between routes into teaching that require only the completion of an appropriate programme of study and those that may impose an additional requirement such as the passing of a competitive test or the satisfactory completion of an induction period (within the EU, education systems are divided roughly equally between these two types).

Understanding these differences is important because the issues identified clearly form part of the complex decision-making processes that contribute to career planning. Costs of the programme of study (time, financial – both explicit and hidden) need to be evaluated against potential benefits of teaching (access to a job and its relative rewards) and the potential benefits of alternative careers.

Typically and traditionally, the costs of training to become a member of the teaching profession are quite high (most obviously, in terms of length of study but, also, financially, in several instances) and this may have significant implications for teacher supply. Uncoupling this discussion for a moment from potential rewards (does the investment in training result in securing a job that offers a high level of reward?), it is important to identify the benefits of a rigorous programme of high-quality teacher education. We are not suggesting that there is a simple relationship between the length of a teacher education programme, or whether it stipulates a particular level of academic achievement, because the link is complex. Not all teacher education programmes necessarily provide high-quality teacher preparation (OECD, 2005). However, there is robust evidence of a relationship between the provision of high-quality teacher education programmes and a corresponding level of teacher quality. In essence, high-quality teacher education is essential to high-quality teaching. Moreover, this does not only relate to the quality of teaching but contributes to higher levels of teacher self-efficacy, which in turn contributes to increased retention. In summary, new entrants to teaching who feel confident about their professional skills are both more likely to perform effectively and more likely to stay in the profession. Poor preparation for a demanding job is more likely to lead to attrition (Podolsky et al., 2017).

Finally, when considering traditional routes into teaching, it is important avoid a simple claim that demanding professional training is a barrier to entry, and that lowering the requirements for entry will increase supply. It is possible to speculate that potential applicants associate rigorous training and high entry requirements with high status, and this in turn increases interest, with the reverse also applying – low entry requirements are associated with low status and/or low potential rewards and so, paradoxically, making entry easier may diminish supply (in particular of higher-achieving applicants).

Many countries across Europe, and beyond, have explored alternative pathways into the teaching profession in the expectation that this can increase both the supply and diversity of potential entrants. These alternative pathways assume many forms, with some representing quite modest changes, and others quite radical. In this analysis, we distinguish between alternative pathways that focus on the *diversification* of teacher training (broadly requiring the same standards of attainment of applicants and completers) and *de-regulation* (actively reducing entry requirements in order to lower barriers to entry and increase supply). In practice, ensuring a tidy distinction between these typologies is not easy.

Several European countries have introduced shortened teacher-training programmes for those who possess relevant qualifications and experience, while others have introduced routes into teaching that are much more employment-based with participants learning “on-the-job”. These may be based in a teacher training institution with a substantial work placement or they may be based in the workplace with some element of input from a teacher training institution (European Commission/EACEA/Eurydice, 2021a).

One of the largest alternative pathway programmes, with a reach across Europe and, indeed, globally, is the *Teach For All* initiative. This programme seeks to recruit high-achieving graduates to work in socially disadvantaged schools. It is controversial because its training programmes are typically much shorter than traditional routes, and there is often an expectation that many participants will move on in due course to work outside teaching. *Teach For All* currently operates in 60 countries, including Austria, Belgium, Bulgaria, Denmark, France, Germany, Italy, Poland, Portugal, Romania, Slovakia, Sweden and the UK. Evaluating its impact on teacher quality and student outcomes is notoriously complex, not least because aspects of its operation can have unintended consequences elsewhere in a system (see Thomas et al., 2021).

Podolsky et al. (2017) recognise that providing fast track routes into teaching may have obvious attractions to policymakers and applicants, but that poor or insufficient training can not only impact quality but also prove inefficient when underprepared staff quit prematurely:

In spite of the benefits of high-quality teacher preparation, growing numbers of people are entering the profession before having completed – or sometimes even begun – their training. Given the rising costs of higher education and limited access to financial aid, prospective teachers have strong incentives to pursue emergency credentials and other alternative routes to a salaried position, often bypassing university based training routes altogether. However, while this may offer a relatively inexpensive way to start one’s career, underprepared teachers tend to struggle in the classroom and exit the profession quickly (p.30).

One claimed advantage for alternative pathways is that they are more attractive to mature entrants into teaching and “career switchers”. This is because the costs of training may be reduced (because programmes are shorter or “on-the-job”) and, hence, the opportunity costs of changing occupation may be lowered.

More generally, it is difficult to establish the size and significance of the mature entrant population in teaching, and the extent to which this may contribute to addressing teacher

shortages. It does appear that mature entrants are an important, and growing, component of the teacher supply sector. There are a range of reasons provided for wanting to switch careers but most common is a desire to work in a job with a focus on (young) people and based on a different set of objectives than those that dominate the corporate sector (Wilkins & Comber, 2015). Mature entrants often increase diversity, particularly in terms of race and ethnicity, and can bring a range of skills and experiences that can have great utility in a school context. However, the transition can be difficult (Wilson & Deaney, 2010) and it is not clear that the pool of potential career switchers is a large one with the potential to make a sizeable contribution to tackling teacher supply problems.

A range of schemes exist to support mature entrants to make the change to teaching, and although these are valuable and perform good work, they do not attract large numbers of new entrants. The opportunity costs involved in retraining, and, then, commencing work on considerably lower pay, are significant and this means that the potential of this source of labour supply is likely to be limited.

Support for teachers when in service – induction and professional development

It is widely recognised that providing professional development opportunities that are appropriate to teachers at their career stage, and which can help teachers manage complex and changing situations, can make an important contribution to enhancing teacher self-efficacy and job satisfaction (Toropova et al., 2021), although the picture is mixed (Smet, 2022). Where there is evidence of a positive relationship, there is often a corresponding impact on teacher retention. In the introduction to the 2019 Education Training Monitor Commissioner, Tibor Navracsics went so far as to assert: “Most importantly, teachers want more and better training to face the social and technological challenges they are confronted with” (European Commission, 2019a, p. 3). We would question whether this is the “most important” reason why teachers seek professional development – and the evidence base for that claim – but it is clearly a very significant factor. However, it is also important to note that access to support such as professional development does not always, of itself, lead to the improved recruitment and retention of teachers. The issue has both qualitative and quantitative dimensions.

That said, there is an increasing recognition that support for teachers in the early stages of their careers can have a significant impact on self-efficacy, and in turn retention (Totterdell et al., 2004). As a result, a clear majority of European countries have some form of induction for new entrants to teaching with most of these being a compulsory requirement, and some being voluntary. The form that such induction takes is also varied with some inductions forming a part of the initial teacher education programme and some being part of the qualifying period (alongside a probationary period), while, in others, induction follows from successful qualification. Formal induction periods are typically for one year, but they vary between 6 and 24 months.

Despite the importance attached to induction processes, politically and rhetorically, in the 2018 TALIS survey, only 43.6% of new entrants reported that they had participated in identifiable induction activities, suggesting that there is a significant implementation gap

between the policy as stated officially, and the actual experience of new entrants and young teachers. Six countries were above this average figure (the highest recorded score was 72%) but, in another six countries, less than 25% of new entrants reported that they were part of an induction process. It is significant to note that where figures were very low, this often corresponded with a high incidence of fixed-term contracts. For example, in Italy and Spain, a large majority of young staff are on fixed-term contracts (78% and 70.3% respectively) and induction is not available to these staff, highlighting a much wider issue that those in precarious employment contexts (and therefore with the weakest links to the labour market) often receive the least support, potentially making them more vulnerable to quitting for better opportunities elsewhere.

Perhaps unsurprisingly, participation rates in induction processes are lower in systems where involvement is recommended and not required.

The types of support provided for new entrants to the teaching profession varies between national systems, with the most common form of support being the provision of some form of mentoring, followed by access to training courses, seminars etc. About one-third of induction programmes offer reduced workloads in some form and this can make an important difference for new entrants as evidence points to a relationship between reduced contact time, increased time for reflection and higher levels of self-efficacy and job satisfaction (OECD, 2019a, 2020).

The 2021 Eurydice Report concludes that “despite the political aspirations and the legislation in force, teachers’ participation in induction remains low” (European Commission/EACEA/Eurydice, 2021a, p.78). Given the recognised value of supporting teachers in their early years, not least because this is when they are most vulnerable to quitting, then the conclusion is significant.

On-going professional learning and development

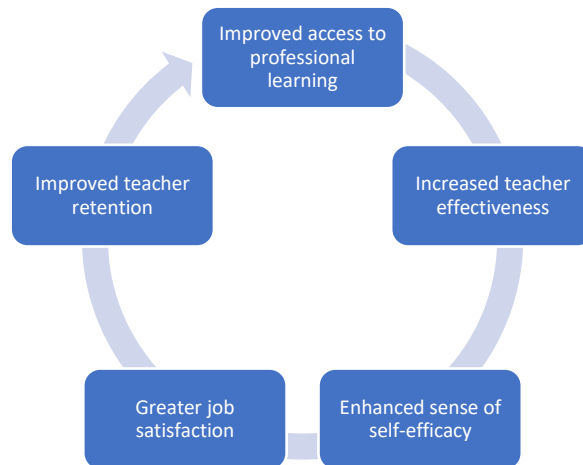
The case for professional development contributing to enhanced teacher recruitment, but, more likely, retention, rests on a number of assumptions:

- Professional learning leads to an enhanced sense of self-efficacy and, therefore, job satisfaction.
- Professional learning can help teachers tackle professional challenges, such as the increased use of technology in education, and, therefore, potentially, diminish stress.
- Professional learning can enrich one’s experience of work (mental challenge, professional collaboration) and this can have a positive impact on perceptions of work.
- Professional learning is associated with, and expected, in professions and the provision of high-quality professional development may enhance the image of teaching as a profession.

These are all important points, but, here, we would wish to highlight that the above analysis is based on an assumption of a type of virtuous circle (see Figure 1) in which access to

professional development, leads to increased teacher effectiveness, an enhanced sense of self-efficacy and greater job satisfaction, which in turn leads to improved retention.

Figure 1. Virtuous circle of professional development



This may well be the case, and is clearly the aspiration, but it not only assumes that engagement in professional development has a positive impact on practice but that teachers believe in the purpose of the professional learning and are committed to the intended outcomes. Therefore, it is not simply sufficient for teachers to have access to professional development; they must also believe that it has benefits in terms of both impact (it makes a difference) and value (it makes a difference they believe in). It follows that, for teachers to have these positive experiences, they are likely to make a significant contribution to determining the form and purpose of the professional learning in which they are engaged. If teachers experience professional development as managerial and transmissive, they may be less likely to commit to it (Kennedy, 2005).

TALIS data indicated that a high proportion of teachers (92.5%) had experienced some form of professional learning in the previous twelve months, although, if a broad definition of professional learning is applied, this figure may not be very revealing. Certainly, the data suggest that teachers engage in various forms of professional learning and development. Many teachers indicated that they participated in a range of different type of activities and those most likely to agree that the professional learning had a positive impact on their practice were more likely to have participated in a range of activities (OECD, 2019a, 2020). It is the case, however, that the type of professional learning most frequently experienced was professional, in-person courses, and it is worth recognising that this type of “short and sharp” provision is often considered least effective in terms of impacting practice, focused as it often is on a transmission model of professional learning (Guskey, 2002).

As with initial teacher education, it is to be expected that there is a significant degree of variation across Europe. One key difference is whether participation in professional

development can be considered as a professional duty or optional, with a large majority of countries (38 out of 43) expecting some form of participation in professional development as a professional requirement and the rest making this optional. In nearly half the countries in the study (18 out of 43), participation was mandatory (a minimum number of hours of professional learning are required) and, in a further 7 countries, access to professional learning is an entitlement (teachers can expect to have a minimum amount of professional learning). In 16 of the 43 countries, it was indicated that participation in professional learning was linked to career progression and, therefore, potentially, pay (European Commission/EACEA/Eurydice, 2021a).

Whether access to professional learning is a professional duty or optional, teachers indicate that the single biggest obstacle to professional learning is the lack of time and, more accurately, the conflict that emerges with work commitments (average 52.9%). Collective agreements will often specify how professional learning expectations are factored into work schedules, but these can be subject to a degree of “drift” as experience in practice may differ from the expectations of a formal agreement. In addition to these arrangements, a significant number of European countries make periods of paid study leave of varying length available for teachers (from less than a week to several months). Less than 25% of countries and regions have no such arrangements, with the 10 areas identified featuring the Flemish, French and German communities of Belgium and all four nations of the United Kingdom. See’s (2022) study of teacher shortages identifies periods of study leave as one factor that can make a meaningful contribution to establishing working conditions that support teacher retention.

As has been indicated above, suggestions that access to professional development is linked to teacher retention can be quite common, although evidence is at best indirect. Support for classroom practice could be expected to enhance the working environment and, hence, the factors (teacher self-efficacy, job satisfaction) that contribute to teacher retention, but a number of factors can complicate this relationship.

Working conditions

The term “working conditions” must inevitably include a wide range of issues that materially impact the quality of working life and, therefore, act as important factors when teachers, and potential teachers, assess the attractiveness of teaching as a career choice. The most obvious issue is that of pay (and the linked issue of pensions), but working conditions must also relate to both the quantitative and qualitative aspects of work. The former relates to job content (hours worked, intensity exerted within hours worked, nature of activities undertaken) and the latter may refer more widely to job control (discretion over the core activity of teaching). This section provides an overview of all of these issues and highlights the potential impact on teacher supply.

It is widely recognised that financial reward is one of several issues that attracts teachers into teaching, but that this must be seen alongside a range of other factors. However, this is not by any means the same as asserting that pay is not an important issue for teachers – to both attract and retain. The issue is summarised in the following terms when the 2021 Eurydice report asserts:

... remuneration has an important role to play in making any profession appealing
... 'competitive teacher salaries are considered as essential for raising the quality of the teacher workforce'. Yet, teachers often earn less than other tertiary-educated workers. (European Commission/EACEA/Eurydice, 2021a, p. 45)

The reference in the quote above is to the 2019 Education and Training Monitor, which further makes the point:

Strong evidence exists on the impact of teacher salaries on recruitment, retention and pupils' outcomes. Higher salaries are associated with positive impacts on the recruitment and retention of better qualified teachers. Levels of teacher salaries are positively correlated with pupils' academic performance. (European Commission, 2019a, p.40)

Evaluating salaries, and their relative merits and value across countries is complex because this requires an assessment of salary levels, rates of salary progression over a career, and the extent to which salaries may be enhanced through supplements for additional responsibilities, qualifications, performance or other factors.

The 2021 Eurydice Report notes that only a minority (37.8%) of teachers across Europe (based on EU nations participating in TALIS 2018) were satisfied with their levels of pay, and that satisfaction levels varied enormously - less than 10% of teachers in Portugal and Iceland expressing satisfaction, compared to over 70% in Austria and Belgium (Flemish community). The report notes that there are significant differences between Eastern Europe and the rest of Europe, with salary levels in Eastern Europe being much lower. In the Eurydice report, it is argued that evaluating teacher salaries only becomes meaningful when compared against average per capita GDP in the specific country and that, on this basis, Slovenia and Romania are the only Eastern European countries where teacher salaries were above the average GDP per capita (in Czechia, the figure is 25% below the average). The report concludes that teacher dissatisfaction with salaries is most acute in countries where salaries are below average per capita GDP levels in that country, or where pay has stagnated badly since the 2008 economic crisis (European Commission/EACEA/Eurydice, 2021a).

The extent to which teachers may be satisfied with their pay can in part be linked to pay progression over time. There are significant differences between levels of pay progression from the lowest pay point on a pay spine to the highest (3% difference in Lithuania through to 143% difference in Romania), and also in the length of time it can take to reach the highest point on the pay spine (an average of 28 years, but, again, with wide variation). The report also notes that pay varies by sector and that lower secondary teachers are typically paid more than primary colleagues, while teachers in upper secondary are paid more than their lower secondary counterparts. Given the extent to which gender differences prevail between sectors, it may be argued that these differences both reflect, and reinforce, structural pay inequalities (European Commission/EACEA/Eurydice, 2021a).

The data provided in this report highlight many of the problems with teacher pay, and how these can feed into supply-side issues; however, we would argue that rather than compare teacher pay to average GDP per capital (useful when comparing purchasing power parity), it can be more useful to compare teacher salaries to that of average graduate earnings in the

country as these are the occupations that compete with teaching for graduate talent. On this basis, the situation can appear more acute with only three countries (Luxembourg, Greece and Portugal) indicating that all sectors of school education exceed graduate average earnings, and a further four countries (Latvia, Belgium – Flemish and French communities – , Finland and Germany) exceeding the graduate average earnings for secondary teachers. In all other EU countries, teacher salaries were either at, or below, average graduate earnings (European Commission/EACEA/Eurydice, 2021a).

This is inevitably a major policy challenge. Teaching accounts for a relatively high demand for graduate labour because it is a large, labour-intensive occupational sector. In countries with an ageing teacher population, the demand for new recruits is likely to rise appreciably in the next decade. However, teaching as a career choice must compete with graduate occupations that, typically (on average), pay higher salaries.

One option to address teacher shortages is to link pay increases to particular “micro-markets”. This recognises that teacher shortages may be concentrated in geographical areas or in relation to particular aspects of the education system. These can take many forms, including supplements, allowances, and forms of performance-related pay. See’s study highlights the importance of pay in relation to teacher recruitment and retention (as one of many factors), but the evidence does not point to targeted supplements having significant and/or long-term impact:

Money is an attractor, but its impact is more complex. There is no evidence that offering monetary incentives for shortage subjects would encourage more people to teach these subjects, nor did it encourage people to switch to teach these subjects. To persuade teachers to teach in challenging schools, we would need to pay them substantially more to compensate for factors that might make the schools less attractive. (See, 2022)

It is also recognised that such pay reforms can be both inefficient and have related unintended consequences, and so See concludes that “pay flexibilities” are unlikely to make a serious impact on teacher shortages.

Alongside data relating to pay, it is important to evaluate data relating to workload, although this can be particularly difficult to compare across countries as a range of ways exist to set out teachers’ contractual requirement, and there is not always a clear relationship between the numbers of hours specified in a contract, and the number of hours actually worked. TALIS data indicated that the single most significant aspect of teachers’ work is classroom instruction, although, within the EU, this still accounts for less than half of teachers’ time (average equals 46.8%). Aside from time devoted to direct classroom instruction, on average, further work is divided equally between work directly linked to classroom instruction (planning and preparation, marking and assessment of student work) and time devoted to more indirect activities such as contact with parents and external agencies, professional development and general administration. How this work is regulated also varies between jurisdictions, with working hours specified in a range of different ways. In some countries, teachers’ work commitments are only specified in relation to contact hours with students (literally, “teaching time”); in other cases, working time is specified in relation to the number

of days/hours at school, and, in yet other instances, time is specified in terms of a total working time.

Studies of teacher workload have pointed to increases over time (e.g., OECD, 2019a, 2020) and this analysis is often linked to increasing complexity in the job and also increasing demands, often driven by increasing expectations of accountability. However, it is not always clear whether the issue is principally an extensification of teachers' workload (working more hours) or an intensification of workload (how effort expended within the specified hours), or some combination of the two.

Teacher stress

Pressures experienced by employees at work are often assessed in terms of stress, although references to stress often refer to an amalgam of a range of related concepts that also include job satisfaction and burnout. In recent years, there has been increasing interest in these aspects of teachers' work and there is an increasing evidence base, including some studies that allow for cross-European study and comparison. The concerns with stress may be obvious, but it is important to rehearse why the issue is important. There is an obvious and well understood relationship between teacher well-being and teacher effectiveness (Duckworth et al., 2009), with effectiveness impeded when teachers experience levels of pressure beyond those that can be considered manageable (a generally accepted definition of stress). However, there is also a recognised relationship with teacher supply, with teachers reporting high levels of stress to be much more vulnerable to quitting. There is less evidence to suggest that a perception of teaching as a high-stress occupation may deter potential new entrants, hence impacting recruitment as well as retention, but it is not unreasonable to speculate the existence of such a relationship. Perryman and Calvert's (2020) study, for example, asserted that new entrants were aware that teaching was a demanding job with long working hours, but their experience in work was that these pressures were still greater than they had anticipated.

The 2018 TALIS study provided evidence of stress levels in teaching (OECD, 2019a, 2020) and, when European countries were extrapolated from the wider data set, the 2021 Eurydice report concluded that stress levels among teachers in Europe are "common" (reported by nearly half of all teachers), although the extent to which they were experienced and reported varied considerably. For example, nearly 90% of teachers in Portugal identified stress as a problem, but the equivalent figure in Turkey and Romania was just over 20% (European Commission/EACEA/Eurydice, 2021a).

Again, when EU countries are extrapolated from the TALIS data, then it is possible to further identify the key sources of stress (see Table 5).

Table 5. Teachers' sources of stress

Source of stress	% reporting problem
Having too much administrative work to do	53.2
Having too much marking	48.6
Being held responsible for students' achievement	47.3
Keeping up with changing requirements from authorities	45.6
Maintaining classroom discipline	41.7
Having too much preparation	36.7
Addressing parent or guardian concerns	36.5
Modifying lessons for students with special needs	35.3
Having too many lessons to teach	30.4
Having extra duties due to absent teachers	22.8
Being intimidated or verbally abused by students	14.1

(Source: European Commission/EACEA/Eurydice, 2021a)

This simple summary of stressors identifies a number of significant results (notwithstanding that variation between countries must be acknowledged), perhaps, most notably, that higher scoring factors are not as “student-facing” as several issues that generate lower scores. For example, higher scoring factors tend to be associated with systemic changes and organisational expectations, rather than being directly associated with managing student instruction and behaviour.

These conclusions are reinforced through a more nuanced analysis in the 2021 Eurydice report when the study distinguishes between a range of systemic factors (including career models, the role of appraisal and the experience of professional development) and working context (including working conditions, school and classroom climate, and self-perception of competence). In relation to systemic factors, the report's authors conclude that career models (single-level or multi-level) have no statistically significant impact on teachers' stress levels, but that both appraisal and professional development had the potential to impact stress levels. Specifically, where appraisal systems form a part of career progression, teachers' score more highly on a stress index, but where professional development is a requirement for career progression, teachers have a lower score on the stress index.

In relation to working context, the report identifies three themes, each with variables within them. These are: working conditions (including working time, years of experience and permanency, or otherwise, of contract); climate (including student behaviour, staff collaboration and professional autonomy); and self-perception (teachers' own assessment of their ability to manage student behaviour and motivate students). Within the working conditions theme, the factor that had the most significant impact on stress was working time, with the report concluding “the more hours teachers work, the more teachers report experiencing stress at work. This is valid in all education systems despite differences in working hours” (European Commission/EACEA/Eurydice, 2021a, p. 149). Evidence relating to length of service and contract permanency was often statistically related but not across all countries in the study. Perhaps counter-intuitively, the study suggests that stress levels are

likely to increase among more experienced staff (longer than five years' service), although this was a statistically significant factor in a minority of countries. More common, in around half of European countries, there was a statistically significant relationship between having a fixed-term contract and a higher score on the stress index.

In relation to school and organisational climate, the relationship between variables and the prevalence of stress was clear cut with statistically significant relationships in all countries in relation to both classroom disruption and staff collaboration (i.e., high levels of student disruption and low levels of staff collaboration), while, in approximately half the countries in the study, there was a clear relationship between low levels of professional autonomy and higher levels of teacher stress.

Finally, when considering self-perception (a teachers' own assessment of their ability to manage student behaviour, student motivation and provide effective teaching), the study identified a statistically significant relationship between the first two factors and stress in a number of countries. Where teachers feel confident to manage student behaviour and student motivation, then stress levels were likely to be lower (a statistically significant relationship in 13 and 15 countries respectively). Interestingly, the study suggested that self-efficacy in relation to instructional ability was not related to stress in a statistically significant relationship at the EU level.

2.6. The attractiveness of the teaching profession: teaching in an age of crises

For much of the last decade and more, discussions about public education, and the challenges for the teaching profession, have taken place against the background of the 2008 economic crisis. It is widely recognised that the huge impact that this had on public investment in many countries impacted the education sector disproportionately (because educational spending is not so obviously recession-related in the way that, for example, social security is). Investment levels in public education were quick to be cut and slow to be restored (Stevenson et al., 2017), with teachers' pay often in the front line when economies were sought. Pay is vulnerable in these circumstances because it is controllable (in contrast to many other commitments) and the impact on expenditure is significant (because salaries are a high proportion of total spending).

More than 10 years after the economic crisis, teachers' pay has often remained at pre-crisis levels in real terms, and has fallen further behind that of other graduate occupations. In practical terms, this has meant that many education systems have been still working with the legacy of the 2008 crisis, and many problems of teacher supply, that have been evident for some years, can readily be traced back to this time.

However, if there was any sense that 10 years after the crisis education systems were beginning to recover in investment terms (Eurostat, 2022), this relative stability was to end abruptly in early 2020 when the Covid-19 pandemic and public health crisis emerged in Europe and spread rapidly. Within weeks, Europe's schools were forced to pivot to online learning, with most students and staff working remotely. In many instances, it remains hard to generalise from the pandemic experience when assessing the impact on teachers and

teacher supply. In one respect, many of the factors that might have negatively impacted teacher recruitment and retention deteriorated rapidly and significantly. Teachers were forced to radically overhaul their pedagogical practice and this impacted workload, self-efficacy and job satisfaction (Klusmann et al., 2022; Milner et al., 2021). In more normal circumstances, these developments may have had a serious impact on both teacher recruitment and retention but, during the pandemic, that was arguably offset by a seriously unpredictable graduate labour market in the private sector. Indeed, for many graduates looking to enter the labour market after completing their studies, the jobs, that they might have expected, simply did not exist. Therefore, and despite the problems previously identified, there was some evidence that recruitment and retention issues in the teaching profession improved rather than deteriorated.

However, in 2023, the situation has now shifted again, dramatically. As economies have opened up post-lockdown, the demand for graduate labour has returned (and, in some cases, accelerated). Teaching once again finds itself in competition for labour with other occupations and the trends experienced pre-pandemic have returned. However, there is also evidence that the situation may have deteriorated further. Specifically:

- Teachers typically worked through the pandemic and lockdowns, often in difficult circumstances. There is evidence that this has contributed to levels of teacher exhaustion and, negatively, to teacher well-being, that may be having long-term impacts (Thompson, 2021). There is certainly evidence that students are experiencing long-term mental health and well-being issues following the Covid-19 lockdowns (Iacobucci, 2022), and that this is increasing the pressures on teachers to provide pastoral support. All these pressures may be contributing to increasing retention problems, in particular, where transitioning into another job may have become easier as economies have opened up.
- There is increasing evidence that one of the long-term consequences of the pandemic on work and employment is that jobs that previously enjoyed little flexibility in terms of time or location of work are beginning to change, in particular, among graduate office-based roles where home-working, and asynchronous working, can be more easily accommodated (McKinsey Global Institute, 2021). While teaching was historically seen to have some advantages, in particular, in relation to combining work and childcare, it may be the case that these relative advantages no longer exist. Indeed, teaching may be seen as comparatively inflexible with the difficulties teachers often experience securing any time off during normal term-time (Green, 2021).
- Following on from the public health crisis, teachers are now experiencing a cost-of-living crisis triggered by the war in Ukraine. This immediately devalues the real value of pay and, for teachers, it may devalue pay relative to other graduate professions, especially in the private sector, where more senior staff (i.e., graduate employees) are more likely to secure inflation-matching pay rises. In contrast, in the public sector, with significant pressure on government spending, securing similar pay rises may be very difficult. These pressures are already visible in terms of increased industrial action, and there is also evidence that teachers are more likely to quit either their job or their teacher training course (e.g., Worth & McLean, 2022).

2.7. Things are not always what they seem: ‘work strain’, job satisfaction and teacher supply

In the above sections, we have identified and discussed a wide range of factors that can impact the supply of teachers, in terms of both recruitment and retention. Here, we analyse in some detail a particular study about teachers in the UK and, specifically, England. There are inevitably a range of context-specific issues, but the wider issues are relevant when seeking to understand teaching as work in its totality. The study provides insights into the relationship between pay and non-pay factors, but also the need to see “workload” as more complex than hours worked. The study is valuable because it draws on a very large data set which allows for the comparison of teachers with other occupations and an assessment of data longitudinally.

Education policy in the UK is the responsibility of individual nations, and so can vary significantly between different jurisdictions. Differences relating to issues of concern in this report can appear substantially different between Scotland, Wales, England and Northern Ireland. In this section, we make reference to England on some specific issues but also draw on UK-wide data.

In the 2019 Education and Training Monitor, attention was drawn to “the high proportion of teachers leaving the profession” in the UK. There were clearly recruitment problems but, of particular concern, were issues of retention, with a high proportion of teachers leaving the profession, particularly in the early years of teaching (20% leave within two years of qualifying and 33% have left within five years). One consequence is a young and relatively inexperienced profession. For example, 85% of primary teachers are aged under 50 (EU average, 68%) and the equivalent figure for the secondary sector is 78% (EU average, 61%) (European Commission, 2019a).

Some of the explanation for these trends can be found in the traditional fields of pay and workload. Pay in the primary sector is 20% below the EU average for those with tertiary education and the equivalent figure in the secondary sector is 10%. In both cases, these figures are slightly below the EU average for the teaching profession. Although pay is only slightly below EU averages for teachers, workload, as measured by working hours, is significantly higher. Teaching time is described as “far above the EU average”, particularly in Scotland, where teaching hours for all sectors were 855 per year, compared to EU averages of 633 hours in upper secondary, 665 hours in lower secondary and 754 hours in lower primary (European Commission, 2019a). In England, TALIS data reported that teachers in lower secondary worked an average 47-hour week, with this figure being the highest among teachers in the EU and 20% above the OECD average (OECD, 2019a, 2020).

One consequence of the above issues is that the 2018 TALIS data reported that teachers in England had the lowest levels of job satisfaction among participating countries in the EU (77.5% of teachers reported being satisfied with their jobs compared to an EU average of 89.5%) (OECD, 2019a, 2020).

Pay and workload are clearly important issues when assessing teacher supply in the UK. Pay is below graduate average earnings and workload issues, in terms of hours worked, are notoriously high. However, Green (2021) argues these issues offer only a partial explanation of developments in the teacher labour market. His argument is that pay and workload may be problematic, but that they have long been problematic and they have not deteriorated in relative terms (i.e., when compared to other professions) in the recent past. However, since 2011, teacher retention *has* deteriorated and, hence, Green argues that the explanation for poor retention rates must involve factors beyond pay and working hours.

Green’s response is to use the UK Skills and Employment Survey relating to work quality that has been completed approximately every five years since 1992. The dataset is considered statistically robust and has the advantage of allowing comparisons over time and across different occupations. According to Green, although the survey covers all workers, “school teachers are covered in sufficient numbers with the statistical power to afford informative estimates of trends in teachers’ job quality” (p. 390). From the data, Green develops ways of measuring four different aspects of *job quality* (defined as “how people’s needs are met through work”, pp. 387-388) which are: work intensity, skills and discretion, pay and prospects, and working time quality (see Table 6).

Table 6. Measurements of teachers’ job quality in England (Green, 2021)

Domain	Focuses on:	Measured by:
Work intensity	Physical and mental input committed to work tasks (not related to number of hours worked)	The Required Work Intensity Index, covering: Self-assessments of effort required in work, the pace of work undertaken and the importance of deadlines
Skills and discretion	The degree of control over work, but also including the training and support to be effective	Assessment of control over work content (deciding approach to task, or what work to undertake), input into workplace decision-making, access to, and quality of, training
Pay and prospects	Levels of current and future pay	Current rates of pay Assessment of job security Expectations of career development
Working time quality	Amount of time physically committed to work	Number of hours worked ‘Scheduling rigidity’ (discretion over when work is undertaken) ‘Time off rigidity’ (ability to take time off work when required).

Green's assessment of the data is that, during the time that the Skills and Employment Surveys have been undertaken, the situation regarding pay and prospects and working time quality has remained largely constant. This is not to make a judgement about whether pay levels or working hours have been acceptable or not, but rather to assert that the relative status of these issues did not change significantly over time. For example, teachers have relatively good job security and this has been maintained over time (with some catching up from other professions). Conversely, teachers have poor scheduling rigidity but this has also traditionally been the case, i.e., there has been no recent decline. Although some factors may have changed, Green argues that they have not changed sufficiently to suggest that "pay/prospects" and "working time quality" have deteriorated during the period in which teacher retention issues have deteriorated. In summary, these factors do not explain why the rate of increase of teachers quitting has accelerated.

By contrast, Green demonstrates that with regard to both work intensity and job skills and discretion, the data do show a deterioration that correlates with worsening teacher retention and that points to a causal relationship. Green makes the point that, from the outset of the study (in 1992), teachers have scored more highly than other professions on work intensity.

No other occupations, for which there is a large enough sample to make the comparison, work as intensively as do teachers: their nearest rivals are health and social services managers and legal professionals.

On one of the indicators of work intensity (self-assessment of effort), teachers' scores have deteriorated markedly and, particularly, between the 2012 and 2017 surveys (coinciding with deteriorating retention rates). For example, 90% of teachers self-assessed that they work "very hard" in 2017, with the equivalent figures for "other professions" being 52%, and "all occupations" being 44%. When teachers were surveyed in 1992, their score was 54%. Green (2021) concludes that "no other large occupation has shown anything like this degree of work intensification" (p. 392).

These data are also mirrored by that relating to task discretion (autonomy relating to task determination and involvement in school decision-making). Green argues that teachers' task discretion has deteriorated in two waves – the first (in the 1990s) coincided with similar trends across all professions and the second (in the 2010s) impacted only teachers. Hence, between 2012 and 2017, all four indicators relating to task discretion declined and the percentage of teachers reporting that they had "a great deal of influence" over how they performed their work fell from 48% in 2012 to 31% in 2017. In a similar way, teachers who reported positively that they felt involved in workplace decision-making fell from 48% in the first survey in 1992 to only 20% by 2017.

Green combines the data on work intensity with that relating to task discretion to generate a score for "work strain". He concludes:

High work strain – the combined indicator of low task discretion and high work intensity – showed a remarkable increase over the long term: the proportion of teachers working under high strain has gone from virtually none in 1992 to 21.3% in 2012 and to 27.3% in 2017. Taken over the whole period, teachers are nearly twice

as likely as other professionals to be working under high strain (16.2% compared with 8.5%). (Green, 2021, p. 393)

We present this study in some detail because it makes an important contribution to the discussion about the attractiveness of the teaching profession. It is a study that is based on UK data and, clearly, must be approached with this caveat. As stated above, education policy in England especially has some clear particularities, and these are reflected in specific recruitment and retention problems (with the latter being an acute system challenge). However, the study does have wider applicability. In particular, we are not arguing that pay and workload issues are not important, but rather we are arguing that addressing recruitment and retention issues requires an assessment of all aspects of teachers' work, including the extent to which teachers feel they have the opportunity (in terms of discretion and time resources) to make judgements that are in the best interests of their students.

3. Retaining good teachers for the right reasons

The report focus thus far has been on current patterns of teacher supply and demand across the European Union and internationally. In terms of the former, the data speak loud and clear; many EU Member States are faced with considerable teacher shortages – whether global or specific to certain subjects, sectors or specialisms. These shortages are not only detrimental to the sustainability of the teaching profession but limit national and local governments’ capacities to provide a quality, inclusive education for all, a key component of the United Nations Sustainable Development Goals and central to efforts to build a European Education Area (European Commission, 2023; United Nations, 2023).

When the “numbers do not add up” – when there are insufficient qualified teachers to meet the demand of students’ current educational needs – national policymakers have tended to prioritise recruitment initiatives in order to attract more candidates to the profession (see, for instance, Ingersoll, 2001). Strategies have included reforms to initial teacher education (e.g., lower entry requirements, alternative preparation or certification pathways for those with prior experience, employment-based teacher training routes for those who want to earn while they learn), increased starting salaries for all newly qualified teachers or those with specific subject specialisms (e.g., science, mathematics, technology) and fast-track routes to management (see Teach for All, 2023; Kelchtermans, 2017). While evaluations are notably limited (see, for instance, IBF Consulting, 2013a, 2013b), it is generally acknowledged that such teacher policies have varying degrees of success. First, lower entry requirements can have implications for the perceived quality and status of both the university programme and profession. Second, despite the popularity of certain alternative routes to teacher certification, graduates of traditional university-based teacher education programmes (Bachelor’s or Master’s) are noted to stay in the profession longer (Carver-Thomas & Darling-Hammond, 2017; Cochran-Smith et al., 2011; Sutchter et al., 2016; Zhang & Zeller, 2016). Finally, despite the implementation of a wide range of pedagogical, professional, and financial incentives to attract new entrants, teacher posts across Europe remain unfilled and students are paying the ultimate price; lessons are being taught by unqualified or non-specialist teachers, learning time is being cut, class sizes are increasing and support for special educational needs is diminishing (Jack & Cocco, 2022).

Reports of a teacher crisis are of great concern to those who work in education and education policy. However, as already noted in this report, the issue of teacher numbers is relative and linked to educational needs within a wider social and economic context (Kelchtermans, 2017). Moreover, it is important to remember that very many teacher education graduates do join the profession each year and a very high percentage of those choose to stay on. For certain scholars then, recruitment initiatives are not the policy panacea; in their view, the major barrier to quality teacher supply is *retention* (Cochran-Smith, 2006; Ingersoll, 2003). Indeed, beyond issues associated with specific subjects or sectors, it has been argued that most teacher shortages are caused by early attrition rather than an insufficient number of candidates entering the profession or major retirements; here, job dissatisfaction and a desire for a “better” job in or outside the field of education are deemed more significant (Ingersoll, 2003, 2004).

Nevertheless, it should not be considered problematic, if certain teachers – those who do not like or are not suited to the job – decide to leave the profession. Retention is not simply about keeping all teachers in the profession for as long as possible; the longest-serving practitioners are not necessarily any more effective than novice teachers (Chiong et al., 2017; Day & Gu, 2009; Day et al., 2007). Indeed, it has been claimed that it is the most “talented” who are most likely to leave (Clandinin et al., 2015; Schaefer et al., 2012; Smith & Ingersoll, 2004) and, while such conclusions contribute to discourses of low teacher quality, which could harm the image and status of the profession further, there is a sense that our understanding of the term “retention” should be more nuanced. In this regard, Kelchtermans (2017) defines teacher retention as “the need to prevent good teachers from leaving their jobs for the wrong reasons” (p.965). To achieve this, it has been argued, retention needs to be seen as a “process”, rather than a result, which requires exploration of the conditions which enable quality teachers to sustain their commitment to quality practices in the profession over time (Day & Gu, 2009). This is especially important if we are to adopt a “development perspective” (Plauborg et al., 2022) to teacher policy.

Why *do* teachers stay?

Research on teacher retention – and specifically *quality* teacher retention – is limited; academic and policy studies tend to focus on the *leavers* – especially those who leave within the first three years of professional practice and for reasons other than retirement – rather than the *stayers* (Booth et al., 2021; Cawte, 2020; Chiong et al., 2017; Day & Gu, 2009; Plauborg et al., 2022). Moreover, most investigations have been conducted in Anglophone countries – principally, the United Kingdom, United States, and Australia – thus, the particularities of the educational system, school context and, therefore, teachers’ working conditions make generalisations somewhat difficult. Despite these limitations, and the fact that teachers’ reasons for leaving can change over time, it can be asserted that teachers’ commitment to stay in the profession is motivated by personal, professional, organisational and policy contexts (Chiong et al., 2017; Day & Gu, 2009).

Retention is a personal issue

Most teachers join and stay in the profession for one major intrinsic reason: to “make a difference”. *Stayers* define this “difference” from an individual and societal perspective. First, teachers are generally motivated to stay in the profession because they want to work with children and young people (Chiong et al., 2017). Moreover, teachers’ perceptions of self-efficacy are often linked to their perceptions of successful teacher-student relations which, ultimately, contribute to their professional identity and job satisfaction (Admiraal et al., 2019). Equally, stayers tend to see their work as socially meaningful; they believe that it makes an important contribution to future societies (Chiong et al., 2017). Beyond these altruistic concerns, teachers enter the profession for intellectual – they enjoy their subject and the pedagogical process – and practical reasons – they believe that the job offers a degree of stability/security and a “family flexible” lifestyle (Cawte, 2020; Chiong et al., 2017). Indeed, in terms of the latter dimension, teachers’ professional trajectories and career motivations can be highly influenced by wider family commitments (Cawte, 2020).

Extrinsic factors – such as salary, job security – are not considered as important initially but can affect why teachers decide to stay. These have been described as “hygiene factors” (Herzberg, 1964); namely, they do not contribute intrinsically to job satisfaction but, when absent, can result in job dissatisfaction. Pay is especially important where the cost of living is high (Barmby, 2006). However, more significantly, teachers today – the majority of whom are women and some of whom are mid-career entrants – have different career and salary expectations to their colleagues of previous generations; at the very least, they want to be compensated appropriately for their work so that they can afford to “buy homes, provide for families, and live reasonably comfortable lives” (Cochran-Smith, 2006, p.9). These extrinsic factors become particularly important when other aspects of their work are threatened, for instance, when increased workload demands and performative work cultures challenge teacher professionalism. This ultimately has implications for policy development. As Day and Gu (2009) note:

Simply adding to those extrinsic factors which attract teachers to stay (e.g., salary) without at the same time reducing the dissatisfiers (e.g., increases in bureaucracy and decreases in classroom autonomy) will not retain teachers’ commitment’ (p.443).

Retention is a professional issue

Professional development is a key component of teachers’ working conditions and, therefore, a significant contributor to their job satisfaction. In terms of initial teacher education, scholars have identified a need for more contextualised approaches to teacher development. For instance, when asked for their views on how teacher preparation could encourage teacher retention, US veteran teachers highlighted the need for “authentic” school-based practicums which reflected the diversity of students and behavioural management issues that teacher candidates might face in their future daily work. It was also suggested that university-based teacher education programmes should focus on the needs of the school district rather than impose a university “template” on students (Beck et al., 2020). A study on the retention of teachers in US rural schools similarly concluded that teacher education students should develop “place-conscious strategies” to pedagogical practice since “what works” in urban and suburban settings might be less effective in more isolated, rural communities (Brenner et al., 2021).

At the school level, induction and mentoring are considered important for a number of reasons. Most programmes focus on the first year of teaching and are noted to have positive effects on job satisfaction, work quality, professional socialisation and teacher retention – although it is not known for how long these effects are experienced (Long et al., 2012; Plauborg et al., 2022). It has been suggested that these induction programmes should value the knowledge of newly qualified teachers – and who they want to be as professionals – in their own development (Long et al., 2014); agency in professional learning might help sustain (engage) newly qualified teachers – rather than simply retain them – and increase job satisfaction (Clandinin et al., 2015; Long et al., 2012; Schaefer, 2013; Shaefer et al., 2012; Schaefer & Clandinin, 2011). As Clandinin et al. (2015) remark:

Sustaining people who are beginning to teach begins with knowing them beyond their “noviceness” in one particular aspect of their life. Sustaining beginning teachers requires that we know them as people (p.13).

The personalisation of professional development is an important factor for mid-career and veteran teachers. To support and develop teachers across the career stages, Kearney (2014) has argued that induction and mentoring should be a lifelong process – or what Bressman et al. (2018) might call “next generation mentoring”. For while their needs and interests are different to those of early career teachers, more experienced teachers often have limited opportunities to develop professionally. For instance, in their scoping study of professional development, career progression and retention in England, Booth et al. (2021) focus specifically on mid-career teachers² with 5-15 years’ experience. These researchers noted that, at this career stage, teachers are likely to experience a career “mid-life crisis” during which feelings of frustration, disillusionment and disengagement can lead to questions over their future in the profession (Cawte, 2020). Though not a homogenous group, the analysis found that mid-career teachers lacked relevant continuing professional development (CPD). As one research participant remarked: “without innovative, forward thinking, exciting CPD, teaching could become a ‘job’ rather than a ‘profession’” (Booth et al., 2021, p.19). In terms of career progression, not all teachers wished to go into leadership and felt that the continued development of teaching expertise was not valued (financially or socially) as highly as managerial responsibilities. Furthermore, promotion to leadership could occur without having completed the necessary professional development, while the lack of flexibility and increased workload of leadership positions could conflict with familial responsibilities. Ultimately, workload, lack of time and family commitments played a significant role in teachers’ capacities to engage in professional development opportunities. Thus:

This suggests that supporting mid-career, and indeed all, teachers to manage their workload, through flexible models of working, career progression and professional development opportunities, may increase retention. (Booth et al., 2021, p.21)

The need for appropriate professional development opportunities appropriate to the career stage is a perspective shared by researchers of late-career teachers (Bressman et al., 2018).

Retention is an organisational issue

Teachers’ working conditions are not only students learning conditions but *teachers’* learning conditions. Therefore, if personalised, contextualised approaches to professional development are key to teacher retention, so is a recognition of the role that schools as organisations play in this development. School culture is considered particularly important to the retention of early career (Johnson et al., 2014) and the longest-serving teachers (Chiong et al., 2017). Indeed, positive interpersonal relations are a major factor in teacher retention. A collegial working environment in which teachers – both novice and experienced – can share experiences, work collaboratively and feel able to approach school management for advice and support promotes teacher self-efficacy and wellbeing (Burke et al., 2018; Ingersoll & Strong, 2012; Rice, 2014). Furthermore, good relations with school administration can be particularly important in more challenging school contexts (Amsley et al., 2019). Overall, a positive organisational culture fosters trust in professionalism, contributes to the development of a professional identity and makes teachers feel valued by colleagues and

² There is no scholarly consensus over the terms “mid-career”, “veteran”, “long-serving” or “experienced” teachers.

management (Gu & Day, 2009; Kelchtermans, 2017). Ultimately, it promotes the conditions for the establishment of professional learning communities.

While collaboration is significant, teachers also appreciate professional autonomy in the classroom. Teachers tend to stay in schools when they have a high level of influence over their professional practices. This highlights the importance of self- and co-determination on matters of teaching and learning. Indeed, teachers have emphasised the need for influence over decision-making processes in their school contexts (Cochran-Smith et al., 2011; Vagi & Pivovarova, 2017).

At the organisational level, job design is an important factor (Amsley et al., 2019). Schools which provide teachers with manageable workloads, professional development opportunities, adequate instructional resources and the time for individual and collaborative planning tend to retain teachers (Greenlee & Brown, 2009). However, teachers are more than their work and exist outside the work organisation. There is therefore a need to understand how the personal and the professional interconnect; the teaching profession is not sustainable if teachers are not able to live sustainable lives in *and* outside the school context (Clandinin et al., 2015).

Evidently, school leadership has a role to play in all the above (Amsley et al., 2019; Burke et al., 2018; Long et al., 2012). Research on transformational and distributed models of leadership attests to the significant role of the school leader in creating the conditions for collaborative school cultures and involving teachers in decision-making processes (e.g., Harris, 2008; Leithwood & Jantzi, 2005). Similarly, professional autonomy is linked to school leaders' recognition of and trust in teachers' capacities. Ultimately, teachers feel valued when they are trusted to get on with the job (Amsley et al., 2019; Kelchtermans, 2017). Leadership is noted to be more important to early, rather than mid-career and veteran, teachers (Chiong et al., 2017). However, leadership can extend beyond the authoritative position of the school leader; mentors and other managerial roles can help teachers develop strategies for complex situations in the classroom. In certain contexts, as seen in our case studies, school leaders can play an influential role in teachers' career and salary progression.

Retention is a policy issue

While the personal, the professional and the organisational are significant to teacher retention, it is crucial to acknowledge that all the above takes place within a wider educational policy context. In centralised and decentralised education systems, salary and salary progression are often determined at the state level (Burke et al., 2015) and, while not considered the most crucial factor to potential teacher candidates, do undoubtedly play a role in their intention to stay in the profession. Research highlights the connection between teacher education level, salary and retention. Significantly, it has been noted that, in geographical contexts where salary levels are higher, there are more, highly qualified teachers and these teachers are more likely to stay in the profession. Equally, teacher attrition is less prevalent in countries where teachers earn a similar level salary to graduates of a similar education background (see, for instance, McInerney et al., 2015; Plauborg et al., 2022).

In the past three decades, there has been a general policy trend towards the increased decentralisation of educational administration to the regional, local and school levels;

however, responsibility for the development of teacher policy – oriented towards the recruitment, development and retention of teachers – has often remained at the state level. At this level, policymakers have frequently turned to the common narrative that quality education systems require quality teachers and this has led to a policy focus on the professionalisation of teachers through professional development and career frameworks. However, these policies are often implemented within a wider educational reform agenda in which teachers are subject to increased monitoring, supervision and control over their professional practices. Accountability mechanisms have increased teachers' workload and challenged their professional identities, wellbeing and overall commitment to the profession. As Andreas Schleicher, Director for the Directorate of Education and Skills at the OECD, has remarked:

People who see themselves as knowledge workers are not attracted by schools organized like an assembly line, with teachers working as interchangeable widgets in a bureaucratic command-and-control environment (Schleicher, 2011, p.10).

To build a high-quality teaching profession, governments therefore need to rethink their approaches to both teacher policy and the wider education policies in which this is embedded. For quality teachers require quality work organisations and these can only be created through changes at the system level.

Conclusion

As this section of the report indicates, teacher retention is a multifaceted problem; it is a personal, professional, organisational and policy issue. However, our knowledge of retention – particularly, *quality* retention – is limited; more research needs to be done if governments are to understand how to design effective teacher policy, not only for those who choose to stay within the profession but also for subsequent generations of teachers. For the development of new teacher policies, which claim to professionalise teachers through continuing education opportunities and career frameworks, may ultimately be ineffective if wider reform agendas are not addressed. It is here that social dialogue has a distinct role to play.

4. Social dialogue and the attractiveness of the teaching profession

Supply issues in the teaching profession are common and have been enduring. Although there is clearly a cyclical dimension, it is important to recognise that the issues are more long term, and, certainly, pre-date recent public health and cost-of-living crises. Problems arise largely because governments tend to face a downward pressure on public spending, while services such as education require relatively large supplies of graduate labour. There is therefore a frequent tension over the allocation of resources, which in the case of education often emerges as a pressure on the single largest item of spending in the education sector: staff and, specifically, teachers. This presents what can be described as a “wicked problem” (Termeer et al., 2019), that is, a problem that is enduring and appears to have an intractable element. Our argument is that such problems need to be addressed in a process that engages key stakeholders and that is robust enough to be able to manage the inevitable and unavoidable tensions and conflicts. Social dialogue offers the most effective mechanisms to address these issues, precisely because such dialogue necessarily engages all key parties and is also predicated on a recognition and understanding of the underlying tensions. Decision-making processes that seek to deny or wish away the underlying tensions are more likely to generate poor results because they fail to address stakeholder concerns. Solutions are less likely to command wide support and will be inclined to be short-term and often problematic.

When assessing the potential for social dialogue to contribute to tackling these problems, it is important to analyse social dialogue in terms of: the social partners participating in the process; the forms social dialogue can assume; the levels within the system at which social dialogue can take place; and the range of issues that can form the agenda for dialogue. In relation to all these issues, there is the scope for significant variation between countries.

Social dialogue is fundamentally a process of dialogue between representatives of employers and representatives of employees. Such discussions are typically described as bi-partite, but, in education arrangements, are often more complex because, although, in many instances, the central Ministry of Education is also the employer, this is by no means always the case. For example, in many public education systems, central government plays the fundamental role in determining funding levels, but they may not be the employer, which may be regional or local government, or even some other body (see, for example, the case study of Sweden in this report). Where this distinction exists, dialogue is typically tri-partite. On the employee side, the picture can be equally complex, with many school systems representing a complex form of “multi-unionism” (Visser, 2012) in which two or more unions represent teachers in the sector. This can take the form of either “adjacent unionism”, where different education unions represent different groups of workers in the same sector, or “competitive unionism”, where two or more unions seek to represent the same workers in the same sector. Understanding these patterns of employer and union organisation are important when seeking to understand the dynamics of social dialogue in different contexts and the intra-organisational bargaining that flows from it (Walton & McKersie, 1991).

Social dialogue can assume a number of forms and in turn can take place at a number of different levels. Although the principal focus of social dialogue is often on processes of collective bargaining, for the purpose of this report, a much broader range of dialogue is

considered, including any dialogue between employers and employees, which may be either formal or informal. In the European context, the forms of social dialogue include:

- Joint projects and initiatives
- Information sharing
- Consultation
- Negotiation

(European Commission, 2016)

In all these cases, social dialogue can take place at multiple levels within the system, with a distinction often made between social dialogue at a national level, a regional or local level and, in some cases, at an institutional level. These alternatives are not presented as an either/or, because what is likely is that social dialogue may take place at multiple levels, depending on the nature of the issue and the level at which decisions are being made. What is most important is that social dialogue takes place at the level where decisions are being made.

In this report, we have highlighted a wide range of issues that research evidence links to teacher supply and the relative attractiveness of the teaching profession. The breadth of the issues is substantial and points to the need to develop a suitably broad bargaining agenda when engaging in social dialogue. For example, it is clear that questions of pay and working conditions are fundamental to ensuring the attractiveness of the profession and an adequate supply of teachers, but issues relating to professional development and the development of collaborative professional cultures also have a positive impact on teacher self-efficacy and levels of job satisfaction, which in turn have the potential to impact recruitment and retention rates. All of these points highlight the need to develop a broad and inclusive agenda in relation to social dialogue, and not one that focuses narrowly on “traditional” industrial relations issues. This is not an either/or option, and any focus on so-called professional issues does not in any way diminish the need to address more traditional concerns, rather it makes the case for focusing on all relevant aspects, and the totality of teachers’ work, and recognising that these are appropriate social dialogue concerns.

If social dialogue is to make an effective intervention in relation to these issues then it can be useful to identify the conditions that are required for high quality social dialogue. Here, drawing on a previous study (Stevenson et al., 2022), we identify the five characteristics of effective social dialogue:

Resources. Social dialogue requires commitment and resourcing, without which good intentions may not be realised

Architecture. Are the appropriate structures in place, at the right levels of the system, to ensure social dialogue can take place in an appropriate way?

Legitimacy. The need for all the parties involved in social dialogue to agree on the issues considered to be in scope and accepted as legitimate issues for social dialogue. This may be

more difficult the more the issues depart from what might have historically been considered as appropriate issues.

Objectives. Is there a broad agreement about the expected outcomes? This does not require agreement. Indeed, the purpose of social dialogue is to try to reconcile disagreements, but the starting point requires agreement around overall outcomes.

Relationships. Effective social dialogue depends on strong levels of trust between those participating in the process. Where there is a high level of trust, it is likely that more can be accomplished than where relationships are more conflictual.

4.1. The attractiveness of the teaching profession: An agenda for social dialogue

Given the above features of effective social dialogue, it is important to consider how social dialogue can contribute to tackling issues relating to the attractiveness of the teaching profession. Here we advance two arguments.

First, social dialogue needs to take place at all the levels where relevant decisions are being made. It may be that many key issues are determined at a national level and so national-level social dialogue is required – in the form of both collective bargaining and other forms of dialogue – to be able to make the necessary decisions and collective agreements. However, many key issues that can impact the quality of working life, and hence teacher supply at a micro-level, are the outcome of local, even school-level, decision-making. Developing robust social dialogue processes at all levels of the system is important if all key decisions are to benefit from effective dialogue between social partners. This is particularly important to avoid implementation gaps whereby agreements reached at national or local/regional levels are not experienced as expected in the workplace.

Second, the agenda for social dialogue needs to be considered broadly to include both traditional *industrial* issues and wider so-called *professional* issues that have a significant potential to impact the quality of working life, but which are not always considered legitimate issues for social dialogue (sometimes from an employer side and sometimes from a trade union side). Drawing on the research presented above, we suggest that such an agenda for social dialogue might focus on the following issues:

Rewards. The issue of pay is central to whether teaching is seen by potential recruits as an attractive profession and, also, critical to issues of retention. Pay relates not only to global levels but also to rates of progression during a career and how, and in what ways, remuneration might be linked to other issues such as geographical location, subject specialism or participation in professional development.

Well-being and quality of working life. Broadly defined, well-being has a significant impact on overall quality of working life and, therefore, both recruitment and retention. In this report, we have highlighted that well-being and the linked concept of stress are closely linked to the workload demands on teachers. Workload is often measured by hours worked, but it is important to recognise the possibility of work intensifying within hours worked. Much of

this activity can in turn relate to the balance between time devoted to teaching and time devoted to activities other than teaching, with the latter further divided between activity that is more directly (preparation, marking) and that which is more indirectly (including much administration) related to teaching. In this area we would highlight the issue of task discretion (see earlier discussion) in particular, and the need to ensure that teachers experience agency in their work. The focus here is on the quality of working life. Social dialogue can make an important contribution to establishing the formal agreements that can shape the experience at work, but, also, and more difficult, is the role social dialogue can play in ensuring adequate space for task discretion.

Equalities. The overwhelming majority of education employees are women and there remains a perception that teaching is “women’s work”, with this perception greater for teachers of younger age ranges. This may contribute to the suppression of teachers’ pay overall and support the imbalance in the workforce. For example, one argument is that teaching is a job that can more easily be reconciled with childcare and, as women remain the primary carers, it follows that the job may be more attractive to women. Social dialogue can make a major contribution to addressing these issues by pursuing policies that challenge stereotypes, tackle inequalities and confront discrimination (including institutionalised discriminatory practices). Here we refer to gender, but many of the same arguments apply to all groups that experience discrimination and structural inequalities. One challenge is to make teaching attractive to all given that any “flexibilities”, that in the past may have made teaching appear relatively attractive, are losing their comparative advantage.

Teacher support. Ensuring teachers have the professional self-confidence and self-efficacy to be effective in their jobs is a major contributor to teacher retention. This not only requires high-quality and appropriate teacher education and effective support for early career teachers (where the risk of dropout is greatest) but also on-going support throughout teachers’ careers. In this report, it has been argued that mid-career and veteran teachers can be neglected and taken for granted (because the opportunity cost of quitting is high, therefore their retention is assumed) and so professional development needs to be appropriate to career stage. Earlier in this report, the notion of career breaks was identified as an important factor in supporting teachers who have longer service. All of these inputs can make a difference, but they are also legitimate issues for social dialogue. For example, ensuring access to professional development that is an entitlement, and is appropriately resourced, has contractual implications. Similarly, there may be tensions between employer and employee expectations, and these may be the focus of social dialogue. Moreover, and as with other issues identified, there can be significant implementation gaps between national agreements and workplace experience, and so social dialogue at all levels is important.

5. Country case studies

These detailed country case studies are intended to highlight the teacher supply issues in three different countries, Ireland, Poland and Sweden, and illustrate how problems of teacher recruitment and retention are being addressed through social dialogue.

5.1. Ireland

The Irish education system

Statutory schooling in Ireland is divided between primary (ages 6-12) and post-primary (12-18) systems. A large majority of primary schools have a faith basis (Roman Catholic and Church of Ireland), although the proportion of non-denominational schools is significant and debates about “secularising” the school system have intensified in recent years (O’Toole, 2019). Post-primary schools are divided between three types and each have different governance arrangements. The most numerous (57% of pupils) are voluntary, or standard, secondary schools, most of which are denominational, followed by vocational and then comprehensive/community schools. Each of these three sectors is represented nationally by a different body, with the Joint Managerial Board (JMB) representing voluntary schools, the Education and Training Board of Ireland (ETBI) representing vocational schools and the last group represented by the Association of Community and Comprehensive Schools (ACCS). Governance arrangements across the sector also differ by school type. For example, the ETBI nationally acts to represent its 16 Regional Members across the country, but it is the Regional Bodies that determine their own policy, and have overall responsibility for the ETBI schools in their area. In ETBI schools, the Board of Management is answerable to the Regional Body. By contrast, the Board of Management in both a JMB school and ACCS school has an overall governance responsibility for the individual school, with the role of the national bodies respectively to help to network and advise other schools in that sector and to represent the sector on various bodies. JMB and ACCS have no regional structures equivalent to the ETBI. In the primary sector, management bodies are more diverse with six bodies representing different faith organisations, the multidenominational *Educate Together*, Irish medium schools (*An Foras Pátrúnachta*, which also has six post-primary schools) and the Special School sector.

Across all these different sectors, the Department for Education represents central government, with no local government participation in the management of schools. The DfE provides the vast majority of funding to schools and directly pays staff salaries.

The ETBI also manages vocational education and Ireland’s network of further education colleges. In 2020, a separate Ministry was established as the Department of Further and Higher Education, Research, Innovation and Science. This department oversees the country’s university sector which includes seven established universities and a recently restructured system of Technological Universities and Institutes of Technology.

Finally, Ireland has a growing system of early childhood education which has historically been located in the private sector but is now part of a series of reforms intended to increase public

funding and direct forms of public provision. These reforms are intended to address issues described by the European Commission (2022a) whereby “the market driven nature of the sector and low levels of public funding resulted in low wages, poor working conditions for staff and high fees for parents” (p. 5).

All of these sectors employed a total of 166,900 workers across all job roles, with women representing a majority of staff in all sectors except higher education (see Table 7).

Table 7. Republic of Ireland: Percentage of women teachers by sector 2018

Sector	Percentage
Early years	98%
Primary	84%
Secondary	62%
Tertiary	45%

In terms of teachers in the school system, 40,351 were employed in the first level and 32,145 in the second level in 2021/22.

The Irish education system has experienced considerable growth in participation rates in recent years and this in part explains the increase in workforce size (a 19% increase between 2008 and 2018, compared to an OECD average of 12% over the same time period). The system can be judged to be relatively successful when comparing “staying-on” rates beyond the years of statutory schooling, and also participation rates in tertiary education. It is also judged to be relatively well-performing using comparative data such as PISA outcomes. For example, in the 2018 PISA assessments, Irish children performed above average in maths and science, and “close to the top” of performers in reading (European Commission, 2022a). Ireland is recognised for the relatively strong performance of lower-achieving students, an outcome that is likely to contribute to the above-average participation levels identified above.

It is important to recognise that these outcomes have been achieved despite relatively low levels of investment in public expenditure. When measuring investment levels in public education, two key metrics need to be assessed: educational spending as a percentage of total government spending, and educational spending as a percentage of GDP. In Ireland, educational investment performs relatively well on the first indicator, but very poorly on the second. For example, Ireland spent 12.4% of government expenditure on education in 2017, thus more than it did in 2016 (12.1%) when the EU average was 10.1% (European Commission 2019b). However, by 2021 this figure had dropped (to 11.3%), although this still compared favourably to the EU average, which had also dropped (to 9.4%). Figures relating to educational expenditure in Ireland as a percentage of GDP are controversial as some question the validity of the data. OECD data for 2019, published in 2022, indicated that “expenditure on primary through tertiary educational institutions as a percentage of GDP is one of the lowest among OECD countries and partner economies” (the figure of 3.2% was actually ranked by OECD (2022a) as 36/36). Indeed, on almost all the measures of educational spending provided by the OECD report, Ireland ranked the lowest, or very nearly the lowest,

across the indicators. The figures attracted considerable media interest when published, although some have argued that specific features of Ireland's economy mean that educational spending as a percentage of GDP "is not a fully reliable indicator, given the specific structure of Irish GDP" (European Commission, 2019b, p. 144). It is perhaps worth noting that the same data published by OECD in 2022 contained no equivalent caveat, and that the 2022 Education and Training Monitor reports the Irish figure as dropping to 3.1% in 2021 (compared 5.3% in Ireland in 2011, and compared to a figure of 5.0% as the 2021 EU average) (European Commission, 2022a).

Teacher supply: the attractiveness of the profession

In the 2019 Education and Training Monitor, focused on the attractiveness of the teaching profession, the European Commission makes a number of observations about the relative attractiveness of the teaching profession in Ireland. The section on teachers opens by asserting that "the teaching profession attracts high academic performers" (European Commission, 2019b, p. 142), although there are concerns about a lack of diversity (a decreasing number of male applicants combined with a workforce that does not reflect the ethnic diversity of Ireland's changing population). The report goes on to acknowledge that "there have been concerns about teacher supply in primary and post-primary schools" (European Commission, 2019b, p. 142) and argues that these are focused on the supply of substitute teachers in primary schools, and on certain subject specialisms in second level schools (STEM subjects, but also foreign languages).

In 2019, the Education and Training Monitor does not suggest a "crisis" in Irish teacher supply, in ways that are clearly indicated in other countries across Europe; however, data collected for this report in 2022 suggest problems identified in 2019 may be deteriorating and that several factors, if left unchecked, are likely to accelerate and deepen supply issues that are already visible. For the most part, participants interviewed for this case study, concurred that teaching in Ireland remains a relatively attractive profession. A representative from a teacher training programme indicated that courses continue to attract a good supply of high quality applicants and that those who commence the programme typically complete it and enter the teaching profession. Moreover, it was agreed that there was little obvious evidence of a retention problem, and that rates of exit were part of what might be called expected levels of "churn".

However, three particular problem areas were identified. First, there is a lack of substitute teachers (those used to cover for teacher absences). Substitute teachers provide flexible capacity to be able to meet need as necessary and the scarcity of substitute teachers suggests a system with very little spare capacity available to respond to need. Second, there are ongoing issues related to subject specialisms, most commonly in STEM subjects but also in foreign languages and some technical subjects. In many cases, these shortages are experienced more acutely in the *Gaeilge* sector, where the medium of instruction is Irish. Third, project participants pointed to geographical issues, and in particular the cost of housing in certain areas, most obviously Dublin (see Webber, 2022). Dublin's acknowledged housing crisis posed particular problems for teachers.

Explaining current trends

One explanation offered for the relative attractiveness of the teaching profession in Ireland is the societal esteem that teachers enjoy in Irish society, and the consequent status of the teaching profession. This is a complex factor. It is not one that is easy to quantify in some tangible form and, indeed, it is easy to invoke in a stereotypical form. However, participants did highlight this issue as a real phenomenon, arguing that Ireland has a strong history, partly rooted in its colonial past, of seeing education as a root to progress and liberation. What is clear is that this phenomenon is culturally deep-rooted, and it is not something that can be readily “manufactured” by advertising campaigns and other short-term measures. Indeed, participants were sceptical that some substantial measures intended to raise the status of the teaching profession had had much impact. For example, Ireland has a Teachers’ Council, that was established on a statutory basis in 2006 and “promotes and supports the highest standards in teachers’ professionalism and teacher education through effective policies, regulation and research” (The Teaching Council, 2023). The Council is responsible for a number of initiatives that contribute to supporting teacher development, but project participants asserted that teachers had little support for the Council, and there was no material evidence to suggest the Council contributed to the positive image of the teaching profession.

Perhaps linked to questions of professional status, it is important to recognise that, Ireland is one of the few countries in Europe where pay exceeds the average for graduate earners. The OECD has noted that “teachers’ average actual salaries remain lower than earnings of tertiary-educated workers in almost all OECD countries, and at almost all levels of education” (OECD, 2022a, p.7) but that Ireland is an exception. Teacher salaries for lower secondary teachers are 3.1% above the average for graduate earnings (OECD, 2022a), although salaries for primary school teachers are just below the graduate average. It is important to note that pay and pensions provision were badly impacted by the economic crisis, and this has had long-term consequences, not least in terms of supporting new entrants into teaching who were recruited on different terms and conditions.

It may also be argued that the working conditions of teachers’ in Ireland are relatively good, although the picture is best described as mixed. The number of days in the Irish school year is at the lower end of the distribution when compared to other European countries, but, by contrast, class sizes are relatively high. For example, the average primary class size across the EU is 21 students (European Commission 2019a), whereas the equivalent figure in Ireland was 25. Work by employers and campaigning by trade unions have brought about some improvement in this figure over the last two years, although the figures remain high (McCárthaigh, 2022). Again, arguably linked to high levels of public trust and esteem for the teaching profession, some participants argued that the education system in Ireland has historically tended to avoid the high-stakes accountability and associated bureaucracy that has become a feature of many education systems, although see below for important caveats in this regard.

Finally, efforts have been made to support more effectively the professional development of teachers and, in particular, teachers in the early stages of their career when the risk of quitting

is greatest. There is now a specific programme to support early career teachers (*Droichead*) and a national framework to support professional learning (*Cosán*), among a number of initiatives intended to support teachers in the classroom. These initiatives are intended to support teacher effectiveness, while also encouraging teachers to feel more supported in their work.

The above factors help understand why the education system in Ireland appears to have been relatively well insulated from the types of supply crises that are common elsewhere in Europe. However, as the data from the European Commission, OECD and Irish sources indicate, there are clear signs that the situation is changing and may be under threat, suggesting that problems, that are currently emergent, may accelerate if not addressed. This was the view of all those who participated in this study. For example, some suggested that the traditional trust in the teaching profession was being eroded, not least by shifting social attitudes that can frame public services in increasingly transactional terms. The suggestion that teaching was an esteemed profession, and therefore an attractive destination for current young graduates, was something that several participants queried.

Furthermore, there is also some evidence to suggest that teachers' pay in Ireland is being eroded and that any relative advantage in the past is diminishing over time. For example, between 2015 and 2021, as many countries emerged from the financial crisis, teacher salaries in OECD countries in lower secondary education (for teachers with 15 years' experience and standard qualifications) increased by 6% in real terms, but, in Ireland, this figure was only 2% (OECD, 2022a). Any decline in relative pay is already being exacerbated by current levels of inflation and, as has been indicated, is experienced particularly acutely in geographical locations where costs of living are (well) above the national average.

Finally, project participants highlighted the increasing demands being placed on teachers in Ireland and the increasing complexity of the job. These issues impact working conditions, when working conditions are broadly defined to include all those factors that impact the quality of the teachers' working environment. For example, it was recognised that teachers had not only been dealing with a substantial reform agenda across both primary and secondary sectors, but that new initiatives often brought with them increasing bureaucratic demands. For example, the system of Whole School Evaluation avoids much of the top-down managerialism associated with systems elsewhere, but it introduced much additional work and an accountability culture that was driving up workloads (identified as a particular issue for primary school principals who often have substantial teaching responsibilities). Several project participants identified a "creeping managerialism" in the system, that was driving work pressures and undermining teacher well-being. Some have argued that the Irish education system is in danger of losing its essential character as school principals are progressively turned into business managers (Mooney Simmie, 2023). Where initiatives were seen as welcome, they were also often described as under-resourced, and so programmes such as *Droichead* and *Cosán* often struggled to secure strong teacher support and commitment.

All of these developments take place in a classroom environment that participants identified as increasingly complex. Ireland is a country that, historically, has struggled with high levels of outward migration (resulting in many teachers emigrating for work elsewhere) but, in more

recent times, the trend has been towards inward migration and teachers have been working in increasingly diverse classrooms. Most recently, Ireland has received a significant number of Ukrainian refugees. This was understood and welcomed by the teachers interviewed and it was recognised that resource support for teachers in schools was generous. However, it was argued that this placed further pressures on a teaching workforce already under pressure. It was also, in very practical terms, increasing the demand for teachers as student numbers were growing significantly.

A final explanation of growing problems was identified as the emergence of more attractive careers, both within and outside the teaching profession. For example, several participants highlighted the pull of a rapidly growing international schools market, often offering higher salaries, better working conditions and significant benefits such as accommodation and tax-free income. One interviewee described how she felt she had to go to work in the Middle East in order to secure the deposit to make a house purchase in Ireland possible. In other cases, it was argued that the long-term impact of the Covid-19 pandemic on working patterns in other sectors was making teaching relatively less attractive. For example, an increase in home-working offered many workers in non-teaching roles greater flexibility both in terms of work location and work time. This allowed such workers to live in relatively low-cost areas, while working remotely from a work base located in a high-cost area. Teachers have no such flexibility. Similarly, a perception that teaching is a job that can be considered more compatible with childcare is being undermined by an ability for non-teachers to work more flexibly.

Social dialogue in the Irish education system

Contemporary industrial relations in Ireland have been defined by a strong commitment to social partnership, although this approach was badly damaged during the years of austerity (when Ireland's financial affairs were managed by the Troika), and some have argued any subsequent improvement has only been partial. The formal system of social partnership was established in 1987 in the form of an agreed Programme of National Recovery in which a tripartite agreement on a range of issues was reached between employers, trade unions and government. This agreement was then renewed periodically, and this approach to social partnership became closely associated with Ireland's rapid economic growth through the 1990s and early 2000s (Hastings et al., 2007). However, when the economic crisis unfolded in 2007/8, Ireland was badly affected, and one consequence was that the social partnership model established in 1987 collapsed. At this time, significant cuts were imposed on public sector pay and pensions, outside of any agreement between employers and unions. Since that time, a more limited form of social dialogue has developed, with a more limited agenda, and largely confined to the public services (Stevenson, 2019). These agreements, such as those signed in 2010 (Croke Park Agreement) and 2013 (Haddington Road Agreement), were intended to reconcile reduced public sector spending on pay, increased efficiency, and protections for job security and working conditions.

One significant outcome of this particular tradition of social dialogue is that public sector pay rises are negotiated between the trade union confederation (Irish Congress of Trade Unions)

and the government *en bloc* for all public service workers, i.e., whatever pay rise is agreed, is applied across the public sector workers such as teachers, health service staff and the police.

It follows from the above that pay negotiations for teachers in Ireland are the outcome of a bi-partite process between the government and the trade unions, with trade union representation managed by ICTU, and individual teacher unions involved in any sector specific arrangements relating to working conditions. In Ireland, school sector teachers are represented by three unions: the Irish National Teachers' Organisation (INTO) represents primary school teachers, and two unions operate in the post-primary sector – the Teachers' Union of Ireland (TUI) and the Association of Secondary Teachers' in Ireland (ASTI). Ireland's education employer organisations, such as the JMB, ETBI or ACCS, will input opinions direct to the Department of Education, but they are not parties to these negotiations.

However, on almost all other issues, social dialogue in the Irish education system can be considered tri-partite, between government, employer organisations and the trade unions. Indeed, this formal tri-partism can also be considered to assume a more informal form when dialogue also includes a range of policy organisations such as the National Qualifications Authority of Ireland. In Ireland, project participants indicated a high level of expectation that social partners will be involved in a collaborative process of social dialogue as part of the policy and decision-making process. This is not to make a judgement about the extent to which contributions impact final outcomes (because much social dialogue of this type is consultative, rather than *bona fide* bargaining), but it is to assert that there is a common expectation of social partner involvement in the processes.

Conclusion

There are inevitably dangers in presenting a complex picture in a limited form; however, it is possible to assert that Ireland has experienced fewer problems of teacher supply than what might be considered the more general picture across Europe. Moreover, and by way of a qualification, it is clear that problems of teacher supply are becoming more visible, and are beginning to preoccupy many involved in providing education in Ireland. There can be no doubt that part of the explanation for this situation lies in culturally specific factors, including the value placed on education in Irish society. This is the outcome of a particular history, and it is something that has been formed over, literally, centuries. It is not something that can easily be created, for example, by running an advertising campaign.

Here we speculate that the value placed on teachers and teaching, and the associated trust that society has in teachers in Ireland, has contributed to a broadly defined set of working conditions that have, hitherto, helped to recruit and retain sufficient numbers of teachers in Ireland's schools. Compared to other European countries, the pay of Irish teachers is relatively strong, working conditions are variable, but with some strong features and generally speaking teachers in Ireland enjoy high levels of professional autonomy that allow them to exercise their professional judgement in the best interests of students.

In this short case study, social partners suggested that social dialogue arrangements made a significant contribution to securing the conditions under which Irish education continues to

perform strongly, despite many challenges. As has been indicated, investment levels in the education system in Ireland are limited, although it may be argued that these resources have been invested in aspects of the service (i.e., people) where there is the greatest impact.

There is, in conclusion, much to be learned from this experience; however, it is also important to counsel against complacency. As is made clear in this case study, many of the positive factors identified in this report are in reverse, or important initiatives (such as those relating to professional development) are seen to be under-resourced. All of this at a time when the demands and complexities of teaching are increasing, and when alternative possibilities (such as teaching abroad, or in jobs that offer greater flexibility) are also expanding. These trends represent significant challenges to the Irish education system – and it is already clear that this is placing a pressure on social dialogue arrangements. Rapidly rising inflation, combined with several developments identified in this case study, are resulting in industrial action campaigns by Irish teachers' unions.

5.2. Poland

The Polish education system

Since the start of political and economic transformation in 1989, which occurred as a result of the collapse of the Communist regime, Poland has shifted from a centralised economy to a neoliberal market economy. In this time, the country has experienced significant demographic changes as a result of fluctuating birth rates and high international emigration, especially of young people, to other EU Member States. Despite the current figures of low unemployment (3.4% in 2021), the ageing population will have a notable impact on the labour market including the teacher workforce. More recently, Russian aggression against Ukraine led to the mass migration of Ukrainian citizens to Poland (European Commission/EACEA/Eurydice, 2022a). By October 2022, 192,278 Ukrainian children and young people were enrolled in educational institutions across the education system, with over 41,000 in kindergartens (OECD, 2021a). Representatives from the Ministry of Education and Science in this study noted that the issue was particularly acute in larger cities.

During this period, the structure, organisation and management of education and educational institutions in Poland has undergone significant reform and, today, teachers' work within a multi-scalar system of educational governance. The Minister of Education and Science is responsible for the development of policy, legislation and regulations in school education and initial teacher education and continuing professional development. However, the administration of educational institutions is decentralised to the 16 regions, 380 districts, and 2,477 communes in Poland. The Regional Education Authorities form part of the regional administration and their responsibilities include the establishment and administration of public in-service teacher training institutions. Conversely, districts are charged with the administration of upper secondary schools, art schools and special schools, while communes take the lead on the administration of pre-primary and primary schools. Poland also has an expanding non-public school education sector which receives public funding but operates with relative autonomy (European Commission/EACEA/Eurydice, 2022a).

On 14 December 2016, two Acts of Parliament were passed – the ‘Law on School Education’ (Prawo oświatowe) and the ‘Legislation introducing the Act - Law on School Education’ (Przepisy wprowadzające ustawę - Prawo oświatowe) – which legislated further educational reform. From 1 September 2017, Poland implemented a new school structure: an 8-year primary school (ISCED 1 and 2), a 4-year general secondary school and a 5-year technical secondary school (ISCED 3), extending the previous primary and secondary programmes by two years and one year respectively. Teachers’ status in Poland is regulated by the Teacher’s Charter (Act of 26/01/1982 on the Teachers’ Charter, with further amendments), which sets the parameters for, among other things, teachers’ employment in and dismissal from the profession, professional duties, promotion, working time, remuneration, issues of social entitlements and leave (European Commission/EACEA/Eurydice, 2022a).

Since 1 October 2016, initial teacher education in Poland has been provided within the higher education sector as first-, second- and long-cycle programmes – with the former leading to a Bachelor’s degree (licencjat) or equivalent and the latter two leading to a Master’s degree (magister) or equivalent – as well as non-degree programmes. Currently, ninety-eight per cent of teachers hold degree-level qualifications; more than 90% have a Master’s degree and, from 2024/2025, all teachers who started their teacher education after 2019 will be qualified at this level. Initial teacher education is organised as both a concurrent model and a consecutive model; however, the former is the dominant approach to teacher education. Alternative training pathways are available for certain subjects and sectors e.g., vocational education and training. Since 1 September 2022, teachers’ participation in continuing professional development has been a requirement of the professional promotion system (European Commission/EACEA/Eurydice, 2022a).

Public expenditure on education in Poland between 2010 and 2021 has consistently remained above the EU average (European Commission, 2021, 2022b). Compensation of teachers and other educational staff represents the largest proportion of the budget (76% in 2018) (OECD, 2021a). The teacher salary in Poland includes: a basic salary, a number of allowances (related to length of service, function, motivation and conditions of service), pay for overtime and ad-hoc replacement hours; and other awards and benefits. Teachers receive the same starting salary regardless of the level at which they teach and this can increase by 63% after the first 15 years and by up to 70% after 20 years (European Commission/EACEA/Eurydice, 2022b). Between 2005 and 2020, the statutory salaries of teachers with 15 years’ experience and the most prevalent qualifications increased by 41% at primary and general lower and upper secondary levels compared to a 2% and 3% average across the OECD (OECD, 2021a). Despite these real-terms increases, the teacher salary at primary and secondary levels remains one of the lowest in the OECD and the European Union (OECD, 2022b).

In 2020, teachers’ in public education institutions in Poland worked 1,075 hours per year at pre-primary level, 604 hours at primary level, 483 hours at lower secondary level (general education) and 478 hours at upper secondary level (general education), which are below the OECD average (OECD, 2021a). However, teachers tend to teach up to 25% more hours than their statutory teaching time (OECD, 2022b).

Teacher supply in Poland

The Minister of Education and Science determines in legal acts the statutory principles for teacher recruitment, promotion and salaries in school education. Local government units are responsible for personnel policy in their areas. Teacher employment is monitored at the national level through the School Education Information System (System Informacji Oświatowej, SIO). Data is transferred annually from local databases to the Regional Education Authorities and the central SIO system under the jurisdiction of the Ministry of Education and Science. These data include information on teachers' age, employment status, educational level, work experience, functions, responsibilities, and salary. Data analysis enables the education authorities to forecast teacher supply and demand, and plan in-service teachers' work accordingly (European Commission/EACEA/Eurydice, 2022a).

According to the 2018 PISA report, school principals in Poland experienced fewer staff shortages than the OECD average. Moreover, 99% of teachers in advantaged schools and 97% of teachers in disadvantaged schools were "fully certified", with the proportion at Master's level similar across both school types (OECD, 2019b). However, EU reports give a less positive assessment of teacher supply, suggesting that the attractiveness of the teaching profession is "limited" and teacher shortages are "pronounced" (European Commission, 2021, 2022b). There are particular recruitment challenges to the early years education sector where salaries can be lower and working hours longer than the OECD average (OECD, 2021a). Equally, there are not enough pedagogical specialists (e.g., psychologists) (European Commission, 2022b).

Pay, working conditions and professional status are considered the principal reasons for low attractiveness (European Commission, 2022b). In the 2020/2021 academic year, almost half of surveyed school headteachers reported problems recruiting qualified teachers, particularly subject teachers of physics, mathematics, chemistry, English and computer science. To address these labour shortages, overtime was assigned to other teachers (52%), employed retired teachers (38%) or people without the necessary qualifications (35%).

To improve the attractiveness of the profession, the Ministry proposed changes to the Teacher's Charter which included amendments to teachers' salary, career progression stages and performance evaluation, the introduction of more working hours and modifications to holiday entitlement. According to the European Commission reports, teacher unions were not consulted and were critical of the proposal which lowered the hourly wage and had implications for teacher quality and work (European Commission/EACEA/Eurydice, 2021b, 2022b). However, representatives from the Ministry of Education and Science disagreed and maintained that trade unions were consulted but did not agree to the changes. As a consequence, these changes were not implemented. Equally, during the aforementioned consultations, the trade unions presented their own proposals in relation to remuneration, which were considered by the Ministry to have a large financial impact on the state budget and were thus impossible to implement. In April 2022, a below inflation 4.4.% salary increase was approved from 1 May. This fell below teachers' expectations.

The social partners described teacher supply from a longer, historical perspective. For instance, civil servants at the Ministry of Education and Science noted that, following the transformation in 1989, Russian was no longer a compulsory language in schools and there

was a demand for teachers of other modern languages, particularly English teachers. At that time, the teaching profession had higher societal status since higher education qualifications had only been accessible to a minority of the population. Since then, Poland had experienced demographic changes and educational reforms and, according to union officials at NSZZ “Solidarność”, the attractiveness of the teaching profession “collapsed and it was like a snowball”.

Both the trade union and the Ministry of Education agreed that there was not a global teacher shortage; rather, there were not enough STEM (particularly, mathematics, physics, chemistry and IT) teachers. Equally, it was considered more difficult to recruit teachers in larger cities where the cost of living was higher and there were more lucrative opportunities in a wider labour market. This was particularly an issue in vocational and technical education which was challenged by the retirement of experienced teachers and the fact that potential teacher candidates were able to find better working conditions in industry:

So, generally, students are looking for another profession with better salary. So, we just saw the symptoms that it will be very bad, but there was not any idea about how to solve it. (Union official, NSZZ “Solidarność”).

This situation does not result from the number of students of these subjects. Students that are trained to do (STEM) subjects. But it results from the labour market in the current situation, which is very, very competitive. So, they are found in banking and industry sectors, as well, not at schools. Although they have completed the relevant education. (Civil servant, Ministry of Education and Science)

Other than inward and outward migration, union officials highlighted three major causes for this shortage: salary; lack of occupational prestige exacerbated by political discourses; and increasing parental demands. In their view, teachers were used as “tools” in “political games”, which had an impact on public perceptions of the status of teachers’ work. To some extent, it was felt that the Internet and social media was also to blame.

The Ministry of Education and Science did not believe that there were any serious problems of teacher supply in general and special education in Poland. According to their own data (see Table 8), there are currently 606,294 teachers working full- or part-time in public schools and educational establishments³ across Poland. The majority of teachers (approximately 5 out of 6) are women, with the highest number (27%) aged between 45 and 54. In 2019, 36% of primary teachers in Poland were at least 50 years old, which is higher than the OECD average of 33% (OECD, 2021a). Consequently, the government is adopting measures to attract younger people to the profession.

As of 2 January 2023, there were 2052 full-time posts advertised by headteachers. This represents less than 1% of personnel in the education system. Most advertised jobs were for subject teachers of psychology (18%) or at pre-primary level (13%). However, the Ministry noted that there were new standards for specialist teachers, psychologists and counsellors who work in schools. Consequently, it was expanding qualifications and in-service training.

³ Amongst others, this includes pre-primary, primary, general and vocational secondary, post-secondary schools, special schools, psychological and pedagogical counselling centres.

Table 8. Number of teachers employed in educational institutions in Poland

Age	Total number of teachers (headcount)	Women	Men
<=24	3,977	3,547	430
25-34	78,623	67,440	11,183
35-44	176,257	149,572	26,685
45-54	194,493	163,210	31,283
55-64	139,427	114,288	25,139
>=65	13,517	9,030	4,487
Total	606,294	507,087	99,207

(Source: Ministry of Education and Science, as of 30.09.2022)

The Minister of Education and Science had specific tools to intervene in issues of teacher supply should the need arise, e.g., require universities to open and provide funding for a specific teacher education programme. In terms of vocational education teacher shortages, civil servants noted that the Ministry had lowered the entry requirements from a Master's to a Bachelor's and, in certain exceptional cases, specialists of crafts, which are not taught at higher education level, were allowed to teach at vocational schools. The Ministry felt this approach had been positive. Equally, it was asserted that the system of teachers' career progression introduced in 2000 had been effective since it connected remuneration to teachers' levels of qualifications "so teachers are strongly motivated to qualify, develop their skills. Because with higher levels of career progression, they receive high remuneration" (Civil servant, Ministry of Education and Science). Since its implementation, the system had been amended so that there were fewer levels and teachers could reach a higher level more quickly. Finally, civil servants highlighted the pay increases which had been implemented since 2015 – 47% for teachers overall with a 76% increase for novice teachers. In 2019, new standards had been implemented for initial teacher education. In general, it was deemed too early to evaluate the effectiveness of these recent policy changes but the civil servants noted that they had been achieved as a result of social dialogue.

By contrast, union officials from NSZZ "Solidarność" felt that official data provided by the Ministry of Education and Science did not reflect the true picture of teacher supply since it did not account for teachers' overtime hours. The government proposal to increase teachers' salary two years ago had been linked to an increase in teachers' contact hours which the union opposed:

So, if you want more money, we will raise your contact time. So, this was the proposal. So, this is maybe a misunderstanding, saying that there was. So, actually, there was some proposal but not acceptable for the unions. And there also was the issue that they wanted to raise the contact time for some of the subjects like music, physical exercise, Polish

language. So they said that “oh, we don’t have such a shortage, so we can raise the contact time”. (Union official, NSZZ “Solidarność”)

Stressing schools’ institutional needs, the Ministry proposed to increase the number of teachers contact hours from 18 to 22 but with the same number of working hours overall. Civil servants at the Ministry felt that the Teachers’ Charter Law offered very competitive working conditions (including approximately 70 calendar days annual leave, health leave and a good pension scheme) for teachers compared to other professions:

Schools need teachers to be more present at school, stay in school for longer. So, longer contact hours. And OECD research shows that Polish teachers have the smallest number of contact hours as compared to other European countries...This is why the Minister has proposed to increase the number of contact hours which will be combined with the pay rise. Quite a considerable one. However, teacher unions did not want to think about this. Didn’t like the idea. (Civil servant, Ministry of Education and Science)

In general, NSZZ “Solidarność” did not think that the Ministry did enough to improve teacher supply or the attractiveness of the profession.

Social dialogue on teacher supply and the attractiveness of the teaching profession

The current model of social dialogue in Poland was implemented in 2016. At the proposal of the Ministry of Education and Science, a special act on social dialogue in the education sector was legislated. The three main stakeholders in social dialogue are: the teacher trade unions (NSZZ “Solidarność”, ZNP and Wolny Związek Zawodowy "Forum-Oświata"), the state (represented mostly by the Ministry of Education and Science) and the local authorities. According to civil servants, social dialogue was conducted on three levels equally: information-sharing, consultation and negotiation; and the trade unions were considered a major partner:

We, as the Ministry, participate in social dialogue with trade unions. We do it under the law and we have a special body appointed which is called the Social Dialogue Council. It is appointed under the Act and we, also, at the Ministry, have appointed a team for the professional status of education sector workers, staff. So, and we discuss all the issues on an ongoing basis. We also cooperate with the representatives of local authorities. (Civil servant, Ministry of Education and Science)

The Ministry highlighted that the team for the professional status of education sector workers was created as a platform for dialogue between trade unions, the Ministry and local authorities. The Ministry of Education stated that their team was the main consultative body for the Minister and, together with trade unions, they discussed issues such as optimum solutions for the teaching profession including working time, remuneration, teaching pragmatics, teachers’ career progression and teachers’ evaluation. In terms of improving the attractiveness of the profession, the Ministry was concerned with both the industrial and professional: financial aspects such as remuneration and initial teacher education and continuing professional development. In their view, these “are overlapping very, very closely”. Civil servants at the Ministry of Education and Science felt that the Ministry and the

local authorities had their own perspectives on teacher supply but that “during our discussions, we are just trying to reach a compromise. In order to work out systemic solutions”. The Ministry also met separately with the local authorities under a special body called the Joint Committee of the Government and Local Authorities for Education.

The Ministry believed that social dialogue was “effective but challenging, especially when we discuss financial matters”. Additionally, social partners’ viewpoints could clash in relation to career progression, working time and working conditions but, they argued, “we are working out sustainable compromises”. However, the Ministry felt that it was difficult to identify a particular policy related to teacher supply or the attractiveness of the profession that had been achieved through social dialogue.

NSZZ “Solidarność” noted the division of labour over professional issues. For example, the Ministry was responsible for determining the overall budget on teachers’ professional development, but it was the local authorities which determined what type of professional development teachers would receive. At the same time, the unions could have some influence over this. In general, however, the union felt that the lines between the state and local authorities’ responsibilities were not clear. Resultantly, this had an impact on social dialogue which union officials did not find effective overall, even though there were some local distinctions:

So, local authorities, they don’t know for what area they are responsible. And there are many misunderstandings on that. And, of course, there’s also, from the union perspective, this is a problem because we are not asked to take part in social dialogue in every different region. So, of course, this is a kind of coordination, but it is a huge challenge. So, and, of course, it depends on the region. Some regions have the money – the typical situation in Poland is that the West, they have a better situation than East. And this is also historical. So, when we are speaking with colleagues from the West, there are no complaints compared with colleagues from the East. And the main decision is going from Warsaw and this is why it is not completely effective. (Union official, NSZZ “Solidarność”)

The union highlighted the absence of a schedule for social dialogue meetings which, resultantly, were perceived to be somewhat “ad hoc”. Second, it was felt that, even if agreements were made between the social partners, the employers did not necessarily fulfill their side of the agreement: “and they are doing everything not to do what they agreed”. Finally, the union noted the two approaches to the development of legislation in Poland, one which required the involvement of social partners and one which did not and therefore social dialogue was “just cut”.

The union and the Ministry had different perspectives on approaches to issues of teacher supply. The union argued that the Ministry tended to see the attractiveness of the profession purely from the perspective of teacher remuneration and there were no discussions on professional development. As a result, initial teacher education had changed very little in the past 20 years. However, according to the Ministry, it was the unions that emphasised the importance of remuneration to improving the attractiveness of the profession; in their view, the initial teacher education standards implemented in 2019 had led to significant changes in the education of the profession.

Conclusions

In general, it would appear that industrial issues of pay and working conditions predominate discussions in social dialogue and there have been some disagreements over policy changes in this regard. Trade unions objected to a Ministry plan to increase teachers' contact time at school which, in their view, did not account for teachers' overtime or the increased planning requirements. Due to these objections, the plan was rejected and remuneration increases in May and September 2022 were introduced without any changes to contact hours. While teacher quality does not appear to be an issue, there seems to be little attempt to engage in dialogue on continuing professional development beyond an assessment of how this supports institutional needs and the career progression framework. Alongside Ministry developed performance standards in initial teacher education and performance evaluations, these limit teachers' agency in their own professional development. Although there is a shared perspective over the issues of teacher supply, which are related to specific subject areas, sectors and the wider labour market, there is a need to attract young people to the profession. This will no doubt continue to be challenged by the comparative attractiveness of the profession. Social dialogue is somewhat hindered by the decentralisation of education to the regions and the apparent division of responsibilities over professional and industrial issues. While the Ministry has developed several teams of specialists to work on issues of teacher policy, trade unions have not always been consulted as extensively as they would like to have been and are not always convinced that their views are acknowledged in reforms.

5.3. Sweden

The Swedish education system

Since the 2008 financial crisis, the Swedish economy and labour market has strengthened. In 2019, the rate of unemployment was 6.8%. However, in sparsely populated areas, there are notably fewer employment opportunities. In addition to these regional distinctions, the population is ageing and has become increasingly diverse; in 2019, 19.6% of residents were foreign-born and Arabic was the second most highly spoken language in Sweden (European Commission/EACEA/Eurydice, 2022c). According to the 2011 Education Act, all children and young people in Sweden are entitled to an equivalent education, regardless of gender, place of residence, and social and financial background; however, equity in education is a major concern. Sweden has high levels of school segregation based on parents' country of birth and educational background, a trend that a union official from the National Union of Teachers in Sweden noted was largely attributed to residential segregation but could also be explained by school choice reforms (European Commission, 2022c; Holmlund et al., 2014).

While the Ministry of Education and Research has overall responsibility for most educational sectors, municipal self-determination is an important part of Swedish democracy. In the early 1990s, responsibility for the administration of education was devolved to the 290 municipalities. Of varying size and political leadership, municipalities are responsible for the organisation of education in pre-schools, the pre-school classes, compulsory schools, upper secondary schools, schools for students with learning disabilities, municipal adult education,

Swedish tuition for immigrants and leisure centres. School choice reforms in the same period led to the establishment of a voucher system and publicly funded, privately managed independent schools (*fristående skolor*). The Swedish parliament determines the level of state expenditure on education. However, responsibility for preschool and school funding is shared between the state (9%) and the municipalities (SOU 2020:28). Independent schools are entitled to the same grant-aided support as municipal schools (European Commission/EACEA/Eurydice, 2022c).

From 1962 onwards, teachers were municipal employees but subject to state regulations and salary grades. Recruitment was centralised and placed all teachers within a hierarchy based on a central system of merit. As one union official from the National Union of Teachers in Sweden remarked, “it was transparent. Everyone understood”. On 1 January 1991, however, the state regulation of teachers’ work and professional development ended, and municipalities and schools became responsible for teacher recruitment. While a teacher degree was still a requirement of employment, schools did not always adhere to this legislation which led to a high number of unqualified teachers in the Swedish education system. From 1 December 2013, all teachers and pre-school teachers were required to have teacher certification (*lärarlegitimation*) in order to teach, set grades and be employed on a permanent contract (Prop. 2011/12:144). The aim was to improve the status of the teaching profession and certified teachers are now in high demand (European Commission/EACEA/Eurydice, 2022c).

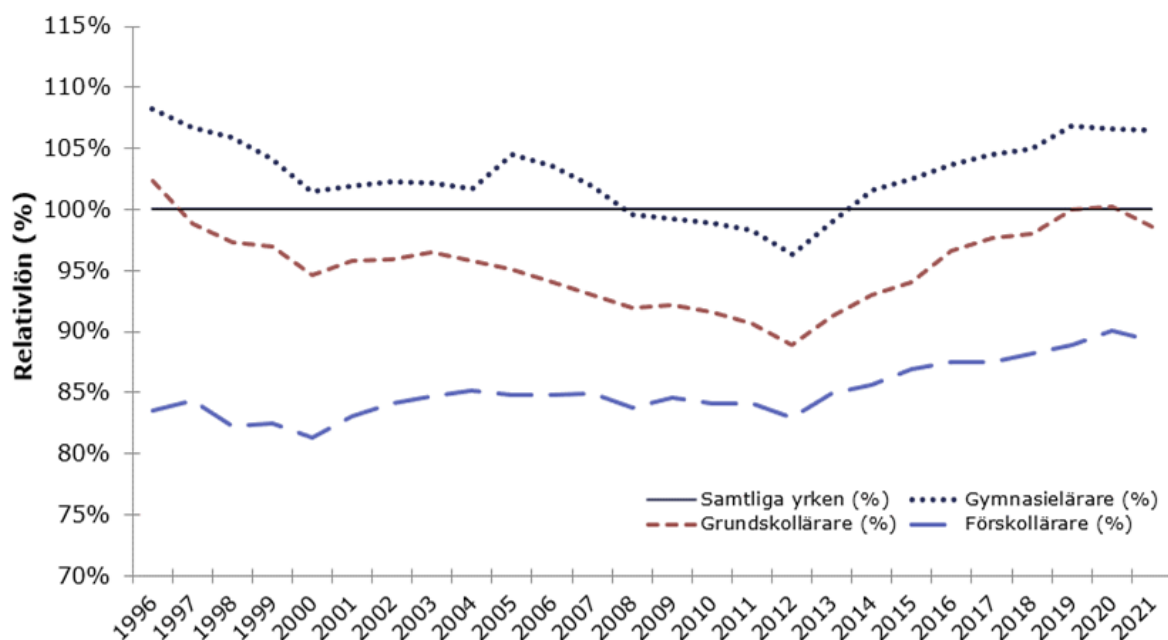
While municipalities have control over schools and teachers, the state has retained responsibility for higher education. Teacher education is the largest higher education programme in Sweden provided by universities and university colleges. Since autumn 2011, there have been four professional degrees in Swedish teacher education: pre-school education, primary school education, subject education and vocational education. Programme length varies between 3 and 5.5 years, according to the subject and age level, but there is also a shorter programme for candidates with Bachelor’s or Master’s degrees. Continuing professional development needs are established locally by municipalities and schools and employers must provide staff with opportunities for professional development (European Commission/EACEA/Eurydice, 2022c).

Compensation of teachers and other educational staff represents the largest proportion (67% in 2018) of public expenditure on education (OECD, 2021b). Prior to 1991, the state and trade unions were the principal partners in negotiations on salary and working conditions. Today, there is no statutory regulation and teachers’ salaries are negotiated individually and based on collective agreements (European Commission/EACEA/Eurydice, 2022d). In 2019, teachers’ maximum salaries were between 17% and 33% higher than minimum salaries at all levels of education (OECD, 2021b).

Teachers’ average salaries are low when compared with workers of a similar education level (OECD, 2022c). However, in the past decade, teachers’ pay has improved considerably when compared to the mean salary of the Swedish population (see Figure 2, where the blue dashed line represents pre-school teachers, the red dashed line represents compulsory school teachers and the black dotted line represents upper-secondary school teachers). The National Union of Teachers in Sweden noted that this trend was initiated through the 2012 collective

agreement which stated that teachers should be given a greater percentage salary increase than industry (4% compared to 2%). It has continued to increase as a result of career post reforms (karriärtjänster) and the Teacher Salary Boost (lärarelönelyftet).

Figure 2. Teachers' salary development in Sweden



(Source: SCB)

In 2013, the centre-right coalition created two new career posts for teachers: lead teachers (förste lärare) for talented classroom teachers without a research degree and senior subject teachers (lektor) for those with a research degree. Appointment to these posts included a salary increase of 5,000 SEK and 10,000 SEK per month (10,000 SEK and 15,000 SEK in the most challenging schools) respectively (Skolverket, 2023). There was widespread support for the senior subject teacher posts since it was based on academic merit. However, school leaders determined lead teacher appointments and, according to the union officials in this research, the criteria on which these were based were considered to be “vague” and “lacking in transparency”. This policy caused tensions in the profession and the social partners felt that it had been implemented too quickly: “it became more a salary reform than a career reform” (Union official, Swedish Teachers’ Union).

In 2016, the Social Democrat-led coalition implemented the Teacher Salary Boost. Three billion SEK was allocated annually so that 60,000 teachers could receive a salary increase. These raises were determined locally but the average had to be 2,500 SEK. The state formulated four difference criteria for inclusion; beyond a requirement for professional certification, these were evidence of advanced university studies, responsibility for difficult instruction or responsibility for teacher candidates. However, teachers questioned whether those in lead teacher posts should also be entitled to a salary boost.

Pre-school teachers work an average of 40 hours per week, of which 31 hours are regulated. Most teachers in compulsory and upper secondary education work an average of 45.5 hours per week, of which 35 hours are regulated. Full-time employees are entitled to an average of 104 hours of professional development which has been agreed as a result of negotiations between the teacher unions and the Swedish Association of Local Authorities and Regions (SALAR) (European Commission/EACEA/Eurydice, 2022c). However, it was noted by a union official from the National Union of Teachers in Sweden that this is the average and studies reveal that many teachers only get 46 hours on average.

Teacher supply in Sweden

Sweden does not have a global teacher supply problem. According to recent statistics from the Swedish National Agency for Education, 139,000 full-time teachers were employed across all school forms⁴ in Sweden in the 2021/2022 academic year (Skolverket, 2022), a 1% increase on the previous academic year. The Swedish government revises its annual projections on teacher shortages in line with Swedish population forecasts. In 2021, it was estimated that Sweden would need 12,000 new teachers by 2035. This is a reduction on previous estimations (Skolverket, 2017, 2019, 2021) which not only created a crisis discourse in the media but were unhelpful to municipal planning:

The lesson that my organisation took from this is that maybe we shouldn't talk that much about what goes on at national level. We promote our members to look into it themselves. What happens in your own area. And what do you know about what will happen in your own area. (Civil servant, SALAR)

The negative forecasts occurred as a result of two major issues: a) demographic changes as a result of high birth rates and migration to Sweden; and b) a 2013 reform that required all teachers to have professional certification. The student population is no longer a concern, although future immigration policy could reverse this trend. By contrast, the 2013 reform is still not fully implemented which means that schools continue to employ unqualified teachers. In 2021, 72% of municipal school teachers and 64% of independent school teachers in compulsory education were certified; however, only 14% were fully qualified in all their subjects and levels. The lowest number of qualified teachers are found in technology, Swedish as a foreign language and craft, and in special education and vocational education (Skolverket, 2022). Union officials and an academic responsible for a government inquiry into teachers' professional development felt that national reports of high teacher employment masked issues of teacher quality:

Now, in fact, we are partly soon over the worst shortage period. So, it's kind of, looking forward, neglecting the fact that, yes, it will be better in the near future or not that distant future, but, until then, every third child will have a teacher that isn't a qualified teacher. So, it's upsetting because it hides the problem partly. (Academic)

⁴ Teachers employed in pre-schools, primary schools, primary special schools, special schools, upper-secondary schools, special upper-secondary schools, municipal adult education.

The best measure of the lack of teachers at a certain point, that is to look how many of the teachers working right now have a teacher degree or teacher certification. And then you can see how big a shortage we have right here, right now. (Union official, National Union of Teachers in Sweden)

Beyond issues related to subject- and school-level qualifications, the social partners noted regional distinctions. For instance, Northern Sweden had greater recruitment problems than Stockholm, Gothenburg and Malmö where there was greater competition for posts in municipal and independent schools. Paradoxically, these latter three regions will likely have the greatest demand for teachers in the coming 15 years (Skolverket, 2021). According to SALAR, teacher shortages were also affected by migration between municipalities, the decrease in population of a working age and/or the dominant industrial model of employment of a region. It was noted that the proximity of a university to a municipality also had an impact on teacher supply and, to counter this, strategies included: distance education, local campuses set up by municipalities and work-integrated education, which enabled students to learn on the job. However, SALAR felt that more could be done to distribute teacher education across the country. The academic responsible for the government inquiry into teachers' professional development noted the importance of getting the regional perspective, and speaking to teachers and school leaders in their localities, on matters of policy development.

All participants acknowledged that teacher education was the largest higher education programme. However, union officials at the Swedish Teachers' Union and the National Union of Teachers in Sweden commented that certain programmes were considered to be of lower status or lower quality. For instance, there was a high number of applicants for upper-secondary Swedish education, but very little competition for pre-school teacher education. It was highlighted that potential candidates of upper secondary education also tended to consider other degrees which would give them access to another labour market. This was particularly the case for students of STEM:

A person who has an interest for science broadly, or maths, or economics, they have completely different career possibilities, a completely different salary development and broader labour market than that of a trained upper-secondary teacher. (Union official, Swedish Teachers' Union)

The National Union of Teachers in Sweden raised the issue of low entry requirements to teacher education; most applicants to teacher education were successful, but this did not guarantee successful course completion. Despite some university dropouts, however, teacher retention was not considered a major issue. Eighty per cent of teachers who graduated from teacher education programmes in 2014/2015 remained in the profession five years later and the majority who chose to leave the profession still work within the education sector (Statistics Sweden, 2022). However, recruitment is notably gendered; in 2019, women represented 76% of new entrants to the field of education.

A major concern of union officials was the segregated school system. It was noted that municipal schools in the most affluent areas, where parents tended to have a higher education, often recruited the most qualified, educated and experienced teachers. By contrast, areas of socio-economic disadvantage and high immigration had higher numbers of

unqualified teachers. Independent schools had a lower number of qualified teachers overall, although there was some variation between schools. The academic responsible for a government inquiry into teachers' professional development referred to this as a form of "pedagogical segregation". He noted that newly qualified teachers tended to start their careers in the most challenging schools and, once they had gained experience, move on. However, both he and union officials recognised that there were nuances:

I think you have a lot of teachers leaving many segregated schools because it's such a hard-working environment for them. But, at the same time, you have schools where there are teachers who'd never leave that school because it's great. Sweden has big differences that way. (Union official, National Union of Teachers in Sweden)

While acknowledging that school and pedagogical segregation did exist, the representative of SALAR stated that this mostly occurred in the larger municipalities where there were more employment options in, and therefore greater mobility between, municipal and independent schools. She noted that there was competition between independent and municipal schools and between municipalities to recruit teachers.

Various governments have attempted to improve the attractiveness of the teaching profession. Beyond salary reforms, teachers' professional development has been a policy priority. In 2016, a commission inquiry was launched to develop a framework for teachers (and school leaders') professional development. Led by a teacher educator and dean of education, the unions considered it an attempt to resolve some of the issues caused by the career post reform. Though not linked to career posts, the framework outlined a merit system for the professional development of teachers. As the academic responsible commented, its aim was to give agency to the profession in their own development:

Every teacher knows what they struggle with. And they really know this is what I would like to learn more about to become a better teacher. I have never met anyone who doesn't want to become a better teacher. They want to learn to do things better. (Academic)

Following this, in July 2022, the Swedish government proposed a new national programme for professional development for teachers, pre-school teachers and principals (European Commission, 2022c). The Swedish National Agency for Education is responsible for the development of the framework.

Union officials argued that the employer was not as constructive as it could have been in its development. Indeed, SALAR considered it state interference in employer domains:

It wants to regulate things that are today regulated by the collective agreements. So that is why we think it's difficult. Because we want to have a clear cut so you might work with. So, it's the state's responsibility for initial teacher training and it's the state's responsibility to have higher education institutions work on competence development etc. but then it's the employers and the unions responsibility with the rest. And this programme kind of mixes them together. (Civil servant, SALAR)

In terms of policy impact, union officials felt that there had been improvements to the attractiveness and status of the profession. However, the employer organisation noted that

there had been no formal evaluation and, since so many policies had been implemented at the same time, it was difficult to know what had actually worked. Participants in this study felt that there needed to be a longer term perspective over teacher supply and the policies implemented to address this issue:

So, the teacher shortages that we have right now, those are the accumulated shortages since the 1980s. So, could we repair this within 5 years, what we have destroyed in 30 years? No, we have to have 25 more years. (Union official, National Union of Teachers in Sweden)

Social dialogue on teacher supply and the attractiveness of the teaching profession

Decentralisation had limited teacher unions' capacities to bargain collectively at the national level and, today, social dialogue remains fragmented due to the large number of associations and schools with which teacher unions must negotiate. Unions noted that there was a lot of dialogue with SALAR, the Swedish National Agency for Education, and the Ministry for Education. Union officials felt that there was particularly good social dialogue with the Ministry. Indeed, SALAR noted that the social partners met four times a year with Ministers and educational authorities because "the Ministers think it's important to talk to both the employers and unions and have a good dialogue" so that government proposals are well implemented.

Social dialogue with SALAR generally takes place in the development of collective agreements. Agreements are then made between employers at the local level based on the national agreement. When social partners do not reach an agreement or do not know how to respond to a specific issue related to working conditions, they agree to set up working groups (Samrådet om Kompetensförsörjning) to examine it further as part of the collective agreement. For instance, professional competence development might mean teachers' working conditions and work environment need to be improved. In the 2018 collective agreement, the social partners agreed to work together to tackle teacher recruitment through a working group. There were four areas of concern: wages, working hours, working environment and school organisation. In the 2021 collective agreement, it was agreed that these working groups would continue. Beyond these meetings, the unions and SALAR also meet in various forums and networks alongside other stakeholders (ministers, Swedish National Agency for Education, universities, non-governmental organisations) to discuss teacher policy e.g., the Assembly for More Teachers (Samling for Flera Lärare) which was set up during the Social Democrat-Green Party coalition. Additionally, both social partners contributed separately to the commission inquiry on the framework for professional development.

While employers and employees had a similar understanding of the complexity and scale of teacher supply and issues related to the attractiveness of the profession, there were different perspectives over the causes and solutions. Union officials from the National Union for Teachers in Sweden and the Swedish Teachers' Union believed that social dialogue at the national level between the teacher unions, the Ministry for Education and its Ministers worked well: "we have had productive social dialogue, I should say, when it comes to how to

strengthen the profession” (Union official, Swedish Teachers’ Union). By contrast, the National Union of Teachers’ in Sweden felt that SALAR wanted increased flexibility, fewer rules and more localism. This contrasted significantly with the union view of a need for greater central regulation. Similarly, the Swedish Teachers’ Union was disappointed with the employer contribution to discussions on the framework for professional development.

Although there had been a high level of ideological conflict with SALAR, the social partners had “sort of learned how to speak with each other anyway” (Union official, National Union of Teachers in Sweden). There were some concerns, however, that certain agreements had not been fulfilled by the employers in every municipality which was associated with the limited mandate for SALAR. The representative of SALAR also noted the complex role of her organisation which had little influence over its members.

Until 31 December 2022, the main social partners were the two teacher unions (Swedish Teachers’ Union and the National Union of Teachers in Sweden) and the employer organisation (SALAR). Union officials felt that their division had been exploited by the employers at national and municipal levels. In recent years, these unions had worked more collaboratively in their preparation for meetings with the employers. On 1 January 2023, the two teacher unions amalgamated into *Sveriges Lärare* (Swedish Teachers’ Union). Both unions felt that the amalgamation was a positive move for the profession and an opportunity to “speak with one voice” (Union official, Swedish Teachers’ Union).

Despite good opportunities for social dialogue and the development of initiatives which had contributed to strengthening the profession and its attractiveness, the official from the Swedish Teachers’ Union felt that it was difficult to see any concrete results in terms of teacher supply. By contrast, the official from the National Union of Teachers in Sweden felt that social dialogue with SALAR had not added any value at all, arguing that, despite social dialogue, members felt their working conditions had worsened: “so, no, what have we achieved?”. Teachers’ excessive workload was also highlighted by the Swedish Teachers’ Union as something which made the profession less attractive.

The National Union of Teachers in Sweden argued that the most important policy influence had been achieved through the commission inquiry. In this regard, the academic responsible for the commission inquiry into teachers’ professional development highlighted the importance of “academic leadership” and his mediatory role between the social partners.

SALAR felt that social dialogue did add value to issues of teacher supply. This organisation also worked collaboratively with the other two national level employers. However, it was acknowledged that the social partners could “do more things together” to “make things happen” at a national level.

Conclusions

On the whole, there are numerous opportunities for social dialogue between the various social partners. There are regular meetings at the national level between the Ministry, SALAR and the unions and there is considerable space for communication, consultation and

negotiation on policy development, the collective agreements, and working conditions more generally, through distinct working groups. Unions argue that there has been considerable progress in terms of salaries and professional and career development opportunities for teachers in the past decade. However, the majority of these reforms have been initiated by the Ministry and there is distinct union dissatisfaction that the various forums at which the social partners meet are not used to good effect to improve the working conditions of teachers, a key consideration in the attractiveness of the profession. Moreover, SALAR, the employer organisation is often considered to restrict wider policy development oriented towards improving the professional development of teachers. On the other hand, SALAR has limited influence over its members; municipalities and schools have the ultimate responsibility for decisions and social dialogue can be effective between unions and employers at this level. While teacher supply is not a global concern, and the number of fully qualified teachers has improved since reforms to certification and salary were implemented, teacher recruitment within a highly segregated system has an impact on educational quality. Equally, there continues to be challenges in various subjects and sectors (pre-schools, vocational, STEM, Swedish as a foreign language) which need to be addressed if Sweden is to provide an inclusive education system to all.

6. Conclusions and Recommendations

In this report, we have highlighted a range of issues relating to teacher supply across Europe. What is clear is that there are significant problems relating to teacher shortages and that, in many instances, these are not new problems, but they are enduring.

It is important to recognise that the scale and form of the problems in different countries can vary significantly. In many countries, problems may be considered as acute, and even at crisis levels. In other instances, the issues are less problematic, although, even in these cases, there is evidence of a deteriorating situation. In those instances where problems are less obvious, there is often evidence of growing problems in particular “micro-markets”. These are typically shortage subject areas or shortages in particular high-cost regions.

In this report, we highlight a range of issues that can explain the problems that are evident.

One obvious issue is that of pay, with teachers typically paid less than average graduate earnings in their country. This remains the most useful measure of pay because it is other graduate-level opportunities that generally compete for the attention of those considering teaching. Payment systems can be finessed to address issues in particular micro-markets, but their effectiveness is unclear, with, usually, only short-term benefits.

However, pay is clearly only one of several factors that impact the attractiveness of teaching as a career. It is almost certainly the case that pay has assumed greater significance in the current period of high inflation, but a range of other factors are relevant including working conditions broadly defined (volume of work, intensity of work, balance of work between different types of activities, control over work) and support for effective working (teacher preparation, early career support, continuing professional development). In discussing all these factors, it is important to recognise diversity within the teaching workforce, and potential teacher workforce, and that structural inequalities and discrimination are experienced by particular groups, not least women, who represent about 70% of the European education workforce.

The above issues are identified as the key factors that impact teacher supply. These issues are not new, and have been well understood for a long time. However, what appears to be the case is that long-term changes mean that problems of teacher shortage cannot be expected to “auto-correct” as they may have done in the past, in particular, as economic cycles scrolled between recession and growth. This is because there is a long-term divergence between the working conditions of teachers (in the past considered relatively good, but now deteriorating) and the working conditions of many other graduate occupations (often considered poor in the past, but now improving). This process of divergence has accelerated due to the Covid-19 pandemic as teachers have returned to their classrooms, but many other occupations now experience increased flexibility (working remotely etc.). Not only are jobs changing, but they are expanding as services continue to grow while manufacturing declines. Such jobs may be particularly attractive to women workers who have traditionally provided education systems with the bulk of the workforce.

This is why the problem of teacher shortages is genuinely a crisis – because the long-term prognosis is poor. It may well be the case that an economic recession may reverse the situation (as it has done in the past), but this will provide only temporary respite from a long-term trajectory.

In summary, pay has always been a problem in terms of teacher recruitment and retention. It can be an important part of any solution, but the other issue that must be addressed is to tackle the shift in the relative attractiveness of the working conditions in teaching (declining) when compared to the working conditions of other graduate alternatives (often improving). For many potential teachers, the job of teaching has an intrinsic advantage – it is interesting, engaging work with the potential to be profoundly fulfilling. However, if that advantage is eroded because poor working conditions get in the way, then the problems are compounded.

This analysis points to the long term need to make teaching as work attractive in terms of the task itself, the working conditions within which the work takes place, and the level of reward provided.

It is not our place, in this report, to identify the precise policies to address these issues. We have presented research evidence that helps to better understand the nature of the problems but what solutions will look like in any specific context will depend on the nature of the problems in that context, the system within which they are located, and the political priorities of policy actors. This report offers guidance on possible solutions, but decision-making must rest with those working and invested in each system.

Our recommendations are focused on the need to tackle these problems through social dialogue as it is only through social dialogue that the necessary complexities and tensions can be considered and navigated. Tackling the long-term crisis in teacher supply is likely to require a collective effort of which social dialogue is a central element.

Such dialogue must take place at all levels in the system where meaningful decisions are being made, not least because social dialogue at all levels minimises any implementation gaps between national-level agreements and actual experience in the workplace. Such dialogue also requires an expanded bargaining agenda that integrates both so-called industrial and professional issues. Here, we suggest the focus of that agenda could usefully centre on four broad areas:

Rewards and remuneration. There can be no serious discussion about teacher supply without recognising the centrality of salary levels and the role paid by remuneration issues in making teaching an attractive profession. There are clearly a wide range of issues that fall within this overall topic, and the areas of priority will vary by country, but issues of pay are both a staple social dialogue issue and are central to addressing issues of shortage.

Wellbeing and quality of working life. Efforts to ensure the long-term attractiveness of the teaching profession must ensure that teaching provides high levels of intrinsic job satisfaction and does not generate levels of stress that can both deter new entrants and drive current teachers from the job. This requires social dialogue to address all the issues that make a meaningful contribution the quality of working life, including workload, the balance between

different aspects of work, and the extent to which teachers feel they enjoy sufficient task discretion to perform their work in the way that they believe is most effective. Social dialogue on these issues may relate to traditional areas of concern in social dialogue, such as working hours or class size limits, but must also extend to other aspects of teachers' work, which can be more nebulous, such as the space to exercise professional judgement.

Equalities. The overwhelming majority of education employees are women, and any discussion of teacher supply needs to recognise this issue. Improving pay and working conditions can contribute to developing a more balanced profession, while reforming work so that it is more attractive for those with caring roles can have a positive impact on all who have to combine work with other responsibilities.

Addressing supply issues requires making the teaching profession accessible to all and, in particular, addressing the barriers to entering the profession that confront many groups

Teacher support. Job satisfaction links closely to levels of self-efficacy and task discretion. This is the belief that an employee feels confident in their own ability to undertake their work role and that they feel they have control over their own work to be able to execute it in the most beneficial way. It clearly requires appropriate working conditions, but it also involves the worker having access to the training and support necessary to perform the task. For teachers, this requires high quality teacher preparation, but it also involves on-going support that is appropriate to teachers for their career stage, and that helps support teachers to deal with changing work environments.

Social dialogue has an important role to play in ensuring teachers can access the support they need, ensuring access to high quality training, but also delivered in ways that allow teachers to participate (because obstacles to participation are minimised).

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Appendix: Country analyses.

In this appendix brief summaries are presented for each country within the European Union, excluding those countries for which we have provided more detailed case studies. The data is drawn mostly from the 2019 Education and Training Monitor country reports which provided an analysis of teachers and teaching for each country. Where data is presented, unless specified otherwise, it is drawn from this report. Situations will have developed since then, not least because of the dramatic impact of the pandemic, but these summaries provide some overview of the context in each nation, and of the type of issues presenting themselves.

Austria

Austria is identified as having an ageing teacher workforce. The proportion of teachers aged 60+ years doubled between 2013 and 2017. In secondary education, 47% of staff were 50 or older (EU average equals 39%) with 11% aged 60 years or older. Primary education and early years education is a better situation but the system will face significant staff replacement issues imminently.

Across the sector, women dominate (99% in ECEC, 92% in primary and 66% in secondary). Women are on average younger than men working in the system and are less likely to have senior roles.

It is widely recognised that classrooms are becoming more diverse and that generates additional demands. There is also evidence that less experienced teachers are concentrated in more challenging schools (recruitment issues are more complex). A policy trend towards increasing school autonomy is likely to compound issues with a risk that those teachers with more experience and better able to manage complex environments are more likely to be located in more affluent schools.

Teachers have limited access to support staff.

From 2019/20, teachers must complete 15 hours of CPD per year. Lack of access to CPD has been an issue in the Austrian education system with 52% of teachers feeling they have no access to adequate CPD.

The perception of teachers is that teaching is not valued in society, but job satisfaction levels are generally high (96.4% of teachers reported they were satisfied with their job compared to an EU average of 89.5%).

Primary teachers receive 76% of graduate earnings, with the equivalent figure for lower secondary being 90% and upper secondary being 97%. Pay reform in 2015 was intended to provide for higher starting pay, but also involved flatter increases.

A feature of the Austrian school system is that 37% teachers are employed at federal level and 63% are employed by the regions. This can cause some problems managing the workforce. Regional/geographical problems do exist with Vienna sometimes recruiting part qualified and non-specialist staff.

Belgium

Belgium faces a range of problems with teacher supply and was described in 2019 as taking a range of 'ad-hoc' measures to address the situation.

In the Belgian French community, teacher shortages have been increasing, which is caused by increasing pupil numbers, an ageing teacher workforce, fewer enrolments to teacher education programmes combined with high dropout rates from teacher education courses. It was also recognised that difficult working conditions contributed to the problems (which were most acute in some geographical areas and in STEM subjects).

Efforts to address issues include increasing 'overtime', raising the retirement age and adopting simplified recruitment processes.

In the Flemish community, efforts to support recruitment and retention including enhancing mentoring support for Early Career Teachers, providing a quicker route to permanent posts and adding an extra salary step for end of career teachers.

A number of teacher education reforms have been introduced. In the French community, pre-primary, primary and lower secondary teachers will require a Master's. New teacher trainers will require an additional one-year Master's.

In the Flemish community, HEIs are the only providers of Initial Teacher Education, but lateral training will become easier. More training is required for teacher educators.

In the Flemish community, CPD is not mandatory and is not recognised for career development. Teachers are not always able to attend the CPD provision that is seen as most likely to support effective classroom practice.

Both Flemish and French Communities are seeking to support school leaders. In the Flemish community, this has involved reducing classroom teaching commitments and trying to increase pay. In the French community, a series of reforms were being planned for 2019 onwards.

Bulgaria

The teaching profession in Bulgaria suffers from low status. It has experienced some struggles to recruit into teacher education courses (although at rates around the EU average), but a key problem is that only 60% of ITE students enter teaching.

The 2019 ETM Country Report concludes that 'low salaries are a major factor deterring young people' (p. 30), but also notes that unattractive working conditions, a lack of CPD and poor student discipline are also factors.

The teaching profession appears particularly unappealing to men with 17% of teachers being male, against an EU average of 28%.

There are also serious issues associated with an ageing teacher workforce with half of teachers aged over 50, and 10% aged over 60 years.

Areas of shortage are across the primary sector and in foreign languages, ICT maths and physics.

Teachers in Bulgaria demonstrate very high levels of demand for professional support/CPD; however, the high level of dropouts from ITE courses points to the need for reforms so that students feel better prepared for the work they will face.

Plans to tackle the low status of teachers, and the resulting crisis in supply, led to proposals to double teachers' salaries by 2021 – aiming for salaries of 120% of graduate average earnings. Alternative entry pathways into teaching have also been explored.

Legislation will reduce tuition fees for those studying pedagogy and an induction process has been introduced to support novice teachers. Alongside this, an obligation to undertake CPD has been introduced and linked to career progression along a 5-stage career path. EU social funds have been used to support CPD programmes.

Problems of teacher supply in remote areas are being addressed by support for commuting and accommodation costs in designated areas.

Croatia

A high proportion of the teaching workforce are women: ECEC is 99%, the primary sector is 93% and the figure for upper secondary is 67%.

There is a perception that there is decent recruitment into initial teacher education but interest in teaching tails off during studies, and this feeds into some recruitment problems.

Teacher shortages are experienced in ECEC and certain subjects (science, technology, maths, ICT). There are also problems recruiting teachers to remote areas.

The 2019 ETM asserts there are 'no specific incentives on offer to address these shortages' (p. 39).

About 1/3 of the teaching workforce is aged over 50.

Teacher salaries are below the graduate average in Croatia. The system spends a relatively high proportion of its education expenditure on teachers' salaries (above the EU average) but actual salaries are still well below graduate average earnings. Recent pay rises have made some effort to address these issues.

Bonuses are available in some instances, such as for teachers in 'schools for life'.

Professional development is a requirement and mandatory for career progression.

More recently training has been provided for schools principals. This did not exist previously. Principals are elected by school boards for 5 years at a time.

Cyprus

The 2019 Education and Training Monitor asserts that teaching 'remains attractive and has started to become more competitive' (P. 50).

The report claims that working conditions are relatively attractive, and teachers believe teaching is valued in society (the second highest score across the EU).

In European terms, teachers in Cyprus enjoy slightly above average job satisfaction levels.

There is generally a strong supply of candidate teachers which partly arises from relatively good working conditions but also a limited supply of graduate jobs elsewhere.

In the period since the 2008 economic crisis, there has been an increase in the supply of teachers from Greece.

Entry into teaching is now on a competitive basis, and there are no salary differentials between pre-primary, primary and secondary levels.

In 2016, actual salaries for teachers were among the highest in Europe, with the salary scale being relatively short and additional responsibilities being compensated for by additional non-contact time.

In 2019, there was no induction training for new entrants. This has existed but was cut back on financial grounds. It is claimed there is a plentiful supply of CPD opportunities – but the ETM criticises this provision for being poorly focused and not evaluated. It is not linked to career paths and teacher evaluation.

Indeed, the lack of systematic teacher evaluation is highlighted, including within the European Semester.

A new proposal in January 2019 included the formative assessment of teachers, school evaluation, support for novice teachers, contract staff and substitutes, evaluation of

evaluators, and continuous support for teachers. The proposal creates a new senior teacher role and increased the role of headteachers in observation of teachers.

Czechia

The 2019 Education and Training Monitor claimed the teaching profession in the country faced 'numerous challenges'. In the European Semester of that year, Czechia received a specific recommendation to 'promote the teaching profession'

The country has a high proportion of female teachers, among the highest figures in the EU. However, the labour market is improving employment opportunities for women and this may impact the relative attractiveness of teaching as a career. This is at the same time as increases in pupil numbers increase the demand for teachers.

There is a particular difficulty recruiting to school leader roles as there is a perception that too much administration prevents headteachers being able to effectively support teachers.

There are also shortages in particular areas such as in the primary sector and in English, Physics, ICT and Maths.

A significant factor in teacher shortages is teacher pay which is described in the 2019 ETM as 'very low' (p.60), by all key measures, i.e., when compared to graduate earnings in Czechia and by international comparison. Salary progression is 'rather flat' (p. 60) although excellent performance can lead to salary increase and supplements for specialist tasks.

In 2018 the govt declared that by 2021 salaries would be at 150% of their 2017 level but before that it was recognised that the attractiveness of the teaching profession for 'talented young people remains low' (ETM p. 61). As a consequence, the threshold for successful entrance to teacher education is low with a potential to impact the quality of entrants. Entrants to ITE are poor quality. Evidence cited suggests talented entrants to teaching are often quick to leave due to the salary situation.

Teachers are generally satisfied with their jobs when compared to others internationally (TALIS data suggests average job satisfaction levels are very close to the EU average, however teachers' assessment of how society values their work is appreciably below the EU average.)

CPD is highly decentralised and teachers are generally positive about their CPD experience. However, the problems with teacher supply arguably highlight that access to CPD may be significant but not determining when impacting aggregate levels of recruitment and retention.

Denmark

Investment in education in Denmark has been relatively high but the system has been facing growing teacher shortages and class size increases. There is also an issue of an ageing profession with, for example, 45% of lower secondary teachers aged over 50.

Between 2009 and 2018, teachers numbers fell in Denmark as pupil numbers fell, but the decline in teacher numbers exceeded the reduction in pupil numbers and class sizes absorbed the issue.

The 2019 ETM reports that Local Agreements between unions and employers existed in 70 out of 98 municipalities and these covered working hours, flexi-time arrangements and in-service training.

Salary scales can vary according to 5 different geographical zones and beyond that part of the salary can be renegotiated by schools, which further increases variation. Salaries are generally considered good, although progression is flat. Measured in terms of purchasing power parity, salaries rank third in the EU. However, the maximum salary is only slightly above the EU average.

In the pre-primary sector, salaries are 68% of average graduate earnings, but that figure rises to 95% in upper secondary.

In 2017, some liberalisation of entry requirements into teacher training were debated and further teacher training reforms were being mooted. Trade unions were seeking a Master's level requirement as per other Nordic countries.

Legislation leaves it to school leaders to determine, how, when and if teachers are appraised.

Estonia

Estonia has an ageing workforce and not enough recruits to meet demand. Half of primary and secondary teachers are aged over 50, and about 20% are aged over 60. The system will need to recruit significant numbers of new teachers in the years ahead, but was struggling to do so.

Despite shortages overall there was also some oversupply, especially in some rural areas.

In particular subject areas, the shortages are experienced in mathematics, chemistry, physics, geography and biology.

ITE programmes are undersubscribed and this does not bode well for a system that will have to recruit significant numbers if it is to replace teachers who will retire in the near future.

Teaching clearly has a perception of being low status, although teachers believe there has been some improvement in this situation from among the wider population. However, the 2019 ETM reports that teaching is considered stressful, with uncompetitive salaries and unattractive working conditions.

Men account for only 17% of school teachers which is likely to reflect the relatively poor salaries. Tackling some of these problems means that between 2014 and 2018 salaries increased by more than 40% with an aim for further improvement (getting to 120% of average graduate earnings, based on a 2019 figure of 113%). There is some local discretion on teacher salaries (at school level) and so there can be considerable variation across the system.

As well as changes to salaries efforts have been made to tackle shortages by introducing more flexible pathways into teaching (2013), allowing for a combination of pedagogical and non-pedagogical routes into the profession and, in 2018 a national education award was introduced combined with a national media campaign.

Finland

Teaching in Finland has historically been considered an attractive profession. The 2019 ETM states that teachers in Finland are 'considered academic professionals and enjoy public respect' (p. 90). Teachers themselves believe they are valued in society with TALIS data indicating that 52.8% of Finnish teachers holding this opinion – the highest score among EU participants in TALIS.

The proportion of teachers who are satisfied with their job is just below the EU average but, significantly, job satisfaction does not drop after 5 years – which contrasts with the general pattern. This is also reflected in the assertion that few teachers leave the career in the early years, and they change career less often than other professionals (ETM 2019).

The teaching workforce is predominantly women (80% of primary teachers, 75% of lower secondary and 60% of upper secondary). The profession is ageing, although the issues are not as dramatic as elsewhere across Europe. For example, 48% of upper secondary teachers are over 50 years, but the corresponding figures for primary and lower secondary are lower (32% in both sectors).

Salaries for secondary teachers are the graduate average, but these are lower in primary and pre-primary.

Despite a relatively strong position in relation to teacher supply, shortages are emergent, most obviously in the pre-primary sector and among teachers with special needs expertise.

France

France has a comparatively young teaching workforce, with an overall gender balance 'among the best in the EU' (p. 100).

However, the teaching profession 'has become less attractive' with a deteriorating applicant to job ratio. The ETM 2019 suggests this may be due to working conditions issues with French teachers having high contact hours and low salaries (in the primary sector especially).

Teachers themselves report that the public has a poor perception of teachers and this is one of the lowest scores across the EU.

Where there are shortages, these are worst in disadvantaged areas but also in some remote areas.

Some of the problems in the system have been addressed by the increased use of precarious contracts – in 2016/17 and 2017/18 these increased by 10% each year ‘possibly at the expense of teaching quality’ (p. 100).

Recruitment to leadership roles in primary schools has become an increasing problem. It may be that salaries are unattractive being only 7% higher than classroom teachers. There are significant gaps between primary and secondary headteacher pay.

Participation in CPD is low and teachers’ perception of the value of CPD is also low. Primary teachers must complete 18 hours of professional development but there is no equivalent requirement for secondary teachers.

In order to address shortage problems in areas of disadvantage, additional payments were made to teachers in schools in these areas in 2018, 2019 and 2020 alongside other reforms.

Additionally, ITE reforms were introduced in 2019, allowing undergraduate students to be appointed as education assistants to help the pipeline into full teaching positions.

Germany

The position in relation to teacher shortages exhibits large differences across the country. This is in part due to Germany’s local government arrangement, with education being the responsibility of individual Länder. However, the most significant differences are between eastern and western Germany; the 2019 ETM reports that when teacher vacancies were assessed, there was a 3.5% surplus in western Germany matched by a 22% shortfall in eastern Germany (equivalent to approximately 1500 teachers).

The workforce shows some evidence of ‘ageing’ with 38% of primary teachers and 44% of secondary teachers being over 50. Again, there are significant geographical variations, with 60% of the workforce aged over 50 in eastern Germany. As a consequence of these trends, a significant proportion of teachers will need to be replaced in next 10 years. There are currently particular shortages in special needs and the primary sector.

Some efforts to tackle shortages have been addressed by recruiting education personnel from elsewhere in the system and providing ‘on the job’ training but it is not possible to assess how effective this has been.

Teacher salaries are described as ‘among the highest in the OECD’, but this does not translate into teaching being seen as an attractive job. This may be because, despite higher salaries according to international comparison, teachers in Germany typically receive pay below

average graduate earnings. Secondary teachers are paid just below average graduate earnings (99%) in lower secondary, and above average graduate earnings (105%) in upper secondary but primary teachers receive 90% of average graduate earnings.

Any advantage in the pay of German teachers is typically received in the early part of their career, with limited progression thereafter.

An emerging area of shortage is in relation to school leaders with principalship not seen as an attractive career choice.

Greece

Greece has experienced extraordinary turmoil in its education system since the economic crisis of 2008. Despite these problems teaching remains a relatively attractive profession and career choice.

Within the Greek education system, teachers are public servants. In recent years, there have been salary and recruitment freezes, but, despite these issues, supply broadly outstrips demand. After the crisis, salaries were cut by 28% in real terms. There have been incremental increases since then, often focused on those with higher qualifications (Master's level and PhD).

Salaries are low when compared across the EU but the 2019 ETM argues they are broadly comparable to others with similar GDP. Some aspects of working conditions can be considered favourable (shorter teaching time, smaller classes and less contact time for more experienced staff). However, the system is dominated by the use of precarious contracts with large numbers teachers acting as substitute teachers. There have been no permanent teachers hired since 2009

Teachers are well qualified but have few opportunities for professional development, especially in secondary education. There is no overall competence framework and no developmental form of appraisal although a form of school self-evaluation is being introduced.

The teacher appointments system was reformed in 2019 with a credits-based system for more consistency – with a focus on 'regularising the situation of substitute teachers' – who exist in very large numbers.

Hungary

The Hungarian school system is experiencing increasing shortages, especially in poorer regions and in shortage subjects. The workforce is ageing, with 41% of the workforce over 50 years in 2017 and only 6% under 30 years. There has been an increase in applications for initial teacher education, but the drop out has been high and less than half enter the teaching profession.

One factor that may explain the above is the generally low level of salaries, but, in particular, the salaries for new starters which are among the lowest in Europe when compared on the basis of purchasing power parity. In 2019, the European Commission reported calls from within Hungary for a salary scale that rises more rapidly in the early years. At the same time a stipend was introduced, to be paid to those who work for a time in state schools for a minimum period after completion of training.

In 2013, a teacher career model and progression path were extended to ECEC; however, this did not lead to increase in supply as the personal were already in the system.

Job satisfaction levels in Hungary were reported as being slightly below the EU average, although the figure drops for those with more than 5 years of service.

The Hungarian education system has been subject to considerable and, sometimes, destabilising change. For example, in 2011, some school-based decision making was removed, only to be partially restored in 2017. This instability may contribute to lower morale, which in turn impacts the attractiveness of the profession.

Ireland

See separate case study

Italy

In 2019, the evidence pointed to Italy having the oldest teaching workforce in the EU and therefore renewal is a major challenge. In 2017, 58% of Italy's teachers were over 50 years and 17% were over 60 years. It followed that nearly 4% of the teaching workforce could retire every year for the next 15 years.

As elsewhere, the majority of the education workforce are women, with figures in Italy generally above the EU average.

A number of reforms have been introduced in recent years to recruitment processes and initial teacher education but reforms have not always been effectively implemented. Therefore, there has been little improvement over time.

There is a perception that teachers in Italy have limited career prospects, relatively low salaries (especially when compared to similarly qualified workers) and this has made it difficult to attract the best qualified graduates. Salaries are lower than the OECD average across all sectors, and it can take many years to progress to the highest point on the pay scale.

Levels of job satisfaction are relatively high (second highest scoring in the EU) although it may be that this relates to some aspects of working conditions that can be considered quite

favourable. However, and conversely, teachers believe the public holds the teaching profession in low esteem.

There are teacher shortages in some subject areas (science, maths, English) and in some regions. Indeed, geographical issues are highly significant in the Italian education system. It is estimated that 80% of Italy's teachers are from the South, but, where there are problems filling vacancies, it is typically in the North. The vacancy situation is exacerbated by high teacher turnover, which in turn is linked to the very high levels of precarious contracts that are a feature of the Italian education system. The number of substitute teachers is very high and teachers have no job guarantee from one year to the next, and so teachers are more inclined to leave posts in search of more secure work, increasing the vacancy problems. Younger and less experienced teachers are disproportionately concentrated in schools with high levels of disadvantage.

A number of reforms have been introduced relating to professional development, appraisal and performance related pay. These have often been contentious and have struggled to secure widespread support from within the profession.

Teachers on precarious contracts are not eligible for sources of support that colleagues on more secure contracts can access and this can intensify their feeling of disconnection from the profession.

School leaders have a separate career profile and salary structure. They are paid less well than other public sector managers, but the gap with classroom teachers is significant.

Latvia

The teaching workforce in Latvia is mostly older and female. In total, 87% of primary and secondary teachers are women. This figure is the highest across the EU and compares to an EU average of 72%.

It is also among the oldest in EU with 47% aged 50 years and over and only 16% of the profession aged under 40 years.

The high proportion of women teachers is reflected in the high proportion of women school leaders.

There are obvious challenges associated with renewing the profession but the evidence indicates that young graduates are not attracted to training. It is estimated that only 35-40% of education graduates enter teaching. Universities have funding linked to student progression into teaching.

Teacher shortages are becoming increasingly apparent, especially in the sciences.

Low salaries and long hours make teaching unattractive. The ratio of salary to graduate average earnings can appear good, but the existence of a large shadow economy suggests a different reality. Recognising these issues, a new teacher remuneration scheme in 2016

introduced significant increases, but these increases were from a low base and, after the increase, salaries were still less than half the EU average.

The Latvian education system features significant levels of school autonomy, and school leaders have some scope to determine pay, allowances, supplements. Working conditions can vary greatly across schools with larger schools have better funding and so they typically find it easier to attract staff.

Professional development is a compulsory requirement for all teachers and is essential for teachers to be able to access pay levels with performance bonuses. The requirement is 36 hours over 3 years, as a minimum.

Lithuania

The teacher workforce in Lithuania is ageing with 47% aged over 50 years. In Lithuania, there is no requirement for teachers to retire and, in 2016/2017, 6% of teachers were over the retirement age. It is estimated this figure could reach 20% by 2021. The danger is that such a phenomenon insulates the system from a genuine need to tackle growing problems.

The European Commission has provided financial support to develop a sophisticated tool to help with teacher workforce planning.

The attractiveness of the profession suffers from a number of problems. Career prospects are considered poor, and teachers believe society holds the profession in relatively low esteem. Teachers' own job satisfaction deteriorates over time, which is a problem common to many contexts. The average starting salary is well below the EU average (purchasing power parity is 70% of EU average) and with very little improvement over time.

Some of the problems above have been compounded by a fall in student numbers and a series of school consolidations. This often results in reduced opportunities for work with a subsequent impact on income. Many teachers felt the need to take on two jobs to protect pay and pensions, but this clearly created additional pressures with the potential to impact quality.

There are some career development opportunities for teachers to take on roles as methodologists and experts to help to support good practice, and a programme for school leaders ('Time to Lead') provides support for more senior staff. However, the European Commission highlighted the need to support training teachers more effectively, while evidence points to high levels of dissatisfaction with the professional development available to in-service teachers.

Luxembourg

Relatively strong salaries attract more young people and men than in many other countries, reinforcing the evidence that higher salaries correlate clearly with a more gender-balanced profession. Male teachers account for 46% of the profession, the second highest figure in Europe. The proportion of teachers under 40 is 40%, which is a figure that compares favourably across the EU.

Teachers' salaries are the highest in the EU across all sectors with the starting salaries of lower secondary teachers being 'more than double EU average' (p. 184) when expressed in purchasing power parity terms.

In 2018, more flexible entry requirements were introduced for ECEC and primary sector teachers and this increased the supply of candidates.

Despite the strong pay levels, teacher supply problems do exist, attributable in part to the need for teachers to demonstrate competence across the three official languages. More recently, this requirement has been relaxed in some areas and supply has increased correspondingly.

Also, in recent years, efforts have been made to strengthen initial teacher education and in-service professional development.

Malta

Ensuring teaching is an attractive career in Malta remains a significant challenge. Levels of job satisfaction are low and teachers do not believe the profession is held in high esteem. There is evidence of strong early teacher motivation, but the system finds it difficult to sustain this.

The workforce has an above average proportion of women teachers with 99% in pre-primary, 86% in primary and 64% in secondary.

Poor salaries are considered to be a significant part of the problem and, although it is claimed that efforts have been made to address certain factors, issues still remain. The highest salary in secondary schools is reached after 19 years and is 26% lower than the EU average. In 2017, sectoral agreements reached with the union introduced some changes and some new allowances but it is not clear to what extent this has resulted in a significant improvement in the situation.

As a result of these issues, teacher shortages are a recurrent problem with teachers leaving the profession for a range of reasons and shortages often tackled through the use of supply staff. These staff often perform well but the inevitable high turnover can impact on quality.

Improvements have been made to ITE with the teaching requirement extended from Bachelor's to Master's (plus two years post-graduation professional experience for full qualification). Efforts have also been made to improve access to professional development

with a sectoral agreement between the employer and the union ensuring teachers made more rapid salary progression if they completed 360 hours of professional development.

Netherlands

The education system in the Netherlands faces an ‘increasing shortage of teachers’ (p. 204).

The numbers of primary teachers reduced by 18% from 2007 to 2017, although this was largely in line with trends in student numbers.

Salaries in terms of purchasing power parity are relatively strong (in lower secondary they are 35% higher than the EU average) with salaries after 15 years of service among the highest in the EU. However, shortages persist and are intensifying, which can highlight the need to make in country comparisons, i.e., compare with graduate average earnings, rather than between countries.

In 2019, a package of measures was announced to tackle shortages including making it easier to bring back retired teachers into service

A ground breaking Work Pressure Agreement was reached with unions which sought to tackle stress. This included some significant investment in primary sector education to tackle a range of issues.

Working hours for teachers in the Netherlands have been much higher than OECD average (teaching hours) and this attests to the need to take a broader view than only pay, when addressing issue of attractiveness.

ITE enrolments fell dramatically by 50% between 2003 to 2017 (partly due to a new loan scheme) but the scale of this problem meant that it had to be addressed.

Professional development for teachers is optional, but it is encouraged through a range of measures including a voucher scheme to purchase CPD materials or pay for tuition fees.

Poland

See separate case study

Portugal

In the years after the 2008 economic crisis, the Portuguese education system has faced many challenges. As in many parts of Europe, there is an ageing workforce with 43.8% of teachers aged over 50 (compared to an EU average of 36%); ‘teachers below the age of 30 account for a very small proportion of the workforce’ (p. 227) and, for new and young teachers, the

challenge of precarious contracts is significant. In 2016/2017, 18.2% of primary teachers and 21.4% of secondary teachers were on temporary contracts. Since then, efforts have been made to move teachers on to permanent contracts after a period of qualifying service although the problem remains a significant one, especially for younger teachers.

In common with other parts of Europe where post-2008 austerity generated very significant problems, teachers in Portugal exhibit relatively high levels of job satisfaction. However, teachers in Portugal have a very pessimistic view about how they are perceived by wider society – only 9.1% believe teaching is valued compared to an EU average of 17.7%.

Efforts have been made to reform initial teacher education and to also provide stronger support for teachers through professional development. However, teachers report a number of obstacles when trying to access professional development opportunities. A very high proportion (89.1%) report that employers do not support their participation in professional development (EU average is 26.7%) and that there are insufficient incentives to be involved (84.6% of teachers in Portugal compared to an EU average of 52.9%). Many more teachers in Portugal cite schedule conflicts as an obstacle participation in professional development than the EU average (77.2% compared to 52.4%).

Romania

There is evidence of significant teacher shortages in Romania, in particular, in remote areas and among certain specialist subjects. There are shortages of fully qualified primary teachers and also shortages in the secondary sector for ICT, sciences, foreign languages and the arts. One response to this problem has been to employ staff into teaching positions who lack all the necessary qualifications, with an obvious consequence for quality of provision.

One cause of these problems has been the low level of salaries and, since 2017, there have been some efforts to raise these. Associated reforms also accelerated the time required to reach the top of the pay scale while also introducing bonuses for staff in particular categories, such as geographical areas where recruitment is an acknowledged problem.

In the European Commission's assessment, some of the problems in the Romanian system can be located in the preparation for teaching that new entrants receive through initial teacher education. It is claimed that new teachers have insufficient practical experience and are inadequately prepared for the demands of a teaching position. This can result in a disconnect between the numbers of teachers being trained, and the number who actually enter teaching.

In contrast to many other European countries, and, in particular, Eastern European countries, Romania does not have a high proportion of older teachers who are likely to retire imminently. The number of teachers aged over 50 was equal to 30% in 2019, compared to an EU average of 37%. This may point to some immediate problems not being so pressing, but it is clear a number of significant challenges exist if those in the system are to be supported as they get older.

Slovakia

In 2019, Slovakia's Education and Training Monitor report asserted that 'the teaching profession remains unattractive in Slovakia' (p. 244).

The report goes on to argue that 'overall there is no shortage of teachers', however there are significant problems in higher cost areas of the country, as well as relating to particular subject areas (science, technology, engineering, mathematics and English). It further asserts that 'average teachers' salaries lag far behind comparable workers' with an expectation that, even after efforts to uplift pay, an upper secondary teacher will expect to earn 68% of average graduate earnings in 2019/20. Statutory salaries are among the lowest in the EU with very limited pay progression from the lowest to the highest point of the pay spine.

The government's strategic plan for education aims for teachers' salaries to be 85% of graduate average earnings by 2027, alongside a number of other reforms to initial teacher training and professional learning. In the 2019 ETM, both ITE and CPD were identified as areas of weakness, with the suggestion that training programmes may offer an 'easy access route to higher education' (p. 245), but, as a consequence, this does not always translate into strong numbers actually entering teaching. Teachers themselves raise concerns about professional development, arguing it is costly to access, often of little relevance and there are too few incentives to engage in CPD.

In 2019, a new law was passed covering a range of issues highlighted in this report and with the potential to impact the issues. However, some questioned whether the new initiative was sufficiently ambitious given the scale of the challenges faced.

Slovenia

Slovenia is another country where overall supply issues have appeared manageable, but where problems are emerging and where shortages in particular subject areas are already clearly visible. More than 50% of those working in tertiary education are aged over 50, although in the primary and secondary sectors, those figures are lower (34% and 38% respectively). Shortages are experienced, in particular, in rural areas, but also in special educational needs, primary education, art and all the STEM subjects.

Salaries have been low, although there have been efforts to address these issues. In the period after the economic crisis, salaries were frozen and these remain appreciably lower than average graduate earnings. Many of the resulting tensions led to industrial action and, since then, there have been further efforts to boost the relative attractiveness of salaries. Given the low base from which these efforts are trying to build, the salary issue remains an important one in the sector.

Engagement in professional development is a requirement for career progression.

Spain

Salaries for teachers in the Spanish public system compare favourably with graduate average earnings, although because of the decentralisation to Autonomous Communities, there is scope for significant variation across the country.

One feature of the system is the high proportion of teachers, often young and less experienced, who are on temporary and insecure contracts. This can lead to considerable staff turnover in some schools, with the risk that such instability impacts quality of provision.

The age profile is broadly in line with the EU average, although this does not mean it is not a cause for concern. The EU average itself indicates significant problems across the system and, therefore, a figure that is consistent with this, is not without problems.

The role of school principal, which is elected and for fixed terms, is not considered attractive and often brings an inadequate supply of applicants.

Sweden

See separate case study