Teachers Working Longer Review: final report

Annex B: Employment practice – rapid evidence assessment

Final report

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Glossary

AST   Advanced Skills Teacher

ATL   Association of Teachers and Lecturers

CEDEFOP   European Centre for the Development of Vocational Training

CIPD Chartered Institute of Personnel and Development

DB   Defined Benefit pension scheme

DC   Defined Contribution pension scheme

DCSF Department for Children, Schools and Families

DFE   Department for Education

DfES Department for Education and Skills

DWP Department for Work and Pensions

LEA   Local Education Authority

LFS   Labour Force Survey

LSIS Learning and Skills Improvement Service

NASUWT   National Association of Schoolmasters and Union of Women Teachers

NAHT National Association of Headteachers

NICE National Institute for Health and Care Excellence

NPA   Normal Pension Age

NUT   National Union of Teachers

OECD Organisation for Economic Cooperation and Development

PPA   Preparation, Planning and Assessment

PPI   Pensions Policy Institute

PT   Primary Teacher

REA   Rapid Evidence Review

SENCO   Special Educational Needs Co-ordinator

SMEs Small and medium-sized enterprises

SPA   State Pension Age

TPA   Teachers' Pension Scheme

TSN   Teachers' Support Network

WLR   Teachers Working Longer Review

Executive Summary

This report presents findings from a research project commissioned by the Department for Education (DfE) on behalf of the Review and undertaken by the Institute for Employment Studies (IES), with support of the Pensions Policy Institute (PPI). The report is based on a Rapid Evidence Assessment (REA) of the published literature to consider evidence on the broad employment context of supporting teachers to work longer. This REA forms part of the work to support the Teachers Working Longer Review, a tripartite review between DfE, teaching unions and their employers, and in particular the work of the sub-group tasked with examining employment practices.

The report documents the search and sift processes adopted, how the literature gathered maps against the key questions posed by the Review, and identifies common themes in the material. It assesses the coverage of the evidence, and highlights gaps in the existing research literature.

Aims and objectives

The aim of the REA was to summarise the existing evidence base on employment practice, because marshalling good practice in managing and developing older school staff will be at the heart of achieving longer working lives. More specifically the REA sought to address five research questions agreed with the Employment Practices sub-group, which are outlined below:

1. What is the extent to which and the reasons why older teachers drop out of the labour market, including the employment experience of older teachers?

2. What are the various career pathways which could support teachers working longer, and what is the extent to which teachers are prepared throughout their careers for moving onto alternative pathways?

3. What is the extent of current flexible working within the teaching profession e.g. managed re-deployments between schools, part-time working? What are the potential options for further flexible working, and how could existing and new practices be used to support teachers working longer?

4. To what extent are Teachers' Pension Scheme (TPS) flexibilities e.g. phased retirement understood and used by employers and teachers to support working longer?

5. Are there any barriers to their use, reflecting that teachers and employers will have to understand the different provisions of the separate sections of the TPS?

Research methods

The REA involved searching and sifting evidence from a mixture of sources to make the evidence base as comprehensive as possible. To prioritise the most relevant material from a large volume of evidence, the REA focused on English-language evidence, material published since 1997, teachers with at least five years' experience, UK settings

or countries comparable to the UK, and teachers in all types of schools. 14,308 items were found through the searches and following a screening process for quality and relevance, 59 were used in the final report.

Selected materials were reviewed in detail against a standard pro-forma and any data related to REA questions was extracted. A detailed quality assessment to compile overall ratings (-, +, ++) of each item covered research design, scope and generalisability, applicability to the UK, influence of context/aims on findings and novelty/centrality of evidence to research questions.

Explaining patterns of attrition and retention for older teachers

There have been falling attrition rates for teachers of all ages since 2000, with teachers most likely to leave the profession within the first five years of entering or aged over 55. Retention through the whole teaching career appears to be lower in the UK than in other European countries. Among headteachers, a loss of motivation was identified after seven to ten years in the role.

For older teachers, separate factors encourage exit and retention. Financial affordability is an initial criterion of whether leaving is feasible. Exit factors then include the external pull of priorities such as desire to spend time on family, hobbies and travel; and push factors such as dissatisfaction with workload, long hours and changes in education policy which may contribute to ill-health. A major cause of attrition is mental health conditions arising from work-related stress and burnout, which can be exacerbated by job workload and perceived lack of autonomy. Retention factors such as level of job enjoyment and the level of supportive management and leadership for wellbeing issues can positively influence intention to remain in teaching.

Career pathways and exit pathways

The dominant career pathway for teachers moving out of full-time classroom roles is progression into management through assistant, deputy and headteacher roles or wider system leadership. For teachers seeking to remain in a classroom-based role, opportunities include special educational needs/outreach, pastoral and roles with subject specialist responsibilities. The main alternative to full-time classroom teaching is supply teaching, commonly pursued by older teachers aged over 50. Its attraction for older teachers is: availability of part-time hours; a commensurately lower workload; and no administrative responsibilities. For senior staff with experience of headship, more options are available including: education consultancy work for local authorities; co-headship roles to mentor newly promoted heads; and school improvement roles, which are attractive because they offer more flexible working with less responsibility.

Provision of informal leadership roles, supervision and mentoring of other teachers, and special curriculum projects are suggested to help increase teacher satisfaction and morale, although there is no definitive evaluative evidence to confirm their impact on retention. Ambition is suggested to diminish as teachers age, but this is partly because some older teachers perceive opportunities as being prioritised for younger staff. A

majority of teachers want to engage in continuous professional development regardless of age or length of service. Evidence on the Advanced Skills Teacher scheme to accredit teaching skills led to positive self-reported benefits from teachers in the form of greater professional respect and recognition of expertise, although no link was sought with impact on retention. For older teachers, management training for senior roles and support to maintain emotional wellbeing for those experiencing challenges appear important.

Employment practices: leadership, organisational culture and salary levels

No robust evaluation studies were found which assess the impact of retention initiatives on older teachers or how such policies affect other staff. The wider management literature across all sectors of employment shares a similar deficit. This could be due to lack of evaluation or few initiatives being in place, and evidence reviewed suggests low implementation of initiatives aiming to retain older teachers. However, evidence identifies two main factors affecting employment levels of older teaching staff. These are:

- Leadership support which shapes organisational cultures that accommodate varying needs of staff across different career phases; and

- Practices that avoid or permit indirect age discrimination.

Leadership approaches which meet older teachers' needs, and by implication may have positive effects on retention, form part of broader approaches to accommodate staff needs and diverse personal circumstances. These are likely to include offering more support for emerging health issues in later career. In practice, there is evidence of limited provision and awareness of services such as occupational health support among teachers. Where available, users reported occupational health provision was helpful although no specific outcomes were assessed.

There appears to be relatively strong evidence that supporting older staff is not a central priority for the majority of headteachers. Schools are more likely than organisations in other sectors to monitor staff age profiles and less likely to have views on appropriate age ranges for particular jobs. However, school leaders place operational priorities first with limited emphasis on staff wellbeing and place more emphasis on recruitment of younger staff. Some literature suggests that cost considerations in employing older staff heavily influence staffing decisions and capability procedures are widely used among older staff, which can result in exit.

The other key issue affecting employment of older staff may be salary. The relative earnings of men with a teaching qualification have declined compared to teaching graduates in other occupations over the past 25 years, although female qualified teachers still earn comparatively more in teaching than in other work. This means that some teachers may judge financial benefits as no longer sufficient compared to salary packages outside the sector. Definitive evidence on this is not available, and the evidence on reasons for leaving show that financial considerations operate together with

other factors. Examples were located in the USA of innovative bonus payments being given to high-performing teachers to assist with housing costs or to encourage them to move to particular schools but without evidence of impact on retention.

Flexible working for older teachers: part-time, reduced responsibilities, job sharing, phased retirement

Take-up of flexible working appears polarised at school level for older staff, with either high or low levels of teachers using this provision. Nearly a quarter of teachers, mostly women, and over half of teachers aged over 60 work part-time. Attitudes of headteachers are a very strong determinant of implementation. There is relatively robust evidence that all types of school are opposed to offering older staff job sharing or part-time working arrangements, due to challenges for timetabling, sharing classrooms and costs compared to younger staff salaries. Evidence from other sectors suggests limited provision of flexible working policies specifically targeted at older staff, and a similarly passive approach from employers. To trial implementation of flexible working for the largest occupational group, in a sector where it is not commonly used, HR expertise to assist school leaders is likely to be required. Forms of flexible working such as job sharing are attractive to school leaders, with uptake driven by shortages of senior staff. It may be helpful to explore how these kinds of examples can be used to provide role models for flexible working more widely across teaching staff.

The Teachers' Pension Scheme and retirement planning

Reforms to the Teachers' Pension Scheme (TPS) in 2008 facilitated the possibility of flexible working to teachers aged over 55 by offering a blend of income through salary and pension in a series of phased retirement periods. However, the impact of the introduction of phased retirement has not been evaluated. Early research anticipated that it would encourage staff to retire earlier rather than later or to continue to work until the same age on reduced hours, which is consistent with international evidence. Older teachers working primarily for financial reasons were more likely to consider using the TPS flexibilities, although they anticipated reluctance from school leaders to offer phased retirement.

The key challenges for the TPS lie in effective communication of retirement options and ensuring teachers make appropriate plans. Levels of awareness and understanding in 2008 were higher among older teachers but relatively low overall. Optimising communication channels through unions may be important for raising awareness of scheme features. Teachers show no major differences from the rest of the population with a minority being active retirement planners who react to options presented rather than actively seeking out choices.

1.   Introduction

This report presents findings from a research project commissioned by the Department for Education (DfE) and undertaken by the Institute for Employment Studies (IES), with support of the Pensions Policy Institute (PPI). The work involved a Rapid Evidence Assessment (REA) of the published literature to consider the contextual nature of supporting teachers working for longer. This report documents the search and sift processes adopted, how the literature gathered maps against the key questions posed by the Review, and identifies common themes in the material. It also assesses the adequacy and coverage of the evidence, and highlights gaps in the existing research literature. This REA forms part of the work to support the Teachers' Working Longer Review, a tripartite review between DfE, teaching unions and their employers, and in particular, the work of the sub-group tasked with examining employment practices.

Background and context

Ageing workforce

In the UK over the last three decades, life expectancy has increased substantially. Alongside this trend the population and consequently the workforce is ageing. In the UK it is estimated that approximately one-third of the workforce will be aged 50 or over by 2020 (Taylor 2007). The growing number of older workers and diminishing supply of young people challenges concepts of redundancy and retirement and ignoring the skills, knowledge and contribution of older workers to organisational performance has been described as a high-risk strategy (Foresight Mental Capital and Wellbeing Project 2008).

However, while capable of continuing to work into later life, many older workers may not be motivated to do so and indeed may wish to retire, often influenced by cultural traditions and norms that are being challenged by conflicting pressures including trends in pensions' provision. For individuals involved in later-life planning, Weyman et al. (2013) identify pull and push factors that affect decisions about continuing in work, including: individual factors; financial factors including pensions; family and social network factors; and workplace factors.

Pension reform

Along with other western societies, the UK has changed its state pension arrangements to encourage individuals to work until older. From April 2010, legislation was set in place to increase the state pension age (SPA) in a series of steps, which will eventually equalise the age at which women and men can access their pensions, and increase that age to 67 years by the mid-2030s and to 68 years by the mid-2040s (PPI, 2014). While intended to manage the financial impacts of an ageing workforce as a first priority, such policies undeniably send a message that retiring at 60 or 65 years old is no longer the norm. However, along with the increased age eligibility, the benefits arising from these latter schemes are changing along with the benefits that individuals receive. The

influence of these changes on extending working lives, however, is not entirely clear (Cleal et al., 2013).

Public and private pension schemes have reacted similarly in response to an ageing population (Sinclair et al., 2013). Indeed, as part of the recommendations of the Independent Public Service Pensions Commission, Lord Hutton recommended that the Normal Pension Age (NPA) should (except for the pension schemes of the uniformed services: Armed Forces; Police; and Fire) be raised to equal State Pension Age (SPA). NPA is the age at which benefits can be taken in full. Members are able to draw pension before, at, or after NPA, although if taken early, benefits will be reduced to take account of the fact they are likely to be paid for longer.

Teachers' Pension Scheme

The Teachers' Pension Scheme (TPS) has been reformed based on Lord Hutton's recommendations and the main regulations to implement reforms have now been put in place, including aligning NPA with SPA. These came into effect from April 2015 and set the framework for reform. While the payment of pension benefits will be linked to SPA for teachers in the reformed scheme, they can still choose when to retire and whether to take pension benefits before, at or after NPA. The arrangements for the reformed scheme also include additional flexibilities to help members to plan and save for leaving earlier than NPA if they so wish, including phased retirement, and the capacity to build extra pension. Employers, at their own expense, can also choose to award teachers premature retirement. There will be a period of transition (with related transitional protection) as the new arrangements take effect and it is anticipated that teachers' retirement ages will climb slowly and that members will continue to take their benefits before NPA.

However, concerns were raised in the sector, particularly by teaching unions, about the potential impacts of working longer and the changes in the pensions arrangements; these concerns are set alongside interest in wider issues such as teacher workload and reform of teachers' pay arrangements. A programme of talks between the Department for Education and teacher trade unions on policy implementation commenced in March 2014 to discuss these issues. Following these discussions, the Secretary of State for Education commissioned a review into the health and deployment implications of teachers working longer.

Teachers Working Longer Review

The Teachers Working Longer Review (WLR) is a tripartite review between DfE, teaching unions and employers. Its aim is to explore evidence around the nature and extent of the impact of working until the age of 68, as a result of pensions reform, on teachers[1], their employers and the pupils they teach. It is specifically considering teacher health and deployment implications and possible options to mitigate these. It will make

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[1] The review is focused on teachers in leadership roles as well as classroom teachers.

recommendations to the Secretary of State for Education, and provide information that may be used to feed into any future reviews of either SPA or the link between SPA and NPA. The review and its effectiveness will feed into the implementation of the reform of the Teachers' Pension Scheme, by helping to identify measures to support the workforce with the changes to normal pension age. The review is also hoped to provide a baseline for consideration of any future changes in pension age, in terms of impact on the workforce and standards.

Overseeing the review process, and responsible for making and agreeing the final recommendations to the Secretary of State, is the WLR Steering Group with representatives from the DfE, unions and employers. This group decided to split the work into two distinct strands, each with its own sub-group, chaired by a steering group member and made up of DfE, union and employer representatives, reporting back to the steering group.

This report concerns the 'employment practice' strand, which sits alongside a strand concerning the evidence of impact of working longer (both published as annex to the Teachers Working Longer Review Interim Report).

Aims and objectives

To support the WLR, in particular the employment practice strand, in February 2015 the Department commissioned the Institute for Employment Studies (IES) and the Pensions Policy Institute (PPI) to undertake a Rapid Evidence Assessment review. The overarching aim of the REA was to summarise the existing evidence base on employment practice as, crucially, marshalling good practice in managing and developing older school staff will be at the heart of achieving longer working lives. More specifically the REA sought to address five research questions, as agreed with the Employment Practice sub-group, and shown in the table below.

Table 1: Questions and sub-questions addressed in the REA

Question	Sub-themes
What is the extent to which and the reasons why older teachers drop out of the labour market, including the employment experience of older teachers? **(retention and attrition)**	What are the patterns of attrition/retention of older teachers? At what age, length of service do teachers leave and has this changed over time? How do experiences change over teachers' working lives? What factors (push and pull) influence older teachers' decisions to stay or leave the teaching workforce? What are the relative strengths of these factors and how do they interact?
What are the various career pathways which could support teachers working longer, and what is the extent to which teachers are prepared throughout their careers for moving on to alternative pathways? **(career (exit) pathways)**	What are the alternative pathways on offer to teachers? What opportunities exist to advance or down-shift within the schools workforce? Which pathways support teachers to work longer? Which do not? Which pathways do teachers choose? Which do they not?
What do good employment practices look like which would support teachers to work longer, and how can these practices be developed, promoted and shared? **(employment practices)**	What is the appetite among employers to retain older workers? Which aspects of good employment practice help to retain teachers in work? Which inhibit their retention? Why? What is the impact of policies targeted at older workers on the rest of the workforce?
What is the extent of current flexible working within the teaching profession (e.g. managed re-deployments between schools, part-time working), what are the potential options for further flexible working, and how could existing and new practice be used to support teachers working longer? **(flexible working)**	What are the common forms of flexible working? What role does flexible working (and its various forms) play in supporting teachers to work longer? What other options exist for flexible working based on evidence from other sectors? What promotes or inhibits the use of flexible working practices, including new practices from other sectors?
To what extent are Teachers' Pension Scheme (TPS) flexibilities (e.g. phased retirement) understood and utilised by employers and teachers to support working longer, and are there any barriers to their usage – reflecting that teachers and	How far and how well do the flexibilities support teachers to work longer? Are there any barriers to the use of the flexibilities? How well do teachers and others understand the differing provisions for flexibilities offered by TPS?

Question	Sub-themes
employers will have to understand the different provisions of the separate sections of the TPS? **(role of pensions)**	What evidence is there for the use of these flexibilities? How far and how well do the flexibilities support teachers to work longer? What is the nature of the barriers to the usage of TPS flexibilities? How do the barriers affect teachers' and employers' usage of TPS flexibilities? What evidence is there from other pensions systems on the impact of pensions on extending working lives?

Covering these five areas ensured exploration of the evidence relating to the career pathways and opportunities that can support and encourage effective transitions which retain teachers in work. The management structures and practices within schools were also considered, as were pension provision and advice on flexible-working that may be available to teachers.

The primary focus of the REA was to assess the evidence that specifically related to teachers in schools (those in state-funded and independent schools, and sixth form colleges), including evidence relating to groups of teachers with protected characteristics. There was scope, however, to extend the REA within and beyond the education arena to capture broader evidence on other professions, where the evidence relating specifically to teachers was found to be limited, and to cover relevant research related to the general population where the findings are considered relevant and generalisable to the teaching profession. In some areas of the REA this was necessary (as discussed below) and the REA drew in some limited evidence from teaching outside the school sector (further and higher education, nursery education) as well as other (public) sector professional occupations with caring and/or safeguarding responsibilities.

Note to the reader

Each of the research questions is explored in a separate chapter: Chapter 3 focuses on the findings relating to retention and attrition; Chapter 4 looks at the material on career (exit) pathways; Chapter 5 covers employment practices; Chapter 6 centres on flexible working (a specific type of employment practice); and Chapter 7 examines the role of pensions.

Each of these follows the same structure. An overview is provided at the start which sets out the key research question and subsidiary enquires guiding the review and analysis of the evidence, summarises the nature of the evidence gathered and assessed, and draws out key messages from the evidence. This is followed by a more detailed discussion of the literature mapped onto the research question and is divided into the themes as they emerged from the literature.

The mapping of the material during the final sifting and full review phase indicated that much of the literature and research evidence is relevant to more than one theme or research question, indeed the research questions are heavily linked. Thus when reading the discussion of the findings within chapters dedicated to each of the research questions there is likely to be some degree of repetition (of themes, papers and findings). Where possible the linkages are noted (signposting to other relevant sections) but the repeated material has been left in situ to enable readers to gain a sense of the entirety of the literature on each of the themes.

2. Methodology

The REA review methodology utilises a robust and transparent strategy to trawl and sift evidence in order to seek out and then distil sources down to a manageable level and weed out sources of insufficient quality or relevance. The review of evidence, therefore, involved a number of steps.

This report presents the findings from the final synthesis stage drawing on the extracted evidence.

Figure 1: Summary of review process
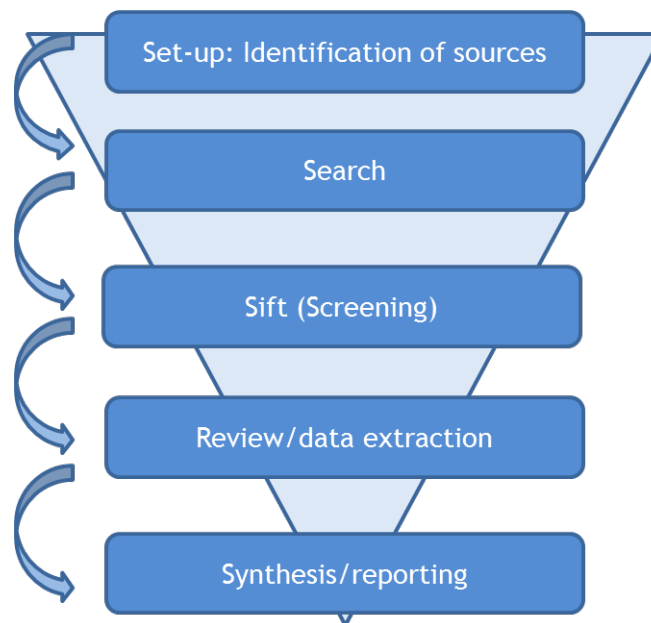
Source: IES and PPI, 2015

These steps involved:

1. A **set-up phase** where the scope of the evidence review and the research questions were confirmed, boundaries for the research were set, and priorities were determined.

2. A **search phase** where a number of databases and websites were searched using the search strategies and terms agreed, with additional materials supplied by stakeholders in response to a call for evidence put out by the Review group.

3. A **sift phase** involving an iterative process to narrow down the materials generated from the search and focus on those of most relevance to the research questions and research utilising robust methodologies.

4. A **review and analysis**, where the full papers of all the studies on the agreed shortlist (the best examples of evidence) were: a) retrieved and appraised, using checklists to ensure methodological quality (level of scientific rigour) and relevance; and b) the relevant data from the papers was extracted using a

standardised pro-forma in a way that ensured consistency across the research team and was structured around the five key review questions.

5. A **synthesis phase**, where the extracted evidence was then synthesised, gaps in the evidence were identified and, where possible, filled from wider (non-teaching specific) literature, and the findings were summarised.

More detail on each of these phases is provided in Appendix 1[2].

The analysis of the final materials identified notable gaps in the evidence particularly a lack of robust evidence on existing practices or their impact. Where there were gaps in the literature a targeted search was undertaken to capture where possible additional (limited) evidence. This involved three approaches. Firstly, a review of evidence from key research institutes and large scale policy research looking at the implications and influences on extending working lives and the actions required from stakeholders to support this. This included the National Institute for Health and Care Excellence (NICE) review of interventions to support the health and wellbeing of older workers and the Department for Work and Pensions (DWP) work on extending working lives. In this way the review drew in material from the more general literature outside of the school sector and/or teaching profession – and this was notably in the area of human resource management and flexible working. Secondly, targeted searches within the key search locations were also conducted on new issues and questions that had emerged as relevant over the course of the review. These, for instance, included issues on the role of leadership in retaining teachers. Thirdly, additional material was identified based on a review of the key sources cited by the literature on the initial shortlist. All additional materials were also subjected to a critical assessment of their methodology; however, they were not assigned a formal weighting. All additional materials identified and used in the review are listed separately in Appendix 2. The REA ultimately encompassed 111 sources.

However, even after additional targeted effort, gaps in the evidence remain. These gaps, along with the nature of the evidence, are discussed in the chapters that follow. Remaining gaps can be seen as reflecting a paucity of quality evidence, which may require new primary research to be commissioned. They may also reflect a lack of good practice in specific areas, for instance, where certain employment practices are not yet applied in the education sector. Finally, they can indicate areas for future research and new research questions.

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[2] The final shortlist for full review is provided in Appendix 2 (this contained 58 papers) with further details of their assessed relevance and quality provided in Appendix 3.

3. Findings on retention and attrition

Overview

Focus of the REA

The key research question relating to retention and attrition was:

- **What is the extent to which and the reasons why older teachers drop out of the labour market, including the employment experience of older teachers?**

Subsequent questions that guided the literature search and review for this area were:

- What are the patterns of attrition/retention of older teachers?

- At what age and length of service do teachers leave and has this changed over time?

- How do experiences change over teachers' working lives?

- What factors (push and pull) influence older teachers' decisions to stay or leave the teaching workforce?

- What are the relative strengths of these factors and how do they interact?

Nature of the evidence

The initial search and sift process found that this aspect of the REA produced the most evidence, with robust bodies of literature from both the UK and the USA. The findings were methodologically diverse, including survey, literature reviews, and qualitative case studies. Thematically, much of the evidence focused on factors influencing attrition, and specific reasons behind teachers leaving the profession.

However, analysis of the retention literature identified four challenges.

- Firstly, discussion of retention in the literature is often coupled with recruitment and thus retention is less often dealt with on its own.

- Secondly, retention and attrition are often discussed within narratives of quality and ensuring the quality of teaching supply and so retention can be about retaining the right quality of teachers (and/or dismissing teachers of lower quality) rather than any consideration of age or experienced individuals. Indeed, much of the retention literature makes little specific reference to age but where it does focus on specific groups of teachers it tends to concentrate on specialist groups such as special needs, primary teachers (PT) or Science, Technology, Engineering and Math (STEM) teachers; or teachers from ethnic minority backgrounds.

- Thirdly, much of the literature is focused on the size and nature of attrition among early career teachers (or 'new' teachers, 'beginning' teachers), which, as indicated below, is a common problem in the sector, and so tends to discuss recruitment

retention and the importance of induction, which is of less relevance to older teachers.

- Finally, the retention literature often focuses on the problems of leaving particular schools or localities or of moving within the sector, rather than leaving education altogether. This was particularly common in the literature from the USA.

Thus there was relatively little large scale data focusing on teachers leaving the profession, with the exception of an England-only dataset of state schools. This could perhaps be updated and expanded to explore current issues for older teachers.

Key messages

The literature revealed that retention is a greater problem among teachers and perhaps among teachers in the UK than in some European countries, although overall levels of teacher exit are low and falling over time in recent years. Teachers tend to leave either early on in their careers or much later on, and not all leavers exit to retirement but instead go on to other employment including self-employment.

It also revealed a range of reasons for leaving the profession but that these do not exert a uniform influence on teachers, and so can be mitigated or strengthened by other factors including background and job role. Key push or pull factors included: a desire for a better work-life balance and to achieve alternative goals (outside of teaching); perceived poor working conditions, poor peer relationships and job dissatisfaction; economic considerations such as salary, pensions, savings and thus perceived financial security; and health considerations. There are also numerous factors affecting job satisfaction which in turn indirectly affect retention. These include: progression opportunities; job demands and workload; autonomy and decision making; physical exertion; and the recognition and value of the teaching role in society.

The literature also indicated that females were more likely to leave the profession than men, most probably due to labour market exit to raise children, as were those who were more highly qualified, and those working in STEM.

Main findings

The literature reviewed suggests that retention rates in teaching are lower than in other comparable (graduate) occupations such as health, law enforcement, military, engineering, science and legal, and lower in England than in other developed countries. However, individuals most commonly leave either early in their careers to move into other employment or self-employment or aged over 50 through early retirement. Research on demographic and socio-economic characteristics of schools with high attrition rates and of those teachers more prone to leaving the profession was less developed.

Quantifying Attrition and leaving destinations

Teaching volumes and characteristics in England

The most recent statistical first release (SFR 21, DfE 2015), which reports on the composition of the school workforce employed in local authority maintained nursery, primary, secondary and special schools, academies and free schools in England, notes that there were 454,900 full-time equivalent (FTE) teachers in state-funded schools in England in November 2014. This represents a 1.2% increase on the previous year and continues the trend noticed in previous years of an increasing school workforce. Teachers thus represent a sizeable proportion of the 942 thousand full-time staff in UK state schools. The release notes an increase in the numbers working in nursery and primary settings, but a decline of 0.4% in the number of secondary school teachers (and a shift in the proportion working in academies and free schools and away from local authority maintained schools). These patterns follow demographic changes to pupil numbers and changes in provision. Amongst this increase in numbers, there has been an increase in the proportion of teachers without qualified teacher status: overall 4.5% compared to 3.7% in 2013 (and higher in academies and free schools). However, demographic characteristics of the teaching workforce remain reasonably static over time: overall 74% of teachers are female (rising to 85% in primary phase); approximately a quarter are aged under 30 (27.6% in primary, and 23.1% in secondary) and one-fifth aged 50 or over (17.5% in primary, and 18.5% in secondary); and 87.5% of teachers are White British (rising to 93.7% when focusing on headteachers).

The statistical first release also sheds light onto working practices: 23% of teachers work part-time (a fall in the proportion from the previous year of 24.7%). Frequency of part-time working varies by phase, as 26% of primary school teachers work part-time compared to 18% of secondary teachers. There has also been an increase in vacancies for full-time permanent teachers in state-funded schools on the previous year from 750 in November 2013 to 1,030 in November 2014. This represents an increase of 0.3% of all teaching posts but overall is a low teacher vacancy rate and follows patterns noticed since 2000. However, three times the number of full-time permanent vacancies (3,210), were full-time posts temporarily filled by teachers working on a short-term contract; and this number looks to have increased from the previous year. Sickness absence has declined slightly: with 55% of teachers having a period of sickness absence compared with 57% in 2013; with the average number of day's sickness absence falling; resulting in the average number of days lost (4.3 for every teacher) amongst the lowest rates recorded since 2000.

Attrition and wastage rates

An extensive review of the literature to explore factors influencing teachers' career decisions gives a comparative overview of the state of play in the UK teaching profession compared to other developed countries (Hutchings, 2010). This reports that attrition has been increasing and only a quarter of teachers in England continue in teaching until retirement, which is stated to be lower than in France, Germany, Portugal, and the

Netherlands, although comparative figures are not given. This report notes how attrition increased over time in the early 2000s and has been largely concentrated among full-time teachers, while the numbers returning to teaching after spells out of the profession have also fallen as part of a longer term trend.

However, the latest government statistics indicate that the teaching workforce overall is increasing over time so more teachers are entering than leaving the profession. The additional tables to the Statistical First release (SFR 21, DfE 2015, Table C1) indicate that in state funded schools, the wastage rate, i.e. the number of teachers who leave the sector during the year, expressed as a proportion of all those in service at the start of the year has risen slightly over time to November 2014 and was approximately 10%. This wastage rate is higher among those working part-time, male teachers, and those working in secondary settings. Also the numbers leaving to move out of service are growing whilst the numbers leaving for retirement are falling.

New research (Worth et al., 2015) using a range of data sources indicates that issues relating to teacher supply are complex but also finds teacher numbers, in general, have been growing in recent years, corresponding with Department findings. This work notes that year on year approximately 10% leave per annum (based on actual movement rather than intention) but the numbers joining have been increasing leading to the overall increase in the size of the workforce. The authors note that this contrasts with some surveys which report large numbers of teachers considering leaving the profession. They also find, through analysis of Labour Force Survey data from 2001 to 2015, that part-time teachers and teachers aged over 50 are more likely to leave the profession (Worth et al., 2015).

Research also indicates how patterns of people returning to teaching have changed over time. Earlier studies found the total number of returners had fallen and: fewer women returned in 2008/09 than in 1999/2000; there was no longer a peak of women returning in their late 40s; those women who returned did so at a younger age, commonly between 30 and 39; and the number of male returners to teaching has increased, particularly those aged over 55 (Hutchings 2010). More recent statistics from the Department (SFR 21, DfE, 2015) shows the numbers returning to teaching in the publicly funded sector have increased from 2011 and by 2014 were at their highest levels for some time (although these data are not broken down by age or gender).

USA literature suggests that retention rates in teaching are lower than for comparable graduate occupations (Guarino et al., 2006). Studies showed turnover rates of 14% among teachers compared to 11% for all occupations in the early 1990s in the USA. The attrition rate for those employed as full-time teachers in 1994 then found working in other occupations in 1997 was 18%, similar to that for graduates who entered health, law enforcement, military, engineering, science and legal support, but higher than for all other occupations.

Destinations for those leaving teaching

Recent work has assessed teacher intentions to leave and their destinations. A representative survey of teachers in England found that 20% of teachers were considering leaving teaching (Worth et al., 2015). A quarter of those considering leaving teaching intended to retire and 10% were seeking a different job in education. Half were undecided on what they would do next; suggesting many had not made concrete plans, and so ultimately might not end up leaving. Secondary teachers were significantly more likely to be considering leaving than primary teachers. This study notes that the proportions of teachers considering leaving is much higher than those who actually do leave, and this survey shows that the proportions of teachers intending to leave is lower than other surveys (e.g. NASUWT, 2014). The authors, therefore, note that intentions may not translate into behaviours.

The same study analysed samples of teachers taken from the Labour Force Survey from 2001 to 2015 to explore the destinations of those leaving the profession. Contrary to the intentions, the most common destinations of those actually leaving state schools were other jobs in education. Excluding those that left to retire, just over half (51%) went into such roles. These included teaching in private schools (16%), becoming teaching assistants (15%) and taking up a non-teaching role in a school (19%). Relatively few teachers took up new jobs outside the school sector (19%) and 40% of those moving out of the school sector took up jobs in further or higher education (Worth et al., 2015). This corresponds with the work of Hutchings (2010) which reported that most of those leaving the teaching profession leave for other employment and indeed many leave early in their teaching careers.

Demographic characteristics influencing teacher attrition

Patterns of teacher movements into and out of the profession differ by: region, subject taught and gender; between part-time and full-time teachers; and also, particularly pertinent to this review, age and career stages (Hutchings 2010, Borman and Dowling 2008). In 2008/09, the highest numbers of full-time teachers left the profession either at the start of their careers (aged 25-34), or at the end of their careers (aged 55 or over); but there were higher proportions of both men and women in almost every age group under retirement age leaving teaching in 2008/09 than in 1999/2000 (Hutchings 2010). The U-shaped turnover pattern of attrition related to age, with higher attrition rates for younger and older teachers, was also found in the USA (Shen, 1997; Guarino et al., 2006).

Research finds that gender and ethnicity are also statistically significant demographic features identified as influencing a teacher leaving the profession. Women are one-third more likely to leave the profession than men, and white teachers are 1.36 times more likely to leave than teachers from an ethnic minority group. Until the age of 50, older teachers are slightly less likely to leave than younger teachers, but there is a sharp increase in retirements from age 50, also confirmed in a study analysing the teacher follow up survey in the USA (Whitener, 1997). Marriage and having a new child were also

strongly correlated with departing the profession, as was being educated to postgraduate level. The latter may suggest that teachers with these kinds of qualifications have a higher degree of choice in career options. Among particular roles, a UK study of headteachers who left their posts prematurely showed that heads often experience a loss of motivation after seven to ten years in the role, when they feel that they have met the key challenges of their job and are starting to stagnate (Flintham, 2003). Some of these key life events, personal characteristics or career stages flag 'danger points' when it may be particularly important to take action to address risks of attrition.

There is also evidence from the USA linking length of service and attrition rates from within schools but not necessarily from the teaching profession in the long-term. In Washington, USA, attrition rates reach approximately 10% by five years of service but flatten out after ten, with 26% of first-time leavers returning to state public schools within three years (Goldhaber et al., 2015).

There are also variations in attrition by gender, ethnicity, age, type of school and subject specialism found in studies from overseas. A literature review focused on the USA notes that three studies found higher rates of attrition among female than male teachers, although female teachers tend to demonstrate higher commitment to the role based on a self-reported measure in a study of 53,000 teachers (Guarino et al., 2006). Teachers from ethnic minority groups have lower attrition rates than white teachers, but teachers with higher measured cognitive ability have a higher probability of leaving the profession. Secondary teachers are more likely to leave than primary, and STEM teachers and music teachers are more likely to leave than others. Age interacts with other personal characteristics in a Belgian study of teachers preferred retirement ages (van Droegenbruck and Spruyt, 2014), with results showing that women want to retire earlier than men. Women and kindergarten teachers stop working earlier than men and teachers of other age groups.

Specific reasons driving retention and attrition

The literature reviewed points to numerous factors influencing teachers' decisions to stay or leave the teaching workforce. In reviewing TPS changes, the most common factors behind staying and leaving teaching across all career stages based on a literature review were:

- External pull factors of interests in hobbies, voluntary work, spending time with family and travel.

- Dissatisfaction with work triggered by a variety of factors including workload, perceptions of leadership and management support, relationships with colleagues, changing demands from education policy.

- Financial attachment to work relative to personal circumstances, salary perceptions and affordability of retirement.

- Illness or disability of the teacher or a family member (Peters et al., 2008).

However, these appear to exert different levels of influence depending on an individual's characteristics, personal circumstances, job role and health.

Priorities outside work and work-life balance

A UK evidence review on teachers found that 38% selected 'not achieving a satisfactory work-life balance' as a reason for leaving (Hutchings et al., 2008). For some teachers, pull factors associated with retirement and more general wellbeing were dominant with almost one-third of survey respondents selecting 'want to pursue hobbies/interests' and one-fifth selecting 'wanting to spend more time with family' as reasons to leave (Hutchings, 2008). Similar findings were located in studies of headteachers who left their posts prematurely (Flintham, 2003) and in studies of teachers in other countries (Hansez et al., 2005; van Droegenbruck and Spruyt, 2014; Bal and Visser, 2011). A survey of the experiences of older teachers in Belgium found personal factors were the most common reason for leaving, with teachers aspiring to undertake other activities, relax, or spend more time with their families (Hansez et al., 2005:216). Teachers who have a working partner (wish to) retire earlier than teachers with no working partner in another Belgian study (van Droegenbruck and Spruyt, 2014). Family-related based reasons are more commonly cited by women.

Working conditions and peer relationships

Among older teachers, half of respondents selected 'enjoyment of teaching' as a factor keeping them in teaching (Hutchings, 2008). Conversely, survey research exploring why teachers leave found that more than half of those aged 49-60 selected 'not enjoying some aspect of their current work' (Hutchings, 2008). This has a number of components including working conditions, peer and management relationships.

A key perspective on teacher retention across all career stages is explored through the concept of resilience in a study which interviewed 100 primary and secondary school teachers in England (Gu, 2014).Three sets of relationships were found to drive this: teacher–teacher relations, teacher–principal relations, and teacher–student relations. The former two in particular provide necessary organisational and social conditions for teachers' collective and collaborative learning and development, while the third enhances capacity to be resilient on a daily basis. All three sets of relationships were a primary source of job fulfilment and teacher resilience over the course of their careers. A large majority, amounting to 91% of teachers able to sustain their resilience, reported positive influence of collegial and collaborative support on their morale, compared to 71% of teachers who did not manage to sustain resilience. The importance of promoting and sustaining these relationships was evident, with emphasis on collegial care, sympathy, and moral support being widespread among teachers who reported close relations with their colleagues. Relationships with colleagues transmitted via social norms have also been identified as influential on retirement intentions. For working as well as retired teachers, the perceived average retirement age of colleagues was positively related to the preferred retirement age in a Belgian quantitative analysis (van Droegenbruck and

Spruyt, 2014). The later teachers perceive the likely retirement age of colleagues to be, the longer the respondents wish to keep working.

Much of the literature which has explored reasons for teachers staying or leaving the profession comes from outside the UK. A study amongst teachers in Belgium aged over 55 found that contact with colleagues was ranked highly among the motivations to stay in the profession, but in contrast, poor material conditions of work and role ambiguity were cited as reasons for leaving (Hansez et al., 2005). Teachers sought modernisation and updating of teaching environments, specifically classrooms as priorities for improving their working lives.

Relationships with non-teaching staff are also influential. In research exploring the characteristics of teachers in the USA who stay and who leave the profession, 'Stayers' reported more influence over school- and teaching-related policies, and that administrators had a good understanding of their problems (Shen, 1997). Complementing this, a survey of 114 teaching graduates in the USA with up to ten years' experience found 'alienation' among teachers to be particularly common (Tye and O'Brien, 2002). This contributed to staff leaving the profession, together with accountability and paperwork, changing student characteristics, criticism and pressure from parents and the wider local community, and tension between teachers and administrators.

Management support and leadership

In common with much of the wider literature on human resource management, there is a considerable body of evidence about the role of management and leadership support, the signals it sends about how staff are valued, and its influence on teacher retention and attrition. There are numerous dimensions to supportive leadership and management practices, which are now discussed.

Leadership is a key factor influencing teachers' attachment to the profession through its impact on their morale and job satisfaction. A telephone survey conducted in 2004 with newly qualified teachers of shortage subjects in England and Wales linked the factors they identified as most likely to make them leave the profession – workload and pupil discipline – with lack of management support (Barmby, 2006). Moreover, many policies identified by teachers as important for retention were school- or job-specific factors which are dependent on management support. These included support on pupil discipline, reducing teacher workloads, efforts to tackle stress, improved school facilities and resources, and greater recognition of work done, all of which were considered important by at least 85% of respondents (Barmby, 2006). The form of support required is likely to take a different form in later career phases. As part of in-depth qualitative research on teacher career trajectories, support to promote resilience, sense of agency and wellbeing helped teachers to sustain commitment and effectiveness (Day and Gu 2007:438).

According to several studies, school leaders' impact on staff motivation and wellbeing is substantial (PricewaterhouseCoopers, 2007). A review of the literature on effective school leadership (Leithwood et al., 2006) found that "school leaders have quite strong,

positive influences on staff members' motivations and commitment" (in PricewaterhouseCoopers, 2007:51). Other literature suggests this is driven by developing resilience among teachers to cope with professional challenges. Analysis of the determinant of resilience found links between resilience and strong leadership, generating trust between teachers, peers and principals as reported by teachers, together with self-confidence (Gu, 2014). In qualitative interviews, teachers and support staff identified effective leaders as those who are visible and approachable, supportive, non-hierarchical and consultative, and responsive to concerns raised. They also provide professional development opportunities and operate performance management procedures (PricewaterhouseCoopers, 2007:52).

There is evidence in the literature that 'supportive' school leadership and effective management can have some influence on intermediate outcomes which may precede exit by reducing the incidence of stress-related illness (Dworkin et al., 1990; Bowers, 2001). This is supported by findings from a telephone survey of 282 teachers in Scotland who had retired for reasons of ill-health (Brown et al., 2006b). When interviewed two to four years after their retirement, over 50% of teachers were more negative about their employers than about their career in teaching as a whole, with over 50% regarding their overall career experience as positive. This may reflect a perceived lack of support from their employer on the part of teachers struggling with ill-health in the workplace (Brown et al., 2006b:437). Another study of teachers retiring due to ill-health in 1998/99 showed that only five out of 369 respondents felt that support received assisted them in remaining in their jobs for longer (Bowers and McIver, 2000; in Bowers, 2001:152).

Administrative support and communication with administrators can also play a role. They were related to lower levels of attrition among teachers in a literature review (Borman and Dowling, 2008). Administrative support covered assisting teachers with student discipline, institutional methods, curriculum and adjusting to the school environment. It was also characterised by regular and supportive communication with a school's principal, department chairs and administrators (Borman and Dowling, 2008).

Salary levels, financial security and wider economic conditions

Salary level has some influence on individuals' decisions to stay in or leave teaching, but the research evidence is mixed and less robust than other factors mentioned in this chapter. It may therefore act as a secondary concern, affecting retirement decisions together with other factors. Direct influence of salaries on decisions among older staff to leave or retire is not clear. One literature review notes that "teachers leaving the profession were more likely to move into self-employment than employment, suggesting that wage levels are less relevant than job satisfaction to their decisions" (Hutchings, 2010:13). Similarly a survey of USA teachers found that while salary issues were ranked last as a reason to consider leaving by teachers who had already left teaching, they were ranked first by teachers still at work in the classroom (Tye and O'Brien, 2002).

Research among active teachers about the most appropriate responses to attrition places a greater focus on salary than that among teachers leaving the profession.

Dalgety et al. (2003), drawing on data from London and the North West of England, reported that the most highly rated factor was an increase in pay (selected by 73% of the sample). Barmby and Coe (2004), evaluating the Repayment of Teachers' Loans Scheme, similarly found that financial incentives were considered to be important, but that they were not rated as highly as support with pupil discipline and reduction in teacher workload. Teachers in London rated salary as more important than teachers elsewhere, whether as an incentive to stay or a factor in decisions to leave (Dalgety et al. 2003; Smithers and Robinson, 2003; Barmby, 2006), which is unsurprising given higher living costs in the capital city, access to better paid jobs or commuting costs for those living outside.

Overall, a recent survey of NASUWT members[3] shows the majority disagree that teaching is competitive in terms of financial rewards or salaries (77% and 67% in disagreement respectively), and 60% say that they have not been able to build up personal savings as a result of the public sector pay freeze and increase in pension contributions (NASUWT, 2014). However, Labour Force Survey analysis of those leaving teaching since 2001 shows that the wages of teachers that left for another job were 10% lower than those that stayed in teaching (Worth et al., 2015). This drop remained after taking account of different characteristics among leavers and stayers, such as their initial pay level, whether they had management responsibilities, the phase of education they taught in, and their age. However, these individuals were only tracked for one year after they left teaching roles, so it is possible that they may have taken a pay cut in the short-term but anticipate larger pay rises in the long-term.

The relationship between teacher salary and retention or attrition appears stronger in the USA. A review of literature found a large amount of evidence for a link between teacher salary levels relative to other professions and retention (Guarino et al., 2006). This was confirmed by several large-scale quantitative studies from the USA exploring the relationship between salary levels and teachers' observable behaviour. For instance, a longitudinal study of new state school teachers in Missouri (1990/96-2000/01) showed that higher earnings levels were negatively associated with attrition (Podgursky et al., 2004), a finding confirmed by Kelly's (2004) study based on the Schools and Staffing/Teacher Follow-Up Surveys (see also Kirby et al., 1999; Gritz and Theobald, 1996; and Brewer, 1996). The relationship between attrition and salary is also confirmed by research that asks former teachers to explain their reasons for leaving the profession. For instance, early-career teachers in Massachusetts state schools who left teaching cited low pay and lack of prestige as reasons for the decision (Johnson and Birkeland, 2004). The level of compensation for advanced teachers with a masters degree and at least 20 years of experience had a statistically significant positive but small effect in reducing voluntary turnover, controlling for teacher and school characteristics (Ingersoll,

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[3] This is a weighted survey of over 500 teachers conducted by an external organisation. The reporting of the survey also suggests that the question wording is balanced (but the survey itself was not included in the research paper). However only union members were sampled and invited to take part in the survey.

2001a) also endorsed in other studies (Hall, Pearson, and Carroll, 1992). A further study found a relationship between self-reported commitment to teaching and salary levels (Ingersoll and Alsalam, 1997).

Broader financial circumstances are likely to be influential on decisions about teacher retirement timing. This is because pension availability and personal financial security are found in wider literature as influences on exit decisions, particularly among older workers (Cox et al., 2015). A Belgian study found the more financial security a teacher experiences, the earlier the teacher wants to stop working (van Droegenbruck and Spruyt, 2014). Teachers who own a house and are able to manage on the household's income want to stop working earlier, and teachers with more feelings of emotional exhaustion want to retire earlier. Teachers who do not feel financially secure are more likely to intend to postpone their retirement (ibidem). A UK survey of teachers suggested that pensions are among a range of factors that teachers take into account when planning retirement (Hutchings, 2008). More than one-third noted that 'financial commitments prohibit retirement' and a similar proportion 'wanted to build up a larger pension before retirement'. Just under one-third of teachers selected 'not being able to afford to retire' as a factor influencing their continuation in the profession. Some were deferring retirement in order to continue to support their families or in reaction to the recession (Hutchings, 2010), but it is not known how long such influences will continue as the economy recovers.

However, once financial obligations had been met, job satisfaction becomes the central factor influencing the decision to continue teaching (Hutchings, 2010). Thus older teachers were more likely than younger teachers to identify school-based factors as retention factors, and younger teachers were more likely than older to choose financial factors (p.6). Only 7% of teachers selected financial factors alone as reasons to remain in teaching. Similarly, research on the factors driving teachers' motivations to continue working beyond the retirement age[4], conducted at a Roman Catholic secondary school in the Netherlands, found no significant effect for financial incentives to work beyond the retirement age (Bal and Visser 2011).

The specific impact of changes to teacher pension provision introduced in the UK in 2007 is discussed in Chapter 7.

Ill-health, stress and burn-out

Health factors were identified as a determinant of exit decisions in numerous research studies; and ill-health retirement appears to be predominantly driven by poor mental health rather than other physical conditions. A UK survey of teachers found that health was the most important factor driving teachers to retire early noted by two-thirds of respondents (Hutchings, 2008).

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[4] Note that the research was concerned with motivation to continue working in general, not solely continued work in teaching or the education sector.

Data from Europe and North America exploring teacher illness and absenteeism notes that more than 47% of ill-health retirees had suffered from psychiatric illnesses, with other illnesses being predominantly musculoskeletal (22% of retirees' illnesses), neurological (14%), and cardiovascular (10%) (Bowers, 2001:153). A greater proportion of women (57%) than men (42%) reported psychiatric problems, while incidence of cardiovascular disease was three times higher in men than in women. A survey of teachers in Scotland retiring due to ill-health report similar findings that the most important causes of ill-health retirement were mental disorders (37%), followed by musculoskeletal disorders (18%), and circulatory issues (15%) (Brown et al., 2006). Seventy-eight per cent of respondents felt their illness was at least partly work related, and participants were considerably more negative about their employer than teaching itself. Fifty-one per cent of teachers were positive about teaching, compared to 24% feeling positive about their employer. A Belgian study showed that teachers suffering from emotional exhaustion stop working earlier (van Droegenbruck and Spruyt, 2014) and, together with retirement attitudes, demographic and financial factors, account for 50% of the differences in preferred retirement ages (van Droegenbruck and Spruyt, 2014).

Concerns about work pressures were found more widely among people working in teaching and teaching-related occupations. The Teacher Support Network (2014)[5] found that 88% of education workers in the UK suffered from stress, 72% from anxiety, and 45% from depression, caused mainly by workload (89%), rapid pace of change (54%), unreasonable demands from managers (53%), and student behaviour (26%). However, it is not certain whether these ill-health conditions have been independently confirmed by a medical practitioner. A majority said that this affected confidence (70%), mental health (68%), physical health (61%), work performance (60%), and personal relationships (56%). Additionally 27% took time off work and 13% left their jobs as a result of ill-health. These concerns had increased compared to the results of a similar survey conducted in 2008. In addition, factors such as lack of promotion, loss of self-confidence, and finding oneself in an increasingly alienating environment were influential on decisions to leave. A suggested remedy is increasing personal support and readiness for change by ensuring teachers are well prepared for policy changes (Day et al., 2005), but no trials were located of interventions to prevent attrition based on these recommendations.

A major review in the UK found that health was the most important factor driving teachers to retire early, noted by two-thirds of survey respondents (Hutchings, 2010). A UK-based qualitative study of headteachers who left their posts prematurely identified a category of leavers termed 'Stumblers' (Flintham, 2003). These are individuals who suffered from burn-out linked to accelerating change in the sector for which they felt unequipped to cope, and often left via ill-health retirement. School leaders' ability to cope with the

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[5] The survey sampling methodology for this study is not stated, so the validity of the research is unknown as is the level of weight that should be given to it. Nevertheless, the relevance of the findings to this review merits the paper's inclusion.

pressures of their position was key to self-perceived job performance and retention. Those school heads with the ability to set boundaries between their professional and private lives were able to limit the impact of stressful events and to recover from them. Struggling heads, by contrast, felt that they were emotionally drained by the pressure of their position, and unable to find sustainable strategies to leave the profession in a planned process.

Job demands and control

Job satisfaction is a common driver of retention in many professions (Rust et al., 1996). In addition to the factors affecting attrition and retention, other elements influence satisfaction and morale, many of which also link to health and wellbeing.

A European study in eleven countries investigated the relationship between teachers' working conditions and their wellbeing outcomes (Griva and Joekes, 2003). It tested the job demand-control-support model (Karasek and Theorell, 1990). This hypothesises that high job demands (task requirements, workload, deadlines, role conflict) and low control (amount of choice in decision-making as well as autonomy, level of decision-making authority and skills discretion) have a negative effect on wellbeing, with control mediating the negative effect on demands. To counteract these negative influences close personal relationships in the workplace can function as a buffer.

The UK element of the research focused on secondary school teachers in Greater London (Griva and Joekes, 2003). The teachers in the UK sample had significantly lower levels of experience than those in the European sample (12.4 versus 18.7 years). Their working conditions were less favourable than European teachers, with UK teachers reporting working significantly longer hours and perceiving significantly higher job demands and lower job control, greater environmental risks and levels of physical exertion. They also reported higher levels of emotional exhaustion and depersonalisation – burnout symptoms – physiological complaints, and lower levels of job satisfaction. However, this research was conducted over ten years ago and may not reflect changes to working conditions and broader education policy in the UK. The sole factor that emerged as a significant multivariate predictor of all outcomes, except physiological complaints, was job demands. This suggests that job demands placed on teachers across Europe have more influence than mitigating factors of support and resources provided to offset them (Griva and Joekes, 2003:466). Job control and social support, by contrast, were not found to be independent multivariate predictors of teachers' psychological wellbeing or physical health. The implication is that support to mitigate any negative impacts of job content and work demands is less important than addressing the perceived challenges themselves.

Barriers to satisfaction influencing attrition – workload and policy change

In the UK, a 2014 survey by the union NASUWT of its members found that the main barriers to job satisfaction reported by teachers are excessive workload (81%) and low salaries (62%). With regard to pay, the majority of teachers surveyed disagreed that

teaching is competitive with other occupations in terms of financial rewards on offer (77%) or salaries (67%). With regards to workload, just over 80% of teachers said that their workload increased over the past 12 months, with the most commonly cited reasons for this being administrative tasks (68%), curriculum and qualifications changes (61%) and inspection (61%).

The factors causing job dissatisfaction vary depending on career stage in the UK (Day et al., 2008; Day and Gu, 2009). Heavy workload and work-life balance tensions appear to have stronger influences on teacher job satisfaction in middle phases from 8-15 years' service and final career phases, whereas, in early career in-school support was more important. This corresponds with findings from a review (Hutchings et al., 2008) that reported more than half of teachers aged between 49-60 years in a survey selected 'not enjoying some aspect of their current work' and 38% selected 'not achieving a satisfactory work-life balance' as reasons for leaving. Perceived negative influence of policy changes became increasingly significant in job satisfaction for teachers' with longer service, rising from 23% of teachers with up to three years of service to 86% of those with at least 31 years' service (Day et al., 2008; Day and Gu, 2009). Unsurprisingly, given that teachers with longer service are more likely to be in senior roles, their concerns about the scale and pace of policy change were also highlighted by a large-scale review of school leadership, including literature review, large scale survey and qualitative interviews (PricewaterhouseCoopers, 2007:147). However, the study also questioned whether such changes are in fact more intense within education than in other sectors or whether they were similar to changes in all professions. It asked whether school leaders' apparent desire for stability and consistency was comparable with other professions that may be more adaptable due to organisational change occurring more often (ibidem).

Evidence on school settings and teacher attrition

The final set of characteristics which affect teacher attrition focuses on school characteristics. This considers common metrics focusing on disadvantage such as free school meals, urban versus rural settings and ethnic mix of pupils.

Specifically within a UK context, statistical modelling and econometric analysis of three datasets (the School Workforce Census (SWC), the National Pupil Database (NPD), and Edubase) showed that there is a significant association between school disadvantage and turnover rate of teachers (Allen et al., 2012). This persists even when controls are put in place for individual characteristics. Schools with fewer financial resources hiring much younger teachers account for this turnover, with early-stage, young teachers more prone to leaving the profession. A survey of the teaching profession noted differences in reasons for leaving the occupation between London and the rest of the UK (Barmby, 2002). Teachers in London expressed greater concern with support for housing and childcare. Additionally, those in London ranked obtaining 'better salaries' as more important and obtaining 'support on pupil discipline' as less important in inducing career exit than teachers in the rest of the UK.

Comparing types of teaching, evidence from the USA found that there is a high attrition rate amongst special education teachers, and these vacancies are the most difficult to fill (Walsh, 2004). Two other types of teachers are at more risk of leaving the profession early:

- Academically high performing teachers: teachers who perform well on college entrance exams and attend highly selective undergraduate institutions are more likely to leave the profession early in their careers (U.S. Department of Education, 2003b) and significantly less likely to return to teaching later in their careers (Murnane et al., 1991).

- Young and inexperienced teachers: teachers aged under 30 or with less than five years of experience leave the profession at elevated rates (U.S. Department of Education, 2003b). (p.50).

A review conducted in the USA noted that schools serving low-achieving students and with greater proportions of minority students had greater difficulty retaining teachers, mainly due to the movements of white teachers, who gravitate towards low-minority, high income schools (Guarino, 2006). Other research finds evidence of higher turnover among teachers in hard-to-staff areas such as schools with high concentrations of disadvantaged children (Whitener et al., 1997; Hanushek, 2003). For example, at the highest-poverty elementary schools in the city of Philadelphia, less than half of the original 1999-2000 staff were still teaching in these schools three years later.

Smaller schools in the USA had higher levels of attrition, as did those with higher proportions of students eligible for free school meals unrelated to urban or rural settings (Whitener et al., 1997). It is possible that attrition in small schools is caused by fewer promotion opportunities as this is common in small and medium-sized enterprises (SMEs) more generally. Finally, five studies reviewed by Whitener found attrition odds were up to three times greater in schools with dominant shares of ethnic minority pupils than schools with a majority of white pupils.

Characteristics of both teachers and schools often interplay. Comparative research analysed the characteristics of teachers who had responded to two waves of a USA teacher survey and either stayed in the same school (stayers), moved school (movers) or left the profession completely (leavers) (Shen 1997). This found that leavers and movers were in schools that had a higher percentage of teachers with fewer than three years of teaching experience, higher proportions of minority students, higher proportions of students receiving free lunches, and a lower salary for teachers with a masters degree and 20 years of teaching experience.

Conclusions

Teacher retention is a concern for policy bodies in the UK and overseas as it affects staffing supply, and 'wastage' from the sector is increasingly marginally over time. Teachers leave the profession more readily and earlier than other occupations, and in the UK, more commonly than in other countries. However retention and attrition has received

more research attention in the USA and in other European countries. Health, socio-economic, demographic, and economic factors all play a role in retirement decisions, so the issue has to be considered holistically.

Individuals most commonly leave the profession either within the first five years of teaching to move into jobs in other sectors or aged over 55 to early retirement, sometimes coupled with part-time work. Evidence shows few teachers who leave prematurely at any age subsequently return to teaching. More women leave teaching than men but the share of men leaving teaching is increasing. Those from white backgrounds, those with higher level qualifications, those working full-time and those working in secondary and specialist roles such as STEM are also more likely to leave teaching. This could reflect greater perceived options in the labour market.

Key factors affecting retirement decisions are pull and push factors of family and hobbies, financial affordability, ill-health often related to stress and burnout, provision of management support and leadership, and job demands including workload, hours and the need to adapt to changing education policies. Job satisfaction plays a key element in these retirement decisions. Managing job satisfaction encompasses numerous elements of the teaching job itself, from workload and professional support through to salary and pensions.

Pull factors are priorities outside of work such as family, caring responsibilities, hobbies, and a desire to rebalance work and life to focus more on wellbeing. These pull factors can be enhanced if individuals have a working partner and if individuals see others retiring early.

Push factors are:

- Lack of job satisfaction, enjoyment, fulfilment, and motivation for teaching.

- Perceived poor working conditions and poor working environments including perceived lack of influence over school policies, increasing workload, administrative tasks and high job demands. Heavy workload and the influence of policy changes were found to have a stronger influence on job (dis)satisfaction of older teachers than those new to the role.

- Changing relationships with pupils and parents with teachers facing challenging behaviour and feeling under increasing pressure and criticism from parents.

- Poor relationships with colleagues including peers, administration staff and senior managers who can provide moral support and bolster resilience.

- Ill-health and poor wellbeing appears higher among teachers in the UK compared to other EU countries, and has been linked to exit decisions and early retirement. Among teachers this features as poor mental health or wellbeing (stress, anxiety, depression, low confidence, emotional exhaustion, burn-out) more strongly than physical conditions. In some studies poor mental health/wellbeing has been strongly linked to heavy workload, rapid pace of change coupled with low

autonomy and influence on work decisions, and weak relationships with senior management.

Salary levels are thought to influence decisions about leaving teaching but this is less well researched in the UK and the relationship is unclear. For example there are indications that pay may have been a secondary consideration to job satisfaction among those who have already left and are reflecting on their decisions; but also that pay may factor more prominently in the thoughts of active teachers when weighing up their career decisions and what could encourage them to stay in teaching. Together with salary, pension availability, financial commitments, personal financial security and economic climate can also play a part in decisions. Financial security enables individuals to exit teaching earlier especially when coupled with push factors such as exhaustion, and once financial commitments are met, push and pull factors can exert an influence. Thus financial factors appear to exert an influence on the timing of exit rather than being the sole reason for leaving or staying.

The nuances of career decisions leading to retention and attrition are highly individualised and there is an evidence gap here within a UK context. Aside from some research on teacher demographics, school disadvantage, and comparing London with the rest of the UK, there is a lack of comparative research which analyses teacher attrition and motivations by distinct groupings. There is some evidence from the USA in this area, but it is not directly comparable to the UK due to differences in the education systems, so findings must be interpreted with caution. The literature would benefit from a more detailed breakdown of teacher attrition, using metrics such as local economic factors, urbanity, or pupils on free school meals, or by school type.

Research into reasons for attrition, with suggestions to mitigate early exit, has either neglected the age dimension altogether or has tended to focus on the exit of early career teachers rather than the loss of older and more experienced teachers. Older teacher retention has not traditionally been tackled, particularly in the UK. There is a clear need for more UK-based research on the factors influencing older workers decisions to stay or leave the teaching sector as much of the evidence is taken from one or two UK studies which are now several years old or from studies undertaken outside of the UK.

4. Findings on career (exit) pathways

Overview

Focus of the review

The two key research questions relating to career (exit) pathways that the review sought to address were:

- **What are the various career pathways which could support teachers in working longer?**

- **To what extent are teachers prepared throughout their careers for moving to alternative pathways within teaching?**

Subsequent questions that also guided the literature search and review were:

- What are the alternative pathways on offer to teachers?

- What opportunities exist to advance or down-shift within the schools workforce?

- Which pathways support teachers to work longer and which don't?

- Which pathways do teachers choose and which do they not choose?

Nature of the evidence

The initial search and sift process found a large volume of literature on alternative routes into teaching and on specialised support and development programmes for beginning teachers. It also provided some evidence on the experiences of career changers entering teaching. However, this is of less relevance to the focus for the review on routes by which teachers position themselves to continue in work after pensionable age or to retire.

Two perspectives can be distinguished in the literature on pathways that could support teachers in working longer. The first focuses on opportunities for career progression and development. It is based on the assumption that as teachers spend longer in their careers, providing them with such opportunities and new challenges will be of increasing importance. Opening up new pathways within the education sector is likely to require continued efforts from early on in teachers' careers, to enable them to prepare and qualify for new tasks. The second perspective is more concerned with opportunities to reduce responsibilities and hence workloads, to accommodate the needs arising as teachers age.

The review found limited evidence on efforts to prepare teachers for alternative pathways from early on in their careers and how this affects willingness to work longer, despite numerous studies citing the importance of career development in retention and attrition. Instead the evidence in this area is centred on access to continuing professional development more generally and is included because training and development is associated with motivation and retention in the wider human resource management literature (see also Chapter 3 above).

With regard to progression opportunities, the review found a substantial body of evidence on access to school and system leadership positions. This may reflect concerns in the UK about potential shortages of school leaders, as headteachers of the post-war baby boomer generations are retiring in large numbers. However, less evidence was identified concerning career pathways for teachers who wish to retain a focus on teaching, and to remain in classroom settings.

There was also little evidence on career pathways that would allow teachers to downshift while remaining within the education workforce. The evidence centres on teachers who enter supply teaching after leaving permanent roles as classroom teachers, in some cases while drawing their pension, and much of the literature comes from the USA. There appears to be no detailed exploration of factors affecting teacher choices of working on after pension age.

Key messages

Promotion and development can be key to retention, allowing older teachers to maintain motivation for employment and can be one pathway to retirement. However, the literature indicates that fewer classroom teachers expect progression opportunities than are interested in gaining it. Interest in advancement appears to fall with age as individuals rule this out as an option if it has not already happened for them. Plans for promotion were more common among staff already on the leadership career ladder as deputy and assistant headteachers or headteachers looking to move to system leadership roles. There is no specific evidence on risks of intergenerational tensions by extending working lives of older teachers, which may block promotion prospects for younger staff[6].

The broader literature suggests older workers face barriers to training and professional development which may be partly explained by employer reluctance to train older individuals but also older employees' lack of motivation to acquire new skills. However UK based research suggests teachers maintain an interest in updating their skills throughout their careers. Older teachers' development needs centre on leadership and management training and their own wellbeing (Day and Gu, 2007).

In the UK, classroom teaching has traditionally been regarded as having a flat structure largely requiring a move from the classroom setting to gain promotion, and clear progression and support structures within school leadership. The literature indicates that role diversification is an attractive alternative to formal progression and/or professional development, particularly for classroom teachers. This combines classroom teaching with administrative work, projects, supervision and active involvement in decision-making – which can reduce attrition. This shift towards 'teacher leadership' is linked to quality debates. It creates differentiated roles and recognition within education, and multiple career paths rather than the traditional confines of upward progression into management leadership. Developments in this area in the UK have included Advanced Skills Teachers

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[6] Note that some weak evidence suggests that older teachers may experience pressure from younger staff to take voluntary redundancy if schools offer this option – see Chapter 5.

and Excellent Teachers (no longer in operation) and more recently Leading Practitioners in addition to local level initiatives by schools but there is only limited evidence that these impact positively on retention (Fuller et al., 2013).

The literature suggests that another pathway to and after retirement is to undertake supply work. Supply teaching allows older teachers to reduce their workload, maintain social links with peers and reduce administrative burdens but still focus on classroom teaching. It enables them to ease into retirement and combine work with other interests. In terms of post retirement plans, UK survey evidence shows many teachers intend to seek part-time work after retiring to supplement their pension. This was most commonly either supply work among women and primary teachers or part-time work in another sector for men. Classroom teachers anticipated having fewer options for post-retirement work in education than headteachers. Thus teachers may return to work in education if provided with appropriate opportunities.

Main findings

A review of the international literature on teacher attrition identified three main concerns related to career development and progression as implicated in teacher attrition:

- A lack of opportunities for on-going learning and development and unchanging challenges.

- A failure of the rewards and responsibilities of teachers' careers to reflect the continuous development of skills and experience.

- Settings where there are few opportunities to diversify the tasks involved in teachers' job roles (MacDonald, 1999).

Older teachers' plans and expectations regarding mid- to-late career pathways

Promotion

There is general acceptance that older teachers are not expected to progress. Indeed, recent evidence suggests that only a relatively small portion of older teachers in England and Wales may be looking for advancement opportunities. According to a survey of the expectations of 3,865 teachers and school leaders aged 49-60 at publicly funded primary, secondary or Pupil Referral Unit (PRU)/special schools conducted in 2007 (Peters et al., 2008), 60% expected to continue to work the same hours in the same position until retiring. One-fifth intended to reduce their responsibilities in some form, by moving from full- to part-time work (12%), reducing responsibilities and pay (5%) or becoming a supply teacher (3%) (Peters et al., 2008:108). Only 8% hoped to gain promotion (ibid.). Whereas a survey focusing on the interests of 2,158 teachers drawn from a sample of 62 Local Education Authorities in England (Wilson et al., 2006) found somewhat higher levels of interest in promotion, with 48% of unpromoted older teachers (those aged 45 or over who had not been promoted to the position of deputy headteacher or headteacher) stating that they were not interested in promotion (and thus 52% interested in promotion).

An interest in promotion appears to be more common among younger teachers. Among the teachers surveyed by Peters et al., expectations of gaining promotion declined with age (Peters et al., 2008:110). According to evidence from Wilson et al., only 21% of unpromoted teachers aged 44 or under were not interested in promotion, compared to 48% of older unpromoted teachers (Wilson et al., 2006:245). This may reflect a perception in the profession that there is an age by which promotion has to be achieved (indeed NASUWT casework suggests a belief that promotion must be achieved by mid-40s, NASUWT, 2001:4). In interviews, several teachers explained that they had ruled out the possibility of promotion as they felt they were 'too old' or had previously sought but not gained promotion (Peters et al., 2008:110). Other research found that teachers did not generally see age as a barrier to promotion in its own right but some felt that it was important to 'get on the career ladder' by a specific age and some felt they were too old to apply for specific positions. In one case study school, older teachers felt that the school was more supportive to younger teachers and that younger teachers had increased opportunities for training. Others had acquired new priorities with age (Wilson et al., 2006:245). Some case study participants also highlighted the interaction between age and gender as a source of disadvantage, suggesting that from their perspective, younger men experienced advantages (Wilson et al., 2006). Ethnic minority teachers were also more likely to be interested in promotion than their white counterparts; older ethnic minority teachers were more likely to report that they would pursue promotion at all opportunities than white teachers in the same age group (Wilson et al., 2006:243)[7].

Plans to gain promotion were also much more common among deputy and assistant headteachers, according to the survey data from Peters et al. (2008). A qualitative study based on focus groups and life history interviews with 19 special educational needs (SEN) co-ordinators who had been in the profession for more than 15 years (Mackenzie, 2012) found that all of the teachers were highly motivated to remain involved in the profession. All saw themselves as remaining working with children with SEN in five years' time, although perhaps in broader capacities with a greater leadership role. Even the four participants who had more than 30 years of experience in the profession were found to be highly motivated to remain within it, with some working in a voluntary capacity after retirement (ibid.).

Interest in promotion among older workers shows that lack of desire for promotion appears fairly common. A survey of 1,494 individuals employed in various occupations and aged 50-75 conducted on behalf of the Equalities and Human Rights Commission found that one-fifth of older workers were unhappy with their overall level of responsibility. Among these discontented older workers, this was more than twice as likely to reflect a desire for promotion (11%) than a desire for reduced responsibility (4%) (Smeaton et al., 2009:21). However, those in poorer health were much more likely to want to downshift (ibid.).

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[7] There is a body of literature that looks at who is more likely to become a headteacher but this was deemed to be beyond the focus of this review.

Headteachers

Headteachers appear to be a distinct group with regards to their career plans and expectations. Peters et al. found considerable interest among headteachers in moving to system leadership roles[8], including providing mentoring for less experienced school leaders (30% interested) (2008:xvii). Twenty-seven per cent of headteachers felt that co-headship was a possibility for them (ibid.). Moreover, headteachers were significantly less likely than classroom teachers to have plans to downshift into part-time work (6%) or reduce their responsibilities (2%) (Peters et al., 2008:109). Qualitative interviews with teachers and school leaders in 12 case study schools suggested that headteachers' plans tended to be more fluid, and that they often had unconventional understandings of what it would mean for them to 'retire'. They appeared to have varied options with regard to their future careers, including job sharing and moving into a range of pre- or post-retirement roles in the education sector, like working as school improvement partners or doing educational consultancy work for their local authorities. Such roles were attractive for offering more flexible working and fewer responsibilities (2008:111; see also Chapter 6 below for more details on flexible working).

The qualitative case studies conducted by Peters et al. (2008) in 12 schools identified a number of co-headship arrangements, which tended to be designed to support younger headteachers in growing into the role to prepare for the retirement of the older headteachers involved.

Continuing professional development

The benefits of continuous learning and professional development for older workers are widely acknowledged in the literature (Phillipson and Smith, 2005:45). Within the education sector, professional development has been identified as 'of crucial importance to teachers' commitment and sense of effectiveness' in the final phase of their career (Day and Gu, 2007:438).

However, the more general literature on continuing professional development and training for older workers suggests that older workers may face disadvantage regarding access to training. Data from the English Longitudinal Study of Ageing shows that participation in training declines steadily with age, with only approximately 12% of workers aged 64 having attended a formal training course over the past 12 months, compared to nearly 30% of 52 year olds (Phillipson and Smith, 2005:45). Humphrey et al. (2003) found that employers were less likely to offer a 'fair amount' or 'great deal' of encouragement to learn more job-related skills to employees with increasing age. Moreover, those in part-time work were significantly more likely to receive no such encouragement at all, with one-third of part-time compared to a quarter of full-time workers experiencing such a lack of employer support. Logistic regression analysis of Labour Force Survey data conducted by Lissenburgh and Smeaton (2003) also found a link between increasing age and reduced access to work-related training; furthermore,

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[8] System leadership would include leadership roles beyond those in individual schools.

they found that workers in part-time or temporary contracts experience particular disadvantage with regard to accessing training.

There is some disagreement in the general literature as regards the role played by older employees' preferences in determining participation in training and development. A review of age equality practices in the Further Education and skills sector (Learning and Skills Improvement Service, 2010:50) found that many organisations overlook staff approaching retirement with regard to development opportunities, but also that older staff often do not expect to receive training opportunities beyond a certain age. Research on the attitudes of older workers more generally has found that they may sometimes fail to take up opportunities provided because they do not feel that acquiring new skills is necessary or will be rewarded (McNair, 2005). Other research, by contrast, suggests that lower participation is largely the result of employer decision making (Taylor and Unwin, 2001). In qualitative research with 300 primary and secondary school teachers in the UK, the majority of teachers maintained a persistent interest in updating and improving their knowledge and skills, and hence in accessing professional development, even among teachers with more than 31 years of experience in the profession (Day and Gu, 2007). Only those who experienced disillusionment and fatigue as a result of ill-health or low levels of in-school support were less interested in continuing professional development and tended to pursue an early exit from teaching (2007:437).

The review identified some evidence concerning the training needs of experienced education staff. The central professional learning and development needs of teachers in the final phase of their career were in the areas of leadership, and support for professional care and emotional wellbeing (Day and Gu, 2007). For those who struggled with the constant adjustments required by challenges within the workplace and their personal lives, in-school support that sheltered them from external policy initiatives and assisted them in adjusting to such changes was key to sustaining their motivation and effectiveness (2007:437). For those with additional responsibilities (58% of respondents in this phase), management training opportunities were of particular importance. According to qualitative interviews and focus groups with special-educational needs coordinators in the UK, the needs of this group also centre on leadership skills (Mackenzie, 2012:160).

Role diversification and progression opportunities for mid-/late-career teachers and preparation for new career pathways across teachers' working lives

Evidence suggests that experienced teachers may experience dissatisfaction as a result of a perceived lack of opportunities for progression and recognition, low rewards for acquiring skills and competencies, as well as a sense of reduced autonomy. This has been linked with attrition (see also Chapter 3 above). An analysis of the results of the USA Teacher Follow-up Survey found that lack of opportunities for progression and recognition for skills were related to dissatisfaction with teaching. Among private[9] school

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[9] Note the term private school is used in the paper, whereas other research uses the term independent schools.

teachers who left the profession between 1993 and 1995 citing dissatisfaction with teaching, 14% named a lack of opportunities for career advancement as one of their main reasons (Whitener et al., 1997:15). A review of the international literature on teacher attrition (MacDonald, 1999:845) found evidence that role diversification – including options to combine classroom teaching with administrative work, curriculum projects, supervising other teachers and para-professionals, or employment outside education – enhances teachers' job satisfaction and hence reduces attrition. Based on in-depth qualitative interviews with experienced teachers in the UK and Australia, those who "regularly change roles, work in a supportive culture and are reflective and are able to participate in significant decision-making in school, maintain their motivation and satisfaction" (Day, Elliot and Kington 2005:567).

Creating progression opportunities

Reflecting such evidence, there appears to be a consensus in the academic and policy literature that creating more clearly defined career paths for teachers is important to retention. For instance, Shen has argued that there is "an urgent need to build a career ladder into teaching" by creating a more differentiated salary structure and opportunities for progression (2012:87). This also reflects findings from a survey of 400 teachers recognised as 'State Teacher of the Year' in the USA, who identified creating an environment in which experienced teachers are offered a wider range of opportunities for career advancement (57%), better pay scales (82%), and more active roles for teachers in decision-making (73%) as necessary measures to reduce turnover in the profession (Goldberg and Proctor, 2000). A USA Government research report on policies for attracting, developing and retaining effective teachers recommends "[t]he development of multiple career paths that involves the creation of differentiated positions that qualified teachers can choose to pursue while remaining in the classroom" (U.S. Department of Education, International Affairs Office, and National Council on Teacher Quality, 2004:61; cf. also Natale et al., 2013; Berry et al., 2013). These differentiated positions included teacher leadership roles in classrooms or subject leadership roles.

Creating progression opportunities can be achieved through innovative applications of forms of leadership roles. Historically 'leadership' in education focused on administrative /curriculum leadership, carried out by individuals in the school leadership team (Lin Goodwin et al., 2015:109). Classroom teaching was conceived as having a flat career structure, with few differences in responsibilities between novice and veteran teachers, so promotion required exit from the classroom setting (ibid.: 113). More recently, understandings of 'teacher leadership' have become more fluid, encompassing classroom-based or informal roles (Danielson, 2007; Harrison and Killion, 2007) and notions of distributed leadership[10] within schools (PricewaterhouseCoopers, 2007; cf.

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[10] This represents new notions of leadership, beyond single and formal headship positions to encompass the collaborative efforts of many, and shared leadership. In their report PWC note several definitions of distributed leadership but define it themselves as being 'beyond mere delegation and is characterised by greater engagement with the workforce, more consultation and the creation of a shared purpose in schools.' (PwC, 2007: 90).

also Glatter and Harvey, 2006). This has been partly driven by developing teachers to ensure high levels of teacher quality, which in turn has been linked to positive educational outcomes (Lin Goodwin et al., 2015:110). However, a culture of informal teacher leadership[11] has also been linked to teacher retention, especially among new generations of teachers who expect clearer career progression (Johnson and Kardos, 2008). Some researchers argue that principals should cultivate 'teacher leaders' engaged in informal or formal leadership roles within their schools (Dauksas and White 2010). They believe that these roles can positively affect teacher retention, pointing to cultures of teacher leadership providing many elements identified by teachers as central to retention. The notion of teacher leadership is linked to recognising teachers as autonomous professionals. Lack of such recognition and management initiatives or style which encroach on teachers' professional autonomy is linked to dissatisfaction and attrition (Barmby, 2006; Day and Gu, 2007; Borman and Dowling, 2008; Shen, 1997).

Existing Interventions

Reflecting the high level of interest in career pathways, progression and teacher leadership in the policy literature, there are a number of programmes and interventions designed to support teachers' career progression in the UK and internationally. Other countries have developed encompassing and clearly defined frameworks of teacher career pathways. For instance, Singapore has a differentiated system: a teaching track focused on instructional leadership, a leadership track focused on school administration, and a specialist track focused on knowledge in specific areas of education (Lin Goodwin et al., 2015). Some USA school districts have created 'master teacher' positions, which tend to entail a higher salary and/or a reduced course load (U.S. Department of Education, International Affairs Office, and National Council on Teacher Quality, 2004:56). In the USA, there are voluntary additional certification programmes for teachers seeking recognition for their skills. For instance, the private, but largely state-funded National Board for Professional Teaching Standards provides National Board Certification for teachers, described as 'designed to reward superior teachers so that they are less inclined to leave the profession' (ibid.). However, the REA identified no evaluations of these schemes explicitly linking them to teacher retention as the focus of the literature in the USA tends to be on teacher quality.

In the UK, teachers can achieve career progression by taking on pastoral or specialist academic responsibilities, becoming coordinators for specialist subject areas or areas of activity likes special needs or outreach, or pursuing school leadership roles. There are also system leadership roles in federations[12], Local Education Authorities (LEAs) or inspection work. A range of preparation programmes and qualifications supports teachers in progressing to formal school leadership roles. These include the National College for Teaching and Leaderships' National Professional Qualifications for Middle Leadership,

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[11] Here informal teacher leadership means leadership within the classroom and involvement in defining the content of teaching, without leaving the formal role of classroom teacher and having to move into a formal leadership role outside of the classroom.
[12] Several schools under the same leadership, this is particularly common with Academies.

Senior Leadership, and Headship and schemes like the Future Leaders Trust. There are also a range of schemes designed to recognise and reward experienced classroom teachers' skills and experience. The UK Government attempted to create a more defined career progression structure in the 1998 Green Paper 'Teachers: Meeting the Challenge of Change' (DfEE), which introduced an Advanced Skills Teacher Grade, and the National Professional Qualification for Headship. The Advanced Skills Teacher[13] scheme was one way of providing teachers who choose to remain classroom teachers rather than pursuing leadership roles with defined progression opportunities. Advanced Skills Teachers were expected to share their pedagogical expertise with colleagues in their school – including new teachers and those struggling to attain standards – and in the local area, to lead professional development, and to model good teaching. Similarly, the Excellent Teachers Scheme was introduced in 2006 as "a new career pathway for experienced teachers" (DCSF, 2007:2). It allowed UK schools to recognise and offer additional remuneration to teachers identified as outstanding. Those in an 'Excellent Teacher' post were then expected to share their teaching skills within the school and contribute to the personal development of their colleagues.

Overall, there was very limited evidence on the impact (positive or negative) of these progression pathways and support programmes on the retention of experienced teachers. One exception however was Fuller et al.'s (2013) exploration of the professional identity and status of Advanced Skills Teachers. They conducted an online survey of 849 Advanced Skills Teachers, as well as in-depth interviews with a further 31. They found that teachers were motivated to pursue Advanced Skills Teacher status by the desire for a new challenge, which was identified as the primary motivator in deciding to become an AST for 97% of teachers surveyed. Teachers were also motivated to enter the route as it was felt to provide an opportunity for them to stay in the classroom (21%) and to share their skills (19%). The Advanced Skills Teacher route hence appeared to have been successful in offering progression opportunities to teachers who desire a challenge and greater responsibility without wanting to lose their focus on classroom practice which would result from pursuing a senior management role. While 27% of the Advanced Skills Teachers surveyed had plans to move into management, 66% had no such plans for the foreseeable future (Fuller et al., 2013:6). Becoming an AST was moreover experienced as offering recognition of teachers' abilities, as a form of reward for their expertise, and as providing a greater sense of professional respect. The authors speculated that the scrutiny of the assessment process involved in achieving the designation against the national standard served to 'objectify' and offer validation of individuals' teaching expertise. This seemed to be a source of satisfaction to teachers. Three-quarters of teachers surveyed felt that their skills were appreciated more in their school since attaining AST status, and 64% felt more respected by colleagues (Fuller et al., 2013:11). Parents were also perceived to recognise the accreditation and offer greater respect (2013:14).

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[13] The Advanced Skills Teacher and Excellent Teachers schemes ended in August 2013 and have been more recently replaced with Leading Practitioner designation.

Post-retirement plans and pathways

There was strong evidence to suggest that individuals retiring from work in the education sector do not necessarily withdraw from work completely, and that some may return to teaching at a later date.

A survey of education staff aged 49-60 in England and Wales provides some evidence on the post-retirement plans of workers in the sector (Peters et al., 2008). Among the 3,865 individuals surveyed, only 29% stated that they intended not to seek any further employment after retiring from teaching. Women were more likely to choose this option than men (30% compared with 25%). Eighteen per cent of the whole sample of employees planned to do some supply teaching, 17% planned to seek employment in another sector (3% full-time, 14% part-time), and 5% planned to become self-employed; 29% did not know what they would do after leaving teaching (Peters et al., 2008:127). Men were more likely than women to have plans to take up part-time work in another sector (19% versus 10%), as were those who had reported mainly financial reasons for staying in teaching as opposed to school or work related reasons (16% compared with11%). Classroom teachers were much less likely overall than headteachers to envisage part-time employment in education. Interviews with teachers suggested that compared to headteachers, they anticipated having fewer options for post-retirement work. Many anticipated that they would face a need to do part-time work to supplement their pension. However, they tended to have few definite plans, but rather to perceive this as issue to be addressed when it became pressing (2008:127).

A survey of 282 Scottish teachers who retired due to ill-health between April 1998 and March 2000 (Brown et al., 2006b) provides some evidence on the behaviour of teachers post-retirement. Most of the teachers included in the sample were experienced teachers, with the median length of time they had been employed as teachers prior to ill-health retirement being 26 years, and 66% of the sample having had managerial responsibilities. The survey found that close to half of the retired teachers (48%) wanted to return to work when surveyed two to four years later. Thirty-six per cent had found re-employment since their retirement, with the majority of first jobs being part-time (83%) and paid posts (76%). Of the 102 respondents who had found re-employment since their retirement, close to one-third (29 retirees) were undertaking jobs involving teaching-related tasks (Brown et al., 2006b:436). Hence there are suggestions that teachers may return to work in education if provided with appropriate opportunities, and if their situation allows, but the option is not yet widely taken up.

Supply teaching as a career (exit) pathway

There was some evidence to suggest that supply teaching is used by experienced teachers as a distinctive career (exit) pathway and that the closer to retirement the more attractive supply and/or part-time work becomes (and thus features more commonly in plans and expectations). Supply teaching appears to allow some older teachers to accommodate their changing needs by reducing their workload and increasing their flexibility while remaining focused on classroom teaching. Moreover, there are suggestions that supply teaching may be viewed as eliminating the administrative

burdens viewed as a negative aspect of full-time classroom teaching. The evidence suggests that it is seen by many as preferable to formalised flexible working.

As Hutchings et al.'s review of the literature on supply teaching suggests, "some older teachers use supply teaching as a way of winding down towards retirement or supplementing their pensions", while others may see it as a more attractive career path in the long run (2006:8). Among the education employees surveyed by Peters et al., 18% reported plans to do some supply teaching after retirement. Older employees, females and those teaching in primary schools were more likely to intend to do supply teaching; notably, 24% of 58-60 year olds reported such plans (Peters et al., 2008). Based on the retirements recorded by a representative sample of schools in England in 2002, 7.4% of teachers who resigned from schools can be estimated to have in fact moved to supply teaching (Smithers and Robinson, 2003:26).

The role played by supply teaching as both an alternative pathway and a way of earning money in education post-retirement is reflected in the characteristics of supply teachers noted in the work of Hutchings et al. (2006):

- According to the 2005 General Teaching Council Survey of Teachers, supply teachers are also more likely to expect to leave teaching over the next five years than regular teachers (28%, compared to 18%).

- According to a survey of a national sample of 1,554 supply teachers conducted in 2005, over 90% of supply teachers have qualified teacher status (Peters et al., 2008).

- Supply teachers are significantly older on average than regular classroom teachers, with 50% being aged 50 or over, compared to 26% of classroom teachers, and one-third of the sample were retired or approaching retirement (Peters et al., 2008).

- About 30% of the supply teacher respondents group reported that they combined supply teaching with another regular occupation. This included 7% involved in part-time teaching posts, 10% with other employment, and 8% who were caring for dependents. Sixteen per cent indicated that they were retired, engaged in hobbies, caring for grandchildren, or engaged in voluntary activities.

- Among the retired teachers active as supply teachers, close to half reported that their main reason for supply teaching was to supplement their pension; close to 80% stated that this was at least one of several reasons. This is consistent with findings from teachers who participated in case study interviews, where most reported wanting to do supply work only if this was financially necessary (Peters et al., 2008:127).

Supply teaching appears to also provide a route for some teachers to gradually 'wind down' their working life and supply teachers reported working on average 2.9 days a week. Among the supply teachers who were retired or approaching retirement surveyed by Hutchings et al. (2006), one-fifth valued the fact that supply teaching allowed them to travel or fit with their childcare or family commitments. Further reasons for entering

supply teaching identified by close to half of respondents included less work outside school hours in supply teaching, and that the overall workload is lower. Similarly, among the older teachers interviewed by Peters et al. who planned to do supply teaching post-retirement, some saw it as an appealing way of gradually withdrawing from work, and to maintain a social link with their school (Peters et al., 2008:127-8). While supply teachers were employed in six different schools per year on average according to Hutchings et al.'s survey (2006), a quarter had only worked in a single school in the last year, often one where they had been employed prior to entering supply teaching. This suggests that schools may also value the fact that returning retirees are familiar with the school's routines, pupils and values (Menter et al., 2004; in Hutchings et al., 2006:8).

As Peters et al. (2008:19) argue, the evidence concerning supply teachers "suggests that many teachers do want to have a post-retirement period with reduced workload and responsibilities". However, the majority of retired or retiring supply teachers felt that daily paid supply teaching was the ideal form of employment for them (57%), 12% wished for part-time work or a job share arrangement in a single school (2006:105). This underlines the status of supply teaching as a career (exit) pathway in its own right.

Conclusions

The evidence reviewed suggests that the majority of experienced teachers in the UK may not expect to change career pathways in the later part of their career. A significant proportion seeks to downshift by reducing responsibilities, while a minority – mainly those already in leadership roles – pursues progression opportunities. There is a perception among some teachers that it is necessary to attain promotion to school leadership roles by about 45 years old, and this may dampen career aspirations and interest in further development among staff above this age. Teaching staff of all ages show commitment to and interest in continuing professional development, but this may be influenced by levels of support and encouragement they receive from managers. The kinds of development needed by older staff range from management training for those in or moving into senior roles to managing personal wellbeing and resilience for staff finding their work demands challenging.

The literature suggests that while there are clear pathways to school leadership and progression on the leadership ladder, there may be a lack of clearly defined career pathways for experienced teachers who wish to retain a focus on classroom teaching. Classroom teachers in the UK appear to have access to limited support and rewards for developing new areas of expertise. Schemes to recognise excellence in advanced teaching skills have been well received by teachers because of the signals they send about value and recognition of professional performance, as well as providing opportunities for working autonomously, but no definitive link to retention was assessed. Headteachers appear to have more diverse career pathways open to them through education consultancy and advisory work. International evidence shows that lack of progression opportunities including role diversification and lack of autonomy and opportunities to contribute to decision-making can be linked to job dissatisfaction and attrition.

The review identified some evidence to suggest that supply teaching is used by experienced teachers as a distinctive career exit pathway, and is preferred by teachers to job sharing or part-time work. This is because it can serve to reduce workload and administrative burdens and increase flexibility within classroom teaching. The popularity of supply teaching among those pursuing such goals may also reflect a lack of flexibility in standard employment relationships in education. Other options included seeking part-time work in another sector, more likely to be considered by men than women. Classroom teachers were less likely to consider further roles in education than headteachers post-retirement. There is some evidence that a substantial minority of teachers who left due to ill-health wish to return to roles involving teaching, and that a proportion do so. Overall, teachers did not make employment plans after retirement from teaching far in advance.

5. Findings on employment practices

Overview

Focus of the review

The two key research questions relating to employment practices that the review sought to address were:

- What do good employment practices look like which would support teachers to work longer?

- How can these practices be developed, promoted and shared?

Subsequent questions that also guided the literature search and review were:

- What is the appetite among employers to retain older workers?

- Which aspects of good employment practice help to retain teachers in work, and which inhibit their retention?

- What is the impact of policies targeted at older workers on the rest of the workforce?

Nature of the evidence

The initial search and sift focused on literature relating to what can be done at the workplace level to support older teachers in working longer. 'Employment practices' were interpreted broadly to try to capture a wide range of practice, actions and initiatives. Thus employment practices are here understood to denote human resource management, specific interventions, and other behaviours on the part of teachers' employers – school leadership teams and management as well as local authorities – that impact upon experienced teachers' willingness to remain in work.

The actual evidence on employment practices that might support experienced teachers in working longer is limited. There is literature that makes recommendations on supportive employment practices for preventing teacher attrition, particularly from the USA, but it is not based on robust evidence. This review theme overlaps with the retention and attrition theme discussed above which looks at the issues driving teachers to leave the profession or retire. The employment practices literature covers both practices and interventions explicitly aimed at supporting teachers in work by addressing the 'push' factors driving teachers out of the profession and/or factors encouraging attachment to work in education. It also encompasses practices that may affect teacher attrition inadvertently, both positively and negatively. These are generally not evidence based but are instead largely policy or guidance documents and there is a lack of evaluation of the impact of employment practices. Where employment practices have been evaluated, the studies are small-scale and focused on particular categories of teachers such as those working in rural locations, rather than older staff. The review was therefore extended to bring in

selected conclusions from the broader, non-teaching specific human resources literature, to fill gaps in the literature and provide context.

Key messages

There is literature on employment practice interventions, and how interventions relate to employee wellbeing, job satisfaction or retirement intentions. But there is a lack of evidence on the impact and effectiveness of employment practices in supporting older workers to remain in employment across human resource management and teaching literatures.

The general literature on employment practices to promote longer working careers stresses the importance of taking: a) a life-course approach (as problems experienced later in careers may have developed during earlier career); b) taking an integrated and preventative approach rather than reactive approach; and c) that no single policy is effective for all (as different types of protection and support may suit teachers differently and support needs can differ between life phases).

The teaching-specific literature (supported by the wider literature) identifies the importance of school leadership and management to retaining older teachers. School leaders' support and appreciation is positively linked to older teachers' job satisfaction and thus retention but also management attitudes to older workers are associated with access to and experience of support as they act as gatekeepers to supportive practices and wellbeing interventions for older teachers. This is reflected in education sector specific advisory and guidance documents.

However research evidence suggests school leaders do not view retaining experienced teachers or implementing retention support measures as a priority, particularly those in schools with an ageing workforce, and do not regard this as part of their role. Research finds school leaders focus more on operational delivery rather than strategic workforce planning, and can view the interests of the school as separate from and opposite to the interests of older staff. However there has been no systematic assessment of the attitudes of school management and leadership towards working longer since the seminal study by Peters in 2008 (shortly after the implementation of the changes to the Teachers' Pension Scheme).

Anti-discrimination policies and real practices may also enable older workers to work longer (reduce the tendency to retire early), as there are indications from teaching unions (although not robust quantitative research) that teachers experience age discrimination or disadvantage: with case examples of heads unwilling to employ older teachers, older teachers feeling under pressure to take early retirement, older teachers less likely to receive training, and greater use of capability procedures with older teachers. However other research indicates that the education sector has more positive age management policies and practices than most other sectors (McNair and Flynn, 2006).

Pay research (particularly from the USA) finds salary levels are a potential mechanism to decrease attrition in teaching. Econometric analysis undertaken 10 years ago of national data suggests that the rate of return for a career in teaching (in terms of lifetime earnings) had been falling, particularly for men, which could make other professions more attractive (Dolton and Chung, 2004).

Rehabilitation policies and occupational support are another form of employment practice that can play an important role in ensuring teachers are able to work longer, as ill-health is linked to attrition among older teachers. However the evidence suggests teachers in the UK have low levels of awareness of and poor access to the support in this area.

Main findings

The paucity of evidence on the impact of employers' employment practices

The role of employers and human resources management in supporting older workers to remain in employment has long been a comparatively neglected aspect of the research literature (Hilsen and Midstundstad, 2015). Vickerstaff et al. (2004:1), as part of the Joseph Rowntree Foundation's 'Transitions after 50' sponsored research initiative, described the age management policies and human resources practices of the employing organisation as a "neglected area of research into retirement and older workers". This is despite the fact that the demand of employers for older workers, and the extent to which they support older workers in work and in their transitions into retirement, is arguably a crucial counterpart to policy initiatives designed to extend working lives (cf. Peters et al., 2008; Vickerstaff et al., 2004). As Vickerstaff et al. argue, "any attempt by government to influence or stem the tide of early retirement will need to focus as much on employers' management of human resources as on individual motivations and the impacts of social policy" (2004:v). The reason for this shortage of evidence could either be a lack of relevant research, or a low number of relevant interventions. The wider evidence (see Cox et al., 2015) coupled with material consulted for this review suggests both a low number of relevant interventions and a lack of appetite for employer or policy-led evaluations.

General Background

A recent review of the literature (Hilsen and Midstundstad, 2015b: 4) noted the extensive quantitative literature in this field, which is mostly based on large administrative or survey datasets, as well as some qualitative studies but limited evidence of the effects of interventions to retain older workers. The authors outline the range of measures to reduce early retirement and increase the employment of older workers including work time reductions, extra days off and bonuses. They indicate that teachers valued these incentives highly. The report cites earlier work of Midstundstad (2005, 2007) which distinguishes three categories of intervention: prevention (policies to prevent health problems and loss of working capacity, competence and motivation); retention (targeted towards vulnerable groups) and integration (targeting individuals outside of the company including re-employing older workers); and two dimensions of measures: those directed

at workplaces such as reduction of workload, reduced hours, reorganisations and change of work tasks; and those directed at individuals such as health promotion programmes, lifelong learning and work-life balance.

Studies relate interventions to workers' overall wellbeing or self-reported retirement intentions rather than to observed behaviour and actual retirement outcomes. There is also a substantial body of best practice research and case studies of company practices, notably in large companies. However, as Hilsen and Midstundstad argue, such research may be able to inspire, but cannot substitute for robust scientific evidence (2015a:47). So although there is literature on what employers could and perhaps should do, there is little on whether this is effective in supporting individuals to work longer.

Teacher Specific

The literature focused on employment practice and age in the education sector suffers from the same deficiencies as the general literature, although it does reflect certain specificities of the sector. Notably, there are few detailed explorations of specific policies designed to support (ageing) teachers or to retain them within the profession. In the USA in particular, there is a large body of good practice guidelines and advisory literature concerning workplace-based retention strategies for teachers, targeting school leaders and managers of school districts. However, no evidence was located which evaluates its impact. This reflects perceived teacher shortages, particularly in specific subjects, and recent changes to the requirements for teacher quality as part of the 2001 No Child Left Behind Act. In the UK, the advisory literature appears to be focused on the retention of school leaders, rather than experienced classroom teachers. In general the best practice literature points to the practices of mentoring (which also features heavily in retention activity for early career teachers), continuous professional development, an array of flexible working policies and financial/non-financial reward policies which help older workers feel respected and valued (Cox et al., 2015).

Studies of relevant measures, where they exist, either explore which forms of support (experienced) teachers consider to be desirable, or to provide evidence on the impact of interventions on teachers' job satisfaction rather than career and retirement plans. Indeed explorations of the impact of measures on teachers' retirement behaviour or even retirement intentions appear to be rare, although there is some qualitative evidence on the role played by teachers' employers in mediating access to supportive policies or interventions, and on teachers' responses to these provisions.

The life-course perspective on employment policies

The literature on employment practices to promote longer working careers highlights the importance of a "holistic approach that covers the whole range of different measures, and the entirety of working life, not solely older workers" (Hilsen and Midstundstad, 2015b: 6). Problems experienced by older workers, which accelerate their exit from the workforce, often reflect issues that have developed gradually over the course of their career, like occupational health issues, burnout or stress (ibid.). Similarly, a review of workplace

practices across the 15 European Union countries[14], which identified a continuum of practices ranging from highly targeted measures to comprehensive age management strategies, concluded that integrated strategies are more effective than the reactive approach adopted by most employers (Taylor, 2006). Successful strategies focus on prevention of early exit from the labour force and adapt to people's needs in different phases of their lives. Rather than being focused exclusively on older workers, they put in place workplace adjustments for all vulnerable groups (ibid.).

The international literature on teacher attrition suggested that different types of protections for working conditions vary in importance to different types of teachers, and that there may be some trade-offs from the perspective of teachers, for instance between pay and flexible working (MacDonald, 1999:844). This echoes findings from qualitative research with experienced special-educational needs coordinators in the UK (Mackenzie, 2012), which found that teachers' support needs differ between life phases. The research found that after approximately 15 years in teaching, staff needs centred on practical support to allow teachers to reconcile family and work demands, such as access to part-time and flexible work. However after around 20 years, support needs were focused on health issues and sustaining and maintaining motivation (2012:160).

With the exception of MacDonald's work this 'life course' perspective on employment policies seems underdeveloped. The literature on the factors driving teacher attrition suggests that factors driving teachers out of the profession are common across different career phases. However, the evidence focuses on practices designed to attract and support early-career teachers, and provides little evidence on how to help teachers in later career phases. Neither does it emphasise measures that employers can take to help teachers make their whole career path sustainable.

Importance of school leadership

The importance of school leadership and management was identified in the literature as a central factor in the retention of older teachers, and can influence in two key ways. Firstly, support and appreciation from leaders and administrators have been linked to morale, job satisfaction and by implication to retirement intentions and behaviour (Evans, 2001; Barmby, 2006; Day and Gu, 2007; Borman and Dowling, 2008). Secondly, managers' attitudes and approaches to older workers have been found to have a strong influence on the extent to which they experience support or in fact discrimination in the workplace. According to a review of the European literature on employment practices supporting longer employment lives across all professions, the introduction of supportive practices at the workplace level tends to be motivated by managers' attitudes towards them (Hilsen and Midstundstad, 2015a, 2015b). Moreover, managers are central intermediaries determining individuals' access to existing supportive practices and interventions. Concerning older workers more generally there can be considerable

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[14] The EU15 comprised the following 15 countries: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom.

differences between organisations' formal age-management strategies and the support actually provided to individuals (Loretto and White 2006). Indeed, where managers believe older workers to be less productive or effective as members of staff, older workers may be offered less support or fewer opportunities to progress, which has also been linked to early exits (Hilsen and Midstundstad, 2015a, 2015b).

There is some evidence to suggest that school leaders may not in fact be very concerned with retaining experienced teachers, but that they rather focus on recruiting younger staff to replace them. A survey of 672 headteachers in England and Wales in their capacity as employers found that 80% had no specific provisions in place to allow them to profit from the experience and skills of older teachers (Peters et al., 2008:50). A minority reported using coaching or mentoring schemes, with a very small share stating that retired teachers worked as supply teachers at the school or provided opportunities for older teachers to remain in work in a part-time role.

Moreover, the same survey found that headteachers leading schools with a high proportion of older teachers were more likely than those leading institutions with a low proportion of older staff to agree with the statement that 'with an ageing teacher population, I would be happy for some to move on so that we can recruit younger staff' (47% among those with a high proportion of older teachers, and 24% among those with a low proportion) and to disagree that 'retention is a greater concern than recruitment' (67% among those with a high proportion, 41% among those with a low proportion). Thus those schools that were immediately confronted with the ageing of the teaching workforce were more likely to want them to move on and to recruit younger teachers.

The evidence also suggests that as a result of their low levels of concern with retaining older teachers, supportive measures focused on retention may not be a key priority for school leaders. In a survey of headteachers in England and Wales in their role as employers conducted in 2007, 82% of respondents indicated that they sought to support older workers in reducing their responsibilities (Peters et al., 2008:177). However, only a quarter of headteachers reported that teachers in their schools had moved from full- to part-time working or vice versa. Those leading schools with high proportions of older teachers were less likely than those with few older teachers to indicate that 'we try to support staff who wish to change their hours and/or responsibilities, and to retain them within the school' (71% high proportion, 88% low proportion) (Peters et al., 2008:49).

Additionally headteachers do not necessarily see supporting older teachers to remain in the profession as one of their tasks. In the qualitative interviews conducted by Peters et al., while some headteachers viewed ensuring staff welfare as a key part of their role of ensuring high-quality education for their pupils, others appealed to the interest of the school as something distinct from and potentially opposed to the interests of older staff (Peters et al., 2008:178). This is consistent with findings from the Independent Study of School Leadership commissioned by the Department for Education and Skills to explore effective models of leadership in raising standards. This large-scale mixed methods study found that staff management, recruitment and retention were not selected by school

leaders when they were asked about their priorities going forward or their future skills needs (PricewaterhouseCoopers, 2007). The report suggests that "many school leaders may not have embraced the people agenda as fully as in other sectors e.g. in the private sector where it is one of the bedrocks on which all current thinking on leadership is based" (PricewaterhouseCoopers, 2007:vi). More generally, the School Leadership study found that many school leaders focus on an operational delivery role rather than a strategic role, which would include forward-looking human resources management. Peters et al. hence recommend leadership development efforts to highlight to school leaders that supporting staff to uphold their wellbeing and motivation is an important element of their role (Peters et al., 2008:185).

Discriminatory employment practice and/or disadvantage

Discrimination in terms of employment practice is set out in the Equality Act 2010 which brought together a number of existing laws into one place and noted the personal characteristics that are protected by the law and the behaviour that is unlawful. The protected characteristics are: age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion and belief, sex, and sexual orientation. The legislation made it unlawful to discriminate, harass or victimise another person because they have (or is perceived to have or to be associated with someone who has) any of the protected characteristics. It covers both direct discrimination – treating someone unfavourably because of a protected characteristic – and indirect discrimination – putting in place a rule or policy that has a more negative impact on someone with a protected characteristic than someone without one[15].

Real or perceived discriminatory employment practices relating to employers' attitudes towards older teachers, their treatment in terms of access to training, promotion, and flexible working, redundancy and retirement, and other elements of workplace treatment can be expected to have a relationship with attrition among older teachers. This is supported by a review of the non-teaching specific European literature on employment practices directed at older workers, which found consistent evidence that individuals experiencing age discrimination or negative attitudes from management have a preference for earlier retirement, and do in fact exit the labour market earlier (Hilsen and Midstundstad, 2015b:6).

Age discrimination has, however, been formally prohibited in the UK since the introduction of the Employment Equality (Age) Regulations 2006. Age discrimination is by its very nature hard to prove, especially where it takes the form of withheld support or the provision of limited opportunities for progression. Changes in legislation and difficulties in identifying discrimination means there is very little robust research on this issue.

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[15] http://www.equalityhumanrights.com/private-and-public-sector-guidance/guidance-all/faqs; accessed 7th December 2015

There is qualitative case study material from the teaching unions based on tribunal casework with union members and feedback from teachers themselves that indicates that older teachers experience disadvantages. Here the unions identify a number of areas of concern. For example, in evidence submitted to the House of Commons Education and Skills Select Committee, the NASUWT stressed that "some heads and governing bodies are unwilling to employ" older teachers for financial reasons, as they are entitled to a higher salary based on their experience. They argue that where appointments are based on cost considerations rather than ability, this can result in difficulties with obtaining new posts or returning to the profession after a career break, which affects both experienced teachers and mature entrants into the profession. They also note reports of older teachers feeling under pressure from younger colleagues to accept redundancy or early retirement when schools are forced to reduce staffing, as they are viewed as having access to an alternative source of income and as being more expensive to retain (NASUWT, 2012). Arguably therefore practice has been influenced by a pay spine system that has until the recent pay reforms guaranteed higher wages to more experienced staff coupled with local management in schools and delegation of budgets. NASUWT casework also provided indications that older teachers may be less likely to receive relevant training, and more likely to face informal barriers to career progression as "there is a belief in education that promotion, particularly to headship, must be achieved at the latest by the age of 45" (NASUWT, 2001:4). This is likely to impinge on women who have taken career breaks in particular. See also the discussion of promotion in career (exit) pathways above.

There are also suggestions from union evidence that employers may target older teachers in their use of capability procedures. A small scale survey of 54 NUT division secretaries conducted in 2013 (NUT, 2013) found that 85% of the surveyed division secretaries felt that their capability casework was increasing year on year. Among those who felt that workloads in this area were increasing, 17% attributed this to the removal of the default retirement age. Several commented that this increase was a result of the need for schools to push out experienced and hence expensive teachers; one argued that the rising pressure and speed of changes in schools were particularly difficult to deal with for older teachers (NUT, 2013). Women teachers over 50 and teachers with a mental health condition, including work-related stress were reported to be disproportionately represented among the secretaries' capability casework by more than 70% of respondents each; a number of respondents stressed that older teachers in general were over-represented (ibid.). The sister REA review reported evidence that: a) older/experienced teachers do not necessarily have higher levels of mental health symptoms than younger teachers (and are less likely to report stress related illnesses); b) although older teachers are likely to have some physical health symptoms as a result of the ageing process these have not been found to have a direct impact on their ability to teach; and c) older teachers were not significantly likely to experience greater health problems affecting their ability to teach than younger teachers (ICF Consultancy Services, 2016).There is also some evidence on employer practices based on self-reporting. This is provided by a large-scale employer survey on age management

practice including recruitment, retirement, benefits, pensions, management practices and discrimination. The survey involved over 2,000 firms in England, Scotland and Wales including 208 firms in the education sector, and was conducted in 2005 (prior to the introduction of the Employment Equality (Age) Regulations) for the Department for Work and Pensions. Analysis of this survey data found that 41% of education organisations, compared to 29% of organisations in all sectors, reported maximum recruitment ages, and 23% (18%) reported making recruitment decisions based on the remaining period to retirement; however, only 3% reported using age criteria directly in recruitment or targeting particular age ranges (McNair and Flynn, 2006). The education sector in general had more positive policies and practices in relation to age management prior to the introduction of the Regulations than most other sectors (McNair and Flynn 2006). They conclude that "[a]ttitudes to age also appear to be more open, and employers are less likely here than in other sectors to have strong views about appropriate age ranges for particular jobs" (2006:12). This is confirmed by a representative survey of 2,205 establishments in the UK conducted in 2009/10, which found that education establishments were least likely to believe that age affects the suitability for some jobs among the sectors surveyed (14%) (Metcalf and Meadowes, 2010:107). It also found that education institutions were particularly likely to monitor the age profile of their workforce in order to identify potential age discrimination (36% compared to 22% overall) (Metcalf and Meadowes, 2010:27).

Pay and rewards

There is a large volume of research on teacher compensation and its effect on retention, reflecting the existence of number of data sources on teacher salaries and their relative level, and the high levels of policy interest in the area. As outlined above, the evidence suggests that there is a link between teachers' (relative) salary levels and retention/ attrition (as noted in the literature reviews of: Guarino et al., 2006; Hutchings, 2010; MacDonald, 1999), although the weight of evidence in the UK is not strong. Reflecting this evidence, "remuneration has attracted attention as a primary incentive to contain or decrease attrition together with attracting quality candidates into the teaching profession" (MacDonald,1999:846). The literature tends to be broadly supportive of efforts to increase teachers' salaries to make them commensurate with those of other professionals with equivalent qualifications. However, there is disagreement in the literature as to whether teacher salaries should be determined more freely by market forces, adjusting relative to other incomes, or whether it would be preferable to provide teachers with a secure status as civil servants, benefiting from an attractive remuneration package involving a good salary, pension as well as security and a relatively high social status (MacDonald, 1999:843). Policy changes in 2013 ended automatic pay increments based on length of service for teachers and replaced these with performance-related enhancements. In addition, enhanced pay above the range maximum for staff with superior teaching skills and responsibilities for supporting other staff to develop these were introduced (e.g. additional allowances or responsibility payments such as a Teaching and Learning Responsibility payment (TLR) or Special Educational Needs (SEN) allowances).

In practice, there have been a range of initiatives and policies to offer increased rewards and incentives to selected teachers, on the basis of factors as varied as location, hardship, qualifications, specialist areas, performance and overtime (MacDonald, 1999). In the USA, some school districts and states appear to be using pay and other forms of financial rewards in an effort to retain teachers. The focus of such policies seems to be on the retention of 'effective' teachers, defined in terms of student outcomes, and on teacher retention in hard-to-staff districts (U.S. Department of Education, International Affairs Office, and National Council on Teacher Quality, 2004). For instance, in one school district, teachers identified as effective were offered annual bonuses and a loan for purchasing a new house as well as performance bonuses for moving into lower-performing schools. Moreover, a variety of different kinds of performance-based pay programmes have been implemented by several school districts across the country (ibid.). However there is no robust evidence on the impact of these schemes.

Salary Uplift

In the UK, there have been repeated efforts over the past 50 years to adjust teachers' salaries upwards to match other graduate wages. The 1974 Houghton Report and Clegg Commission review of public sector pay set up in 1980 resulted in substantive rises of teacher starting salaries. However, there is evidence that this has been insufficient to ensure a sustained match between earnings in teaching and in comparable careers over the course of teachers' careers.

An econometric study undertaken in the early 2000s' compared the net present value of the lifetime earnings (not average pay) of qualified teaching graduates who choose to enter and remain in the teaching profession with that of such graduates who had reported a teaching qualification as their highest level of education, but who were pursuing other professions (Dolton and Chung 2004). They used data from the Labour Force Survey, New Earnings Surveys, and detailed Department for Education and Skills (DfES) data on teacher earnings across the lifecycle. They found that the rate of return on choosing a career in teaching for qualified teachers in the UK has been declining for both men and women over the 25 years to 2000. For men, while teaching offered higher wages across the life course in 1975, by 2000, the age-earnings profile of alternative occupations had shifted upwards while that of teaching had shifted downwards. By contrast, for women, earnings from alternative occupations were consistently lower over their lifetime than those in teaching, and there is a particularly large gap in the later stages of women's careers. Hence for women with teaching qualifications in the UK, "teaching still appears to be a relatively well remunerated job compared to the alternatives". (Dolton and Chung, 2004:95). In terms of net present value of lifetime earnings, males' choice to enter the profession has been financially disadvantageous since the late 1970s, while for women, it has remained consistently 'profitable'. Males entering teaching since 2000 can expect to lose an average of £40,000 (secondary) to £67,000 (primary) over lifetime earnings, while women can expect to gain £42,000 to £65,000. A conclusion drawn from this evidence is that an overall fall in teacher earnings compared to other occupations may

have been an incentive for men in particular to switch professions, because they are more sensitive to salary differentials (2004:99).

More recent data analysis undertaken for the 2015 School Teachers Review Body report (DfE, 2015) focuses on average pay comparisons. This reports that, although the mean classroom teacher salary was lower than that of a graduate professional in all regions of the UK in 2013/14, and classroom teachers' median salaries and overall teacher median salaries had seen a drop of 9% to 10% in real terms between 2002/03 and 2013/14; in comparison private sector graduates' median salaries had seen a drop of 14% over the same period.

Rehabilitation and return-to-work policies

Ill-health plays a prominent role in driving attrition among older teachers. Hence occupational health support, rehabilitation and return to work policies can be expected to play an important role among workplace-based strategies to ensure that teachers are able to work longer. It should be noted that the other rapid evidence review supporting the Teachers' Working Longer Review (The Impact of Teachers Working Longer, ICF Consultancy Services, 2016) focuses on the impact of teachers working longer and so also discusses some of these issues. This REA explores the evidence relating to the physical, mental and emotional demands of roles within the teaching profession; current ill-health pensions provision for teachers, and the medical conditions underpinning applications for ill-health pensions; as well as the provision of occupational health and other support for teachers working longer.

Research in Sweden suggests that receiving vocational rehabilitation such as work training, and/or transfer to other positions within the same organisation increases the chances of public sector workers including teachers to return to work after long-term sickness absence (90 days or more) (Heijbel et al., 2013). It also suggests that high quality workplace based prevention and rehabilitation programmes leads to positive changes in employee-judged health, stress, psycho-social working conditions and rehabilitation after sickness absence. High quality programmes were those deemed to take a more holistic approach, focus on psycho-social working conditions, involve improvements in work organisation and team development, have strong health promoting leadership, and develop co-operation with occupational health services (Vinberg and Landstad, 2014).

However there is evidence to suggest that teachers in the UK may have low levels of awareness of and poor access to the support available in this area (as also outlined in ICF Consultancy Services review, 2016). Among respondents to the Teacher Support Network Group's Education Staff Health Survey 2014, which surveyed 2,463 individuals in the education workforce (including teachers, lecturers, support and administrative staff), only 8% reported that they had a wellbeing policy at work that was implemented. Similarly a survey of Scottish teachers who had retired for reasons of ill-health (Brown et al., 2006b) found that only 16% of teachers stated that an occupational health adviser was available to them in their job; however, all Scottish local authorities report providing

occupational health services (2006b: 435). Only 11% of the teachers surveyed had met with an occupational health adviser prior to their ill-health retirement. However, of this group who did attend occupational health services, 84% found them helpful (ibid.).

Guilt about the effect of absences on colleagues and concerns about how others would perceive one's absence were central drivers of 'presenteeism' (i.e. turning up for work when ill, this is a term regularly used in management and practitioner literature) among respondents in a survey of public sector workers. The quality of communication and relationships within teams and with managers were seen as key in overcoming such issues. "Managers were seen as having a role to play in sanctioning absences and reducing the burden of guilt and perceived pressure felt by staff to attend work when they are unwell" (Buck et al., 2011:506). Moreover, they were perceived as mediators, influencing the implementation of organisational policies to support rehabilitation like flexible working and re-entry interviews. Overall, socio-cultural factors, notably beliefs about appropriate behaviour, others' expectations and perceptions, acted as a strong motivation to stay at or return to work, but could also constitute barriers to doing so where they prevent individuals to take advantage of adjustments available to them or can exacerbate psychological distress. In the area of organisational policies, flexible working and phased re-entry were perceived particularly positively, while re-entry interviews and absence reporting were often perceived as punitive.

Conclusions

Supportive employment practices potentially have a key role to play in retaining experienced teachers. They exert a strong influence on working conditions and on older teachers' access to training, professional development, flexible working and other supportive practices.

The literature identified a range of good practices which would support teachers to work longer. These include access to flexible working and opportunities to reduce hours and responsibilities (see Chapter 6), but also progression opportunities and recognition for the skills of experienced teachers (see Chapter 4). Supportive practices also include efforts to improve working conditions by addressing problems like workload and administration. However, this review found limited evidence on the effectiveness of specific interventions in retaining experienced teachers; this reflects both a likely shortage of good practice and a gap in the research literature.

The development of good supportive employment practices occurs in settings where employers recognise the need to retain older workers and there is a culture of strong organisational leadership focused on effective staff management. In the USA, there is an extensive policy and consultancy literature promoting and sharing information on practices in this area, directed at school (district) managers and leaders. This is driven by concerns about the supply of high-quality teachers. However, no impact evaluations of these initiatives were located, and no evidence was found on how on widely they have been implemented in schools. In the UK, the focus of policy literature has been on school

leader retention. There is very limited good practice literature on how best to retain older classroom teachers. Support requirements of older teachers are likely to centre on preventing and addressing ill-health conditions and maintaining resilience and motivation. Although those teachers who have used occupational health services report finding such provision helpful, some literature suggests there is low awareness and take-up of these support mechanisms.

Real lifetime earnings levels and average salary levels (excluding other parts of the compensation package) have fallen over time, with some research indicating lifetime earnings have fallen further relative to other occupations. This may encourage career switching among male teachers who are more sensitive to earnings levels, but there is no evidence which identifies the relative weight of factors affecting teacher decisions to leave the profession (see Chapter 4). No evaluations were located of innovative financial incentive schemes used to retain teachers in the USA.

There is limited evidence on the attitudes of UK employers towards retention of older teachers. A survey of headteachers in England and Wales found that a large majority wished to support older teachers, but most had no specific provisions to reap the benefits of older teachers' experience and skills. Many were negative about the school-level impact of flexible working for older workers, especially costs. Schools with largest volumes of older teachers were more likely to want them to move on and to recruit younger teachers. This contrasts with arguments from the general human resource management literature, which suggest that policies to support and retain older workers are more likely to be developed by employers who are confronted with demographic pressures. It may reflect the fact that in education there is a centralised supply of newly qualified teachers and considerable policy attention on attracting and retaining new graduates into the profession. The literature on older teachers in the UK also suggests they may experience age discrimination in progression opportunities, capability procedures and experience pressures from younger staff to take voluntary redundancy when schools restructure.

Supportive practices for older teachers are driven by a specific school and leadership culture that is open to flexible working and supportive of teachers' needs. This is based on recognition that ensuring staff welfare is a responsibility of school leaders' roles of providing a high-quality education for pupils. The UK literature notes that headteachers do not necessarily see staff management in general, and supporting older teachers to remain in the profession in particular, as one of their tasks. This may imply a need for targeted leadership development to highlight that helping staff maintain their wellbeing and motivation is an important element of school leaders' roles.

6.   Findings on flexible working

Overview

Focus of the review

The three key research questions relating to flexible working that the review sought to address were:

- **What is the extent of current flexible working within the teaching profession?**

- **What are the potential options for further flexible working?**

- **How could existing and new practice be used to support teachers working longer?**

Subsequent questions that also guided the literature search and review were:

- What are the common forms of flexible working?

- What role does flexible working (and its various forms) play in supporting teaching to work longer?

- What other options exist for flexible working based on evidence from other sectors?

- What promotes or inhibits the use of flexible working practices, including new practices from other sectors?

Nature of the evidence

There is variation in the amount of evidence available on these issues. While part-time working (as a form of flexible working) is relatively well documented, there is little evidence on the incidence of other forms of flexible working in the profession – and particularly little evidence on the provision of flexible working for older teachers. Moreover, as in the case of the literature on employment practices, there is limited evidence on the impact of specific forms of flexible working on teachers' retirement behaviour and on supporting them to work longer. While such practices feature prominently in case studies, 'best practice' reports and advice documents for school leaders (particularly from the USA teacher retention literature), such publications rarely provide evidence on retirement outcomes. The shortage of evidence in this area may in some cases reflect a lack of relevant practices. For instance, the limited evidence concerning phased retirement for older workers more generally has been linked to the fact that "measures promoting a smooth transition between full employment and full retirement are rare in most countries" (Hilsen and Midstundstad, 2015b: 3). A further factor specific to the education field is that the effects of the new provisions supporting flexible working under the Teachers' Pension Scheme, which came into effect in 2007,

have not been evaluated. However the literature did provide evidence on: the importance of employers in regulating access to flexible working, the impact of pensions arrangements, and the changes in these, on phased retirement; desire for and ability of older teachers to switch to part-time work and thus reduce hours; attraction of and opportunities to reduce responsibilities and to job share.

Key messages

Analysis of data finds 23% of the teaching workforce in England works part-time and research shows part-time hours can be used to transition into or beyond retirement. However the demand for part-time work/reduced hours among older teachers may be even greater than this, particularly among teachers with families/caring responsibilities. Some older teachers may not be interested in flexible working as this can have a negative impact on career progression and access to professional development, and those with final salary pension schemes may be discouraged from reducing their hours and thus reducing their pension entitlements. The changes in TPS to career average calculations and other flexibilities may make flexible working more financially viable and thus attractive but opinions are mixed and the real impact has yet to be thoroughly tested through evaluation

The wider literature and the research focused on teachers presents a consistent finding that employers and line managers play a central role in regulating access to flexible working (including part-time work and reduced hours) for older workers; and thus managerial/leadership discretion has a large impact on retirement choices. The attitudes of and support shown by headteachers matter, and access to flexible working may depend on perceived market value of the individual. Access to flexible working is greater in schools with high proportions of flexible workers, but lower in schools with high proportions of older staff.

Other forms of flexible working include reduced responsibilities and job sharing. Reducing responsibilities (i.e. giving up a specific responsibility, moving to a non-managerial role, or moving to supply teaching) is also believed to encourage teachers to remain in work longer and/or phase retirement. However the evidence here, although positive, is limited as are such opportunities. The literature suggests that job sharing is largely the domain of school leaders (e.g. co-headships) despite an interest in this among the wider teaching workforce.

Research shows how headteachers may be reluctant to agree to teachers moving to part-time time, job sharing or to reduced responsibilities. Numerous reasons are given for this reluctance including lack of continuity of teaching and timetabling difficulties (suggesting that part-time work is more difficult to reconcile with the structure of the teaching profession than in other occupations) but also cost. Indeed older workers can be perceived as expensive compared to younger or support staff.

A minority view is that older teachers working flexibly enables the school to retain their experience. However the evidence is unclear on the extent to which flexible working is

being used in schools in a targeted manner to retain experienced teachers and/or to support teachers struggling to remain in work (due to ill-health). Similarly it is believed that allowing older workers access to flexible working increases their engagement (also job satisfaction and motivation) but there was little solid evidence on the impact of reducing hours on attachment to work among older workers and likelihood of working longer.

Main findings

Access to flexible working

The Chartered Institute of Personnel and Development (CIPD) define 'flexible working' as "a type of working arrangement which gives some degree of flexibility on how long, where, when and at what times employees work. The flexibility can be in terms of working time, working location or the pattern of working" (http://www.cipd.co.uk/hr-resources/factsheets/flexible-working.aspx). They note that flexible working practices include: part-time work, term-time working, job sharing, flexitime (where employees choose when to begin and end work, often within set limits), compressed hours (where work is reallocated into fewer and longer blocks during the week), annual hours, working from home on a regular basis, mobile working/teleworking, career breaks or sabbaticals, and zero hours contracts.

The general literature on flexible working for older workers notes that employers and line managers play a central role as intermediaries and gatekeepers, regulating access to flexible working and phased retirement (Vickerstaff et al., 2004; Loretto and White, 2006). For instance, findings from qualitative case studies in three organisations (local government, transport and health products) in the South of England (Vickerstaff et al., 2004) stressed the role of managers as gatekeepers in this regard, and found that many managers and employees experienced decision making as arbitrary. Vickerstaff et al. (2004) argued that the choice between early retirement, retirement at the 'normal age' for their organisation, or working beyond that age is largely at the discretion of managers and employing organisations. Research in the NHS and across other sectors found that having a supportive management climate and culture, giving attention to the individual needs of older workers, and involving all employees in designing workable options are important in implementing flexible working choices (Weyman et al., 2013; Cox et al., 2015). In addition, HR expertise and signposting to advice is essential to help staff understand pensions implications.

The role of employers is also confirmed in the literature on teaching. Case study research on employer approaches to flexible working in 12 schools in England and Wales (Peters et al., 2008; Hutchings et al., 2008) suggested that "the attitude of the headteacher was the most important factor affecting the flexibility offered to teachers" in a school (Peters et al., 2008:46). Both classroom teachers and headteachers argued in the qualitative interviews that there is a large element of managerial discretion in decisions on flexible working. This can be perceived as arbitrary or unfair, especially where it advantages

those with close links to the school leadership, those who play a key role in the school, and teachers of shortage subjects, resulting in a "jobs for the boys situation", as one respondent put it (Hutchings et al., 2008:12).

A survey of and interviews with headteachers in their capacity as employers found that they display varying levels of support for older teachers wishing to access flexible working (Peters et al., 2008). According to 672 headteachers in England and Wales in their capacity as employers, there were no differences between primary, secondary and special schools regarding school leaders' attitudes to flexible working for teachers. A large majority of 82% indicated that they "try to support staff who wish to change their hours and/or responsibilities, and to retain them within the school" (Peters et al., 2008:46). However, some were very reluctant to agree to teachers moving into part-time work or reduce their responsibilities. Among approximately 700 school leaders surveyed, less than a quarter (23%) were happy to employ more teachers on a part-time or job share basis (2008:47). In interviews, headteachers cited concerns over a lack of continuity in teaching and timetabling problems as the main reasons for this reluctance (Peters et al., 2008:175). According to survey responses, headteachers also perceive cost as a barrier to implementing flexible working arrangements for older teachers who wish to reduce their hours or responsibilities, with 41% of headteachers and 11 out of 39 local authorities noting this as a problem (Peters et al., 2008:174). Another study attributed this resistance to a perception of older teachers as expensive compared to younger or support staff (Hutchings et al., 2008). By contrast, a minority of headteachers saw flexible working for older teachers as beneficial for the school as a whole, as they viewed it as a way to 'rejuvenate' older teachers and to retain their experience. School leaders in schools with a high proportion of part-time teachers were more likely to be happy to increase the share of flexible working (28 versus 18%), as well as being more likely to agree that staff 'often' moved between full- and part-time work (Peters et al., 2008:47). This supports suggestions from the case studies that some schools have a positive and supportive culture with regard to flexible working for older teachers (Peters et al., 2008).

Moreover, it is not clear to what extent school leaders are using flexible working measures in a targeted manner as part of efforts to retain experienced teachers. A survey of headteachers in their role as employers found only a minority of headteachers had considered implications of the new TPS flexibilities for staff management and roles (Peters et al., 2008). Secondary school headteachers were more likely to have done so, with a quarter stating that there had been discussions about potential roles for those seeking to reduce responsibilities or hours within their schools. In primary schools, fewer than 10% of headteachers had identified potential roles within the school. Those leading schools with higher proportions of older teachers were more likely to have done so.

Some pieces of research suggest that flexible working may have a negative impact on career progression and access to continuing professional development within the teaching profession. Analysis of a survey with 2,158 teachers in England and eighteen

school case studies concluded that "the structure of the school day advantages those who are able or willing to work full-time" (Wilson et al., 2006:250). They also found that part-time workers and supply staff reported limited access to training and professional development, and in some cases felt they were not eligible for progression opportunities such as the former Advanced Skills Teachers scheme (2006:251).

Part-time working

According to the School Workforce Census (November 2014), close to a quarter (23%) of the teaching workforce in England were working part-time. Part-time working was more prevalent among female teachers, of whom 27% worked part-time, compared to 9% of all male teachers (DfE, 2015). An earlier School Workforce Census suggests that there is a tendency for teachers to transition into part-time work as they approach retirement, with more than half of teachers who continued to work in the profession after the age of 60 working part-time (DfES, 2007).

There is some evidence that there is a desire for reduced hours among older workers, both inside and outside education[16]. A survey of 1,494 individuals (using a random sample of households) aged 50-75 found that among older workers, 27% reported not being in their ideal jobs with regard to hours worked (Smeaton et al., 2009:17). According to a survey conducted on behalf of the Department for Work and Pensions, in 2011, 32% of education workers aged 50-64 said that they would prefer shorter hours than at present in their current job. This is somewhat higher than in younger age groups (19% of 18-24 year olds and 29% of 25-49 year olds), but lower than in all except one out of nine sectors surveyed[17] (DWP, 2013). Among older workers in general, moving into part-time work appears to be a strategy in later-life careers. Wilson et al. (2006) found, based on a postal survey of 2,158 teachers in England and interviews at 18 case study schools, that many teachers, particularly those with families or caring responsibilities, would welcome more flexible working.

The evidence on the extent to which older workers in general, and teachers in particular, are able to reduce their hours in later career stages is somewhat mixed. A study of older workers who moved out of permanent full-time employment found that 46% of women and 16% of men who made this move shifted to part-time working rather than leaving the labour force (Lissenburgh and Smeaton 2003:15). Among men, advancing age, health problems and the number of years spent working for their current employer reduced the likelihood of a transition into part-time work rather than exiting the labour market, while being educated to NVQ level 3 or above increased their chances of doing so. Among

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[16] Statements of preferences regarding reduced hours, job sharing etc. should however be treated with caution: Employees' financial needs are likely to play a role in determining whether they would take up such flexibility if offered (Weyman et al., 2013; Smeaton et al., 2009:28).
[17] The other sectors considered were finance, construction, manufacturing, public administration, health & social care, hospitality, retail, education, and transport.

women, health problems and age were also negatively associated with such transitions (Lissenburgh and Smeaton, 2003:16).

Evidence on teachers facing health difficulties also supports the perspective that transitions to part-time working may not be used as an employment practice to support teachers struggling to remain in work. Among 282 Scottish teachers who were surveyed after retiring for reasons of ill-health (Brown et al., 2006b), 9% (23 out of 263 working full-time at the time) were offered part-time work in response to the health issues they were experiencing. Only five were working part-time when they retired (2006b:436).

Employer support for part-time working

In teaching, there are some suggestions that not all employers are supportive of moves into part-time working. According to 2005 Labour Force Survey data, female teachers, as well as nurses, are particularly likely not to work in their profession if they work part-time (Women and Work Commission, 2006:6). Some evidence is available on employer attitudes towards older teachers reducing their hours. In a survey of headteachers in England and Wales in their role as employers (N = 672), 82% of respondents indicated that they sought to 'support staff who wish to change their hours and/or responsibilities, and to retain them within the school' (Peters et al., 2008). Whereas those leading schools with high proportions of older teachers were in fact less likely to agree with this statement (71% high proportion, 88% low proportion) (Peters et al., 2008:49). The level of practical support offered by headteachers to those wanting to move to part-time work may moreover be lower than these positive statements might suggest. Less than a quarter of headteachers (23%) reported that they 'would be happy to employ more teachers on a part-time/job share basis' (2009:47). This was more frequently reported by headteachers leading schools that already employed a high proportion of part-time teachers (ibid.), suggesting that particular schools may have cultures that are more supportive of flexible working.

This is confirmed by case studies of 12 schools conducted by Peters et al. (2008). Four headteachers were consistently sympathetic to requests from older teachers to reduce responsibilities and identified examples of part-time working. Across all school types, only 28% of headteachers surveyed agreed or agreed strongly that in their school, 'staff often move from full-time to part-time or vice versa'. This was more commonly reported by secondary (32%) than primary school headteachers (28%) (2008:46). Headteachers' resistance to increased part-time working reflected perceived difficulties for timetabling, with 60% of headteachers agreeing that part-time teachers make this more difficult, especially at secondary school level (84% of headteachers agreed compared to 57% in primaries) (2008:48). Some headteachers were also concerned about the impact of teachers sharing classes as a result of part-time working. This confirms suggestions in the literature that part-time working is considered more difficult to reconcile with the structure of the teaching profession than other professions, and that those working part-time may experience disadvantage with regard to access to training, development or career progression opportunities (Wilson et al., 2006).

Impact of part-time work on retirement

This review found very limited evidence concerning the impact of reducing their hours on older people's attachment to work, and of teachers in particular. Hermansen (2015) conducted difference-in-difference analysis on a survey of all employees aged between 61 and 62 years (N = 18,174) employed in 442 Norwegian companies. They found that the risk of individuals taking early retirement was unaffected by employers introducing measures allowing individuals to reduce their hours (ibid.). By contrast analyses of the 2006 Portuguese Labour Force Survey found that voluntary reductions in older workers' hours of work were associated with earlier full retirement (Machado and Portela, 2012). They hence concluded that such a reduction may signal a desire to exit the labour market, rather than a continued attachment to work combined with a desire to change one's working hours. An evaluation was also conducted into the effects of a German scheme designed to offer older workers a gradual transition into retirement via part-time work (Huber et al., 2013). Based on an analysis of data from the IAB Establishment Panel and administrative data, the timing of complete withdrawal from the labour market of older workers was unaffected by the part-time working scheme. Instead an increase occurred in cumulated regular employment and tenure among East German older workers whose firms offered gradual retirement, but the research found no such effects in West German workers (2013:21-22).

Reduced responsibilities

The policy literature suggests that allowing older teachers to reduce their responsibilities by changing roles may be an important strategy to allow them to remain in work for longer. This reflects evidence that doing so is considered desirable among some older teachers.

Research on the factors driving teachers' motivations to continue working beyond the retirement age[18] conducted at a Roman Catholic secondary school in the Netherlands (Bal and Visser, 2011) found that the ability to change one's work role is significantly positively related to motivation ($\square$ = .35, p < 0.05). Changes in work role were understood to include shifting to a different type of work, reducing the level of activity carried out, adapting the job content to one's personal wishes, and using bridge employment to transition to full retirement. Women found a change of work role to be more important to their motivation to remain in work beyond the retirement age (2011:595). They concluded that "allowing teachers to change jobs positively influences the motivation to continue working", and that it is hence advisable for organisations to "create policies and practices aimed at facilitating teachers in changing their job-role when they enter retirement age", for instance by becoming a manager or mentor for less experienced teachers (Bal and Visser, 2011:598). However the authors recognise that the generalisability of their

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[18] Note that the research was concerned with motivation to continue working in general, not solely continued work in teaching or the education sector

conclusions from a study based in a single Dutch secondary school to other nations and school sectors may be limited; so hence recommend a cross-national study.

The review identified limited evidence on opportunities for older workers in general and teachers in particular to reduce their responsibilities by changing roles or refocusing their work. A survey of 22 higher education institutions in the UK conducted in 2010 found that more than 20% offered sideways moves or teaching- or research-only roles to their staff, more than 30% offered reduced research and teaching, and close to 60% provided opportunities for reduced responsibilities (Centre for Diversity Policy Research and Practice, 2011). Among 282 Scottish teachers who were surveyed after retiring for reasons of ill-health (Brown et al., 2006b), only 15 were offered alternative work in the period leading up to their ill-health retirement. Moreover, seven of these indicated that the work they were offered was not appropriate to their needs (2006b: 436).

A survey of TPS members provides some evidence on the extent to which the new phased retirement option might be used as a way to reduce responsibilities (Peters et al., 2008). Among the 38% of respondents who reported that they might consider the option of phased retirement, half (51%) stated that they would use it as a way to reduce both their hours and their responsibilities, and only 4% intended to only reduce their responsibilities (2008:152). The most common potential way of reducing responsibilities identified by those considering phased retirement was to reduce or give up a specific responsibility (21%) or move to a non-managerial role (23%). Teachers also volunteered options such as moving to a role as a supply teacher, teaching assistant, consultant, preparation, planning and assessment (PPA) support teacher, special educational needs coordinator (SENCO), or into a mentoring role (2008:152) (also see Chapter 4 for a discussion of supply teaching as a career exit pathway).

There is also evidence to suggest that teachers' employers can in principle identify roles that could be usefully filled by older teachers seeking to reduce their responsibilities. A majority of the headteachers surveyed in their capacity as employers by Peters et al. reported that older and experienced teachers taking on a range of roles would be useful (Peters et al., 2008:142): 79% identified enrichment work with small groups as a useful option; 73% (particularly those at secondary schools) mentoring less experienced teachers; 62% working with student teachers; and 59% felt that older and more experienced teachers teaching a fraction of a timetable, possibly as a job share, would be useful. However, some headteachers were also sceptical regarding the financial viability of moving older teachers into such positions, arguing that this would be financially unappealing for schools, as these roles could be filled by cheaper support staff (2008:156).

Job sharing

The evidence on job sharing among classroom teachers is relatively limited. This is despite the fact that there is some evidence for demand for the practice among teachers. Among newly qualified teachers of shortage subjects in England and Wales surveyed in 2004, the introduction of job share schemes was identified as an important policy for

persuading teachers to remain in the profession by approximately 36% of respondents (Barmby, 2006).

Job sharing and school leadership

Job sharing appears in the literature notably in the guise of co-headship arrangements, where a single school leader is replaced by two headteachers who share the leadership of the school. The National College of School Leadership's[19] database of co- and dual headship arrangements suggests that the arrangement can take a variety of forms, especially concerning leaders' involvement in teaching and the split of their activities (Glatter and Harvey, 2006). There appears to be rising interest in such models, as an alternative to the traditional model of headship and a form of flexibility to be used in supporting headteachers in remaining in their positions for longer. This reflects recent concerns over the supply of potential headteachers in the UK (e.g. Hartle et al., 2007).

A survey of TPS members suggests that job sharing arrangements may be an appealing option for school leaders under the new phased retirement rules introduced in 2007 (Peters et al., 2008). Among those who stated that they would consider phased retirement (38% of the total sample), job sharing was identified as an interesting option particularly by school leaders. More than 70% of deputy and assistant heads stated that they would be interested in a school leadership role as a job share if they took partial retirement. Among headteachers, 76% – especially female headteachers and those leading primary schools – professed an interest in job shares in a school leadership role under those circumstances (2008:153-154). This was confirmed in the interviews as part of the 12 school case studies, where several headteachers, particularly in primary schools, also expressed an interest in such arrangements. However, some secondary school headteachers also expressed doubts as to whether such arrangements would be feasible within their schools (Peters et al., 2008:166-169).

The evidence suggests that co-headships tend to emerge in response to the needs of the individuals involved (Glatter and Harvey, 2006; PricewaterhouseCoopers, 2007). One factor appears to be "work-life balance issues as people near retirement" as well as childcare commitments (Glatter and Harvey, 2006:50). The 12 school case studies conducted by Peters et al. (2008) included three involving co-headship arrangements. In two of these cases, the arrangements were conceived to retain existing heads wishing to reduce their workloads and responsibilities, and in one case this followed an illness. In such cases, co-headship provides opportunities to include individuals in the senior leadership team who face other demands and would be unable to remain in such positions otherwise (PricewaterhouseCoopers, 2007), and who might otherwise have left in order to achieve a reduction in workload (Glatter and Harvey, 2006). A second driver of co-headship identified is as a means of 'leadership development' (PricewaterhouseCoopers, 2007:58). In one of the cases studied by Peters et al. (2008), the arrangement was explicitly conceived as a mentoring arrangement, to allow a

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[19] Now the National College for Teaching and Leadership

younger headteacher appointed to the co-headship to grow into the role and take over once the older co-head retired. Decisions to introduce such arrangements can hence also serve to address recruitment difficulties and retain younger experienced teachers who might otherwise have left to achieve a promotion (Glatter and Harvey, 2006). Overall, the model has been identified as reducing workloads, stress and feelings of isolation among senior leaders, and as providing opportunities for discussion and collaboration (ibid.).

A further strategy identified in the literature that allows school leaders to reduce their workload and hence makes working longer sustainable for them centres on distributed leadership in a broader sense. For instance, executive headship structures or federations often involve a single head being responsible for several schools, with another individual responsible for leadership at the level of the individual school (Glatter and Harvey, 2006; PricewaterhouseCoopers, 2007). Furthermore, according to the literature, leadership can be more or less distributed within the leadership teams of individual schools, which may involve senior support staff like bursars as well as qualified teaching staff. These arrangements can also reduce pressure on heads, and create opportunities for flexible or part-time working (ibid.). The National College for Leadership of Schools and Children's Services hence recommended that employers and governing bodies consider various forms of flexible working for school leaders, including "home working, part-time working, flexible hours, job share and co-leadership" (Hartle et al., 2007:22).

The Teachers' Pension Scheme and phased retirement

Pensions arrangements have been identified as a barrier to flexible working in later life careers so are discussed in this chapter. Chapter 7 provides a more detailed discussion on the operations of the Teachers' Pension Scheme.

Phillipson and Smith argued, "final salary' schemes strongly discourag[e] employees from cutting their working hours (or moving to lighter, less well paid positions)" before retirement (2004:53). Where such schemes are based on final salary, such downshifting results in reduced pension entitlements for individuals. Case studies of three organisations in the South of England conducted by Vickerstaff et al. (2004), involving interviews with managers and employers, concluded that their impact on pensions entitlements did in fact present a significant barrier to the take up of flexible working among older workers, despite considerable interest on the part of both organisations and individuals (2004:v).

The new flexibilities introduced as part of the 2007 reforms of the Teachers' Pension Scheme may make flexible working and reducing hours or responsibilities more financially viable for older teachers. The calculation of teachers' pensions final salary benefits is now based on the average of the best consecutive three years' salaries in the last 10 years (inflation-adjusted), meaning that reductions in hours or responsibilities in the final phase of a teachers' career are less likely to affect pension entitlement. This then enables TPS members who, following further reform in 2015, remain in or have accrued rights in the final salary scheme to access a part of their pension benefits while

continuing to work through phased retirement without the reduction in hours/salary significantly reducing the value of their final salary benefits. To take part in phased retirement, teachers must be over the age of 55 and must obtain the consent of their employer to reduce their work such that their pensionable salary is reduced by at least 20%. Periods in which teachers receive pensions benefits must last at least 12 months. Teachers under the final salary arrangement can take two phased retirements before finally retiring; whereas those in the career average arrangements (where benefits are based on actual salary per year and so a reduction in salary does not impact career average benefits already accrued) can take phased retirement three times before finally retiring, provided that no more than two of the phased retirements are before age 60. This may allow older teachers who wish to reduce their responsibilities or hours with a way to "step down not out" (Crib, 2007). School leaders can also take advantage of these options to "move into system leadership roles alongside their existing headship … offering experienced headteachers fresh challenges and a chance to refresh their careers while retaining them in their schools" (Peters et al., 2008:164).

However, evidence on scheme members' and employers' expectations shortly after the introduction of the changes (Peters et al., 2008) suggested that they may not have a strong or clear-cut effect on teachers' retirement behaviour. Only a very small proportion (4%) of Teachers' Pension Scheme members surveyed shortly after the 2007 changes indicated that they had changed their retirement plans as a result of the reforms, whereas 23% indicated that their plans had 'possibly changed' (Peters et al., 2008:146). Moreover, the survey responses do not suggest that the TPS changes were likely to have a large impact on extending working lives, based on retirement intentions. Of those who stated that they had changed their plans:

- 25%, (or 7% of all respondents) reported intentions to retire earlier after the changes, and 24% (or 6% of the total) were now considering staying longer (Peters et al., 2008:148).

- 24% (or 6% of the whole sample) planned to draw their pension later as a result of the changes than previously planned, while 13% (4% of the whole sample) planned to do so earlier.

However, given the limited understanding of the new rules among many of the respondents, and the fact that retirement intentions do not necessarily map onto actual behaviour, particularly given the complexity of the rules governing pensions, these conclusions should be treated with caution.

The Peters et al. (2008) study examined a small number of cases in which individuals had already taken advantage of the new provisions in order to take phased retirement or step down from leadership positions with the certainty that this would not negatively affect their pension entitlements (also reported in Hutchings et al., 2008). The research found that in none of the cases examined did the teachers concerned have any "intention of remaining in the profession longer than they had previously planned"; they rather used the provisions to achieve a better quality of life during the unchanged length of time they

were planning to remain in the profession (ibid). This echoes comments from headteachers in school case studies who expected the changes to lead teachers to have "more energy and increased motivation" (Peters et al., 2008:172-3). This suggests that while teachers who take advantage of the flexibilities may have a higher level of job satisfaction and motivation, they may not work longer than they would otherwise have done.

Surveys of headteachers in their capacity as employers found mixed opinions among headteachers about the impact of the flexibilities on the retention of older teachers (Peters et al., 2008). While 41% believed that the retention of experienced teachers within their school would be improved and the same proportion believed that teachers would extend their working lives, 'continuing in a reduced capacity beyond the age at which they would have otherwise retired', more than half (54%) expected teachers to reduce their hours and responsibilities even in cases where they would otherwise have continued to work full-time to age 60 (2008:144). Headteachers (as employers) expected many older teachers to be likely to want to reduce their responsibilities (39%) and hours (37%), and that the proportion of teachers working part-time was likely to increase (60%) (ibid.).

Among the TPS members surveyed by Peters et al. shortly after the introduction of the new flexibilities, only 5% expected to take phased retirement. Moreover, this was the group least likely to describe their retirement plans as certain (2008:150). Headteachers and younger teachers (49-51 years) were less likely to intend to take up this option. However, nearly two-fifths of employees (38%) reported that this was an option they would explore further or give consideration to in the future (2008:151). It is important to note, however, that "many teachers and headteachers seemed to think that phased retirement meant any 'staged' process of reducing hours and responsibilities before retirement. Thus these employees were not necessarily thinking of the specific meaning of phased retirement set out in the pension regulations when they said that it is an option they would consider" (Peters et al., 2008:151). Members at all levels were similarly likely to report an intention to consider phased retirement: 35% of headteachers, 39% of deputy or assistant heads, and 39% of teachers (2008:151). Teachers who stated that their main reason for remaining in work is financial obligations, rather than enjoyment of their work, were more ready to consider phased retirement (40% compared to 30% of those who enjoy teaching) (Peters et al., 2008:165).

The survey also provides some evidence on what form of working those taking phased retirement would adopt. Half (51%) of scheme members who stated that they would consider phased retirement stated that they would use it as a way to reduce both their hours and their responsibilities; 38% intended to reduce only their hours, and only 4% intended to only reduce their responsibilities (Peters et al., 2008:152). Teachers who stated that they would consider phased retirement identified enrichment work (71%) and classroom teaching, potentially part-time or under a job share arrangement (68%) as options for them. More than 70% of deputy and assistant heads selected each of the

following options as of interest to them: 'working with student teachers'; 'a school leadership role as a job share'; 'mentoring or working alongside less experienced teachers'; and 'mentoring less experienced school leaders'. Among headteachers, 76% – especially female headteachers and those leading primary schools – professed an interest in job shares in a school leadership role (Peters et al., 2008:153-154). However, most of the headteachers interviewed as part of the case study research did not see any need to make use of pensions flexibilities like phased retirement to take up such roles, feeling that they could do so 'after retirement' (Peters et al., 2008:xvii).

However, it is not clear that preferences for phased retirement will necessarily translate into access to such arrangements, especially as taking phased retirement presupposes the employers' consent to reduce one's responsibilities and hence salary by at least 20%. Close to half (45%) of teachers who were interested in the option of taking phased retirement voiced doubts about their ability to find roles that would allow them to do so (Peters et al., 2008:160). Among the teachers interviewed as part of case study research conducted by Hutchings et al. (2008) at 12 schools, there were several instances where requests to reduce responsibilities to move into phased retirement had been refused by headteachers.

Conclusions

The literature suggests that allowing older teachers to reduce their responsibilities or hours is related to job satisfaction and motivation. In the UK there is a lack of evidence on the impact of access to flexible working on older workers and retirement behaviour, both in general and specific to the teaching profession. This reflects a broader lack of widespread implementation, suggesting that using flexible working specifically for older staff is not yet a priority for the majority of employers. Managers have a key role to play as gatekeepers and shapers of organisational cultures affecting the use of flexible working.

The evidence on the extent of different forms of flexible working within the teaching profession in the UK is relatively limited. The School Workforce Census indicates that close to a quarter of the teaching workforce in England work part-time. Other research suggests that nearly one-third of staff in education aged over 50 would like to work part-time. However, there is little evidence on the incidence of reduced responsibilities, job sharing arrangements, and phased retirement. Evidence suggests that some teachers may not wish to take up flexible working options due to concerns that this will have negative impact on career progression and access to professional development opportunities.

Employer and school leader attitudes were identified as a key factor in promoting or inhibiting the use of flexible working practices. There is evidence of flexible working patterns being adopted for headteachers. This can serve both to retain older senior staff and also to offer graduated progression into the role for younger staff moving into leadership. Senior staff were able to identify roles to make good use of older teachers'

experience in mentoring other staff and developing curriculum enrichment. But there appears to be widespread reluctance to embrace these options for classroom teachers, due to costs and overcoming issues such as timetabling and continuity of relationships with pupils. Fewer than a quarter of school leaders surveyed were content to employ teachers on a part-time or job share contract. Schools with high proportions of staff working part-time were more likely to be willing to expand this compared to those with low share of part-time teachers. Some research suggests that only a small minority of staff with ill-health conditions are offered the opportunity to work part-time.

Pensions arrangements had been identified as a further barrier to taking up flexible working, due to the potential effect of reduced hours or responsibilities on salary and hence pension entitlements. The 2007 Teachers' Pension Scheme reforms sought to address this barrier. However, the review found very limited evidence on the effects of the new flexibilities on teachers' retirement behaviour, which reflects the relative recency of the changes. A substantial minority of teachers were willing to contemplate phased retirement using TPS flexibilities but believed that they may not be permitted to do so by school leaders. As for workers in other countries, while teachers who take advantage of the flexibilities may have a higher level of job satisfaction and motivation, initial predictions from school leaders anticipated that these options would not necessarily encourage teachers to work longer.

7.   Findings on the role of pensions

Overview

Focus of the review

The two key research questions relating to the role of pensions that the review sought to address were:

- **To what extent are Teachers' Pensions Scheme (TPS) flexibilities understood and utilised by employers and teachers to support working longer?**

- **Are there any barriers to the usage of TPS flexibilities?**

Subsequent questions that also guided the literature search and review were:

- How far and how well do the flexibilities support teachers to work longer?

- Are there any barriers to the use of the flexibilities?

- How well do teachers and others understand the differing provisions for flexibilities offered by TPS?

- What evidence is there for the use of these flexibilities?

- How far and how well do the flexibilities support teachers to work longer?

- What is the nature of the barriers to the usage of TPS flexibilities?

- How do the barriers affect teachers' and employers usage of TPS flexibilities?

- What evidence is there from other pensions systems on the impact of pensions on extending working lives?

Nature of the evidence

The initial search and sift process identified extensive literature on teacher pensions systems, the incentive effects of different pensions arrangements and their impact on retirement patterns. However, much of this material comes from the USA and covers specific aspects of their system for which there is little read-across for the UK, but could suggest methodologies using longitudinal pensions and retirement data to use in the UK context. The wider literature focusing on pensions in the international context was felt to have more relevance to the review. Where pensions are specifically discussed in the UK context, the literature was often of poorer quality (i.e. sector specific news articles, comment pieces or descriptive accounts of the nature and likely impact of pension reform rather than substantial research evidence). There was also a large body of literature from the UK teaching unions but this was aimed at providing information, specific guidance and advice for teachers on the new reforms. In addition, some material identified in the literature which focused on attrition and retention, as this often mentioned pay and

'benefits' which could include pensions, alongside other factors which could encourage or discourage retirement and exit from the profession.

The review therefore found little recent evidence on teachers' levels of awareness and actual uptake of the new TPS flexibilities since the 2008 report commissioned by the DCSF shortly after the implementation of the changes to the TPS (Peters et al., 2008).

Key messages

Unions and colleagues are a key source of information about pensions in the UK but the literature reveals a lack of awareness of pensions details and of the alterations made under the 2007 TPS changes in particular (less than 10% having detailed knowledge). Teachers do not know the financial advantages and detriments of different retirement options. This lack of pension awareness is found in other countries and other occupations.

Studies show that, although teachers feel they understand in broad terms how their pensions are calculated, few regularly familiarise themselves with pension information, their information may be partial or inaccurate and there are numerous sources of confusion (around the basis of calculations and rules about taking benefits). However those closer to retirement are more likely to have detailed pension knowledge and awareness of TPS changes. Wider studies also indicate a substantial group of the UK population (43%) have no retirement plan, a larger proportion (63%) have no back-up plan in case they are unable to continue in work to their planned retirement age, and 37% do not know whether they are on course to achieve their anticipated retirement income (Aegon, 2015).

Research indicated mixed views on the potential impacts of the TPS changes on extending working lives and retirement behaviour, and highlighted the difficulties in isolating the impacts of pensions in retirement decisions from other influencing factors such as personal life, family, health and cultural norms. Indeed the review found no recent research available to unpick how changes in TPS flexibilities have actually influenced teacher decisions about retirement. Lessons from the USA suggest that the design of pension schemes, coupled with awareness of the details and scale of the impact on benefits is important in encouraging access to flexibilities; and that men are more sensitive to pensions changes than women.

The literature indicates several barriers to TPS having its desired impact: teachers may not see pensions as a key factor in their retirement decisions, they may not investigate pensions until close to retirement age, and as noted above, have limited or incorrect understanding of the scheme. Additionally the rules of the scheme may create problems such as those related to phased retirement.

Main findings

The Teachers' Pension Scheme

The review found a body of literature focused on the differences between Defined Benefit (DB) and Defined Contribution (DC) pension schemes, finding differences in their influence on retirement decisions and timings. In general, DC schemes produced a more even distribution of retirement across a range of ages, and were not subject to the same 'spikes' as DB plans, where retirement volumes peaked at particular career points and ages dependent on the schemes. An indicative example is from Missouri (Koedel et al., 2013), where these spikes were evident at 25 years' service due to the '25 and out' rule that resulted in strong pension accrual at that point, and again when teachers hit the '80 year rule'; that is, when age and tenure together add up to 80, a teacher can claim their full pension without financial penalty.

The Teachers' Pension Scheme (a form of Defined Benefit scheme) in the UK has been modified on several occasions to changing demographics and policy priorities. These changes have had some implications for retirement decisions. Rules which took effect in April 1997 made it financially unattractive for teachers over the age of 50 to seek early retirement from their jobs, unless teachers took ill-health retirement and were deemed unable to return to teaching (Bowers, 2001:151). Ill-health retirement is a notable feature for which there is no direct equivalent in countries outside the UK. The option requires a professional medical opinion to advise scheme administrators about eligibility. A related scheme is offered in the Republic of Ireland, which promotes a voluntary early retirement scheme including a route out for people experiencing more broadly defined professional difficulties. Evaluations of these changes made in the TPS are lacking, and no evidence was located with regards to how it has affected teachers' retirement choices.

In 2007 the TPS was reformed so that the level of contribution that members were required to pay was increased and the age at which they could take their pension was raised. These reforms were cost-saving measures introduced to reduce pressure on the tax-payer and maintain the long-term sustainability of the pension scheme. While the reforms reduced the value of the scheme to members by some degree, the TPS in its post-reform state still remained more valuable to members than the majority of Defined Contribution workplace scheme offerings available to private sector employees. However, additional reforms made in 2013 further reduced the value of the yearly pension benefit from 23% of a member's working-life salary to 14%. The 2013 reforms were part of a policy move for public sector pension schemes away from final salary and towards career average schemes, setting the value of pension benefits as an overall working-life average of salary (Cleal et al., 2013). Under the reforms, there is less difference in the value of pension benefits between teachers who leave the profession early and those who stay until normal retirement age. They also help equalise disparities under the previous scheme where those with rapid career progression benefited disproportionately.

Views from the teaching profession have been collated by some of the teaching unions on further changes to the TPS, particularly around financial penalties associated with early retirement, and how best to invest and spend employer contributions. One union, the Association of Teachers and Lecturers (ATL), advocates a method of earmarking parts of pensions to fund early retirement, and notes that the reduced pension, available from the age of 55 at an actuarially reduced rate, has gained popularity since its implementation (Kirkman, 1997; 2003).

A major study using large-scale surveys of teachers aged 49-60 (N = 672), interviews (N = 91), and case studies of schools (N = 12) assessed how pension provision influences teacher retirement (Hutchings et al., 2008) at the time of TPS reforms. Three-fifths of teachers understood in broad terms how their pension was calculated but only a quarter regularly familiarised themselves with pensions information.

At the time of the research, less than 10% of survey respondents had detailed knowledge of the TPS changes made in 2007/08 unless they were planning to retire in the next two years. Almost half had a limited awareness or had not realised that the TPS had changed. Key sources of confusion were:

- Mistaken belief that pensions for part-time workers are based on a part-time final salary when the scheme is based on full-time equivalent salary with a slower build-up of years of contribution. This was cited as a deterrent to part-time work, and some part-time workers planned to move back to full-time work for their final year.

- Mistaken belief that lump sum and pension could be taken separately. This is not the case; they must be taken at the same time, and both are actuarially reduced if taken before age 60.

- Mistaken belief of obligation to draw a pension when leaving teaching before the retirement age; and that pension rules force the date of retirement although pension can be accrued up to the age 75 or 45 years of service.

- Underestimation of the size of reduction in pension among teachers planning to retire early. This was also found by Peters et al. (2008). This may be a key point of understanding to test and correct if seeking to encourage teachers to work longer.

The study analysis found numerous barriers to the TPS having its desired impact. Many teachers did not see pensions as a key factor of retirement decision making, did not investigate pensions until they were close to retirement age, and had limited or incorrect understanding of the pension scheme (Hutchings et al., 2008). This is probably one of the major barriers to teachers making use of TPS flexibilities, but it is uncertain whether awareness of scheme flexibility has risen over time. Across the broader population, awareness of pensions is mixed at best.

Another study noted that while 59% of teachers reported a broad understanding of how their pension is calculated, qualitative research found that in many cases it was partial or inaccurate (Peters et al., 2008:63). Some teachers also did not recall having received an

annual pensions statement. Older teachers who were closer to their retirement date had greater levels of awareness of TPS changes. The main sources of information were unions for over half of respondents and colleagues for around two-fifths. This is consistent with wider research on pension awareness and planning among the general population. As one study for DWP puts it: "Most people are not active planners or information seekers with regard to [Extending Working Lives] options, pension investment choices or retirement planning. They are more disposed to react to events, options and opportunities when they are tabled by others. This suggests that situational influences play an important role in decision-making." (Weyman et al., 2012: 2).

Views on potential impacts of the pensions changes varied: 41% of headteachers agreed that teachers would extend their working lives while 54% thought that teachers who would otherwise have continued to work full-time to age 60 would now reduce their hours and responsibilities before that age. Barriers to uptake of TPS reforms included provision for phased retirement only if salary is reduced by 25%; this does not fit well if, for example, a teacher wants to work a four day week (20% reduction). However, the TPS was revised in 2010 to take account of this so phased retirement is now possible with a salary reduction of 20%.

Impact of teacher pension reforms in the USA

One study gives an account of how pension eligibility triggers retirement (Costrell and McGhee, 2010). Their analysis of USA data shows that retirements spike when teachers become eligible for early retirement at 25 years of service and at the point when teacher become eligible for normal retirement at 28 years of service. These spikes were also found in an econometric analysis of teacher retirement in Missouri (Koedel et al., 2013) and a study of a scheme with pension eligibility after 30 years of service (Friedberg and Turner, 2010). In practice, most teachers retired at or between these two points. The analysis found little difference between the performance of teachers leaving and staying in the profession, and questioned the retention benefits of the scheme due to the earlier leaving spike.

Michigan considered reforming its teachers pensions to adopt the '80 year rule'. Other states sought to encourage retired teachers to return to teaching and encourage existing teachers to work longer (Walsh et al., 2004) by allowing teachers to draw a salary and a pension concurrently or by altering their pension benefit formulas (Werneck, 2001). However, budget deficits forced some states to implement policies to encourage early retirement instead.

Two studies (Ni et al., 2009; Ni and Podgursky, 2011) used econometric modelling to assess the retirement behaviour and retention rates of teachers in Missouri under different pension regimes, contrasting Defined Contribution (DC) and Defined Benefits (DB) schemes using longitudinal data and hypothetical projections. Under the DB plan, retirement occurs at an older age peaking at around 60, although changes to the DC plan in recent years mean that the age is shifting upwards as pension wealth declines through early retirement penalties. Modelling retention found that at the end of the forecast period

(2021), around 7% of the teachers are predicted to remain in teaching under the DC plan, while around 1% are predicted to do so under the DB rules (Ni and Podgursky, 2011:30). These findings suggest that pension scheme design is vital, as is ensuring that teachers understand such principles.

Barriers to use of pension flexibilities have been found in schemes in the USA. Less than half of teachers in 'hybrid' schemes which blend elements of DC and DB schemes were able to describe their pension accurately. In addition, the design of some plans may deter early leaving even if it is the individual's best interests. In later parts of their working lives teachers in DB plans who leave before completing the minimum number of years of service suffer far greater overall loss of wages and pensions than members of hybrid DB/DC plans and members of solely DC plans (Goldhaber et al., 2015).

Econometric analysis on the impact of changes to the DB pension system for teachers in California assessed the relationship between level of pension income and willingness to continue working longer. This found that when teachers' annual pension income doubled in return for an extra year at work, the majority of teachers worked for a year longer than they previously would have, while a 10% increase in pension income only motivated an extra two months' work, on average, than previously (Brown 2013:11). A regression analysis set in the USA also found a link between salary rises and retirement decisions; a $1,000 rise in earnings reduces the exit rate by about five percentage points (Friedberg and Turner, 2011). Using a nominal retirement account which grows with contributions made at a guaranteed rate of return, spreads out exit decisions rather than concentrating them around specific lengths of service with a net effect of a one year increase in length of teacher service.

Overall, perceptions of retaining future pensions benefits deters retirement, but analysis via econometric modelling set in Pennsylvania has demonstrated that men are more sensitive to current and future pension levels than women in making this decision (Furgeson et al. (2006:27) In the UK, having reached maximum entitlement in a Defined Benefit scheme, men were more likely to leave employment than men in Defined Contribution schemes, however there was not a similar pattern for women (Banks, Tetlow 2008:19)

Phased Retirement and Early Exit Schemes

Findings on phased retirement and a comparative view of retirement in different countries shows a number of useful pieces of information. In Sweden, shifting to part-time work has been estimated to increase the number of hours worked (Wadensjo, 2006), whereas in France those who take phased retirement exit the labour market earlier due to a slightly different financial structure of pensions compared to those who retire abruptly (Pedersini, 2001).

Analysis of a large survey of teachers in Belgium aged between 45 and 65 found that early exit schemes account for 20% of the variance in the actual retirement age over and above the other factors in the study (Van Droegenbruck and Spruyt, 2014). Teachers

who (plan to) make use of the early exit scheme (want to) retire earlier than teachers who do not (plan to) make use of the early exit scheme and this variable had the strongest effect on the preferred and actual retirement age (Van Droegenbruck and Spruyt, 2014:767). Two-thirds of retired teachers used this, meaning they could retire from 56. This was symptomatic of a 'culture of early exit' and results suggest that "raising the minimum age of the entitlement to early exit schemes may significantly raise the retirement age of teachers" (Van Droegenbruck and Spruyt, 2014:770).

Wider evidence on retirement planning among the UK population

In considering understanding of the TPS, the research noted lack of awareness as a broader problem in the UK population (Peters et al., 2008). Other, more recent, studies attempted to assess the adequacy of retirement planning and these can provide information on the timing and decisions people make about leaving work. Across the working population, the UK's score on retirement 'readiness' was six out of ten, marginally above the 15 country average of 5.86. Across the countries assessed: scores were highest in Brazil, Russia, India and China (known as BRIC), economies experiencing rising incomes and high interest rates; second highest in countries like the UK that give great importance to workplace based retirement plans; and lowest in countries where retirement incomes rely centrally on government retirement benefits.(Aegon, 2015). This quantitative study (the Annual Retirement Readiness Survey) which surveys over 15,000 employees and retirees across 15 countries found that for UK respondents over half received a low score below six on the index, with roughly a quarter each gaining medium or high scores. Additionally, 12% of people had a written retirement plan, 41% had a non-written plan, and 43% had no plan at all. Also 63% did not have a backup plan in case they were unable to continue working until their planned retirement age. A quarter (25%) of people felt they were on course to achieve their retirement income, 9% felt they would achieve 75% of their retirement income, and 37% of people did not know if they were on course to do so (Aegon, 2015).

Other research highlighted that it is difficult to extricate reasons for changes in retirement decisions and behaviour. While pensions no doubt play a factor in determining when and how people retire, other factors such as personal life, family, health and changing cultural attitudes to working at older ages also play an important role (Strudwick and Kirkpatrick, 2013: 26). For example, people whose partners work after State Pension Age (SPA) are more likely to work after SPA themselves and there may be similar patterns with regards to private pension ages (Banks, Tetlow 2008: 20). Wider research has found that rises in the state pension age have tended to produce inertia rather than distinct behaviour change as people are passive in financial decision-making and tend to respond to options presented to them rather than make active choices (Weyman et al., 2013).

Conclusions

Individual retirement planning and pension provision in the UK, in both teaching and more generally, are an increasing concern for policy makers, with scores on retirement

readiness falling and widespread evidence of a lack of planning. Among teachers, eligibility to take a full pension has historically been a trigger for retirement. Ill-health retirement with a pension is also an option and this has no direct comparison in other countries.

The move to a career-average related pension calculation for teachers is intended to equalise the value of pension benefits regardless of pace of career progression and to offer greater flexibility in retirement timing. The evidence here was mixed. It indicated that, due to low awareness, scheme structures had little impact on retirement behaviour; yet retirement ages were clustered around the date at which people could access their Defined Benefits pensions. Evidence from other countries shows that Defined Contribution plans appear to result in much smoother attrition patterns than Defined Benefits plans. USA evidence shows that DB plans are more likely to encourage teachers to remain in full-time work until they can take their full pension, even if it is not in their best financial interests. For example research on the California Teacher's Pension scheme found doubling pension income in return for an extra years work had the effect of motivating the majority of teachers to work an extra year. In contrast, DC and 'hybrid' schemes do not have these effects but teachers in 'hybrid' schemes find these much more difficult to understand. Also men across different occupations are more likely to leave work when they reach their entitlement age to a full pension under DB schemes in the UK. Part of the explanation for differences in research results lies in the varying scheme structures and economic, demographic and policy backgrounds found in different areas and countries.

For the TPS, there are a number of barriers that may require addressing in order to maximise use of its flexibilities. Increasing awareness of the pension scheme's options could be vital in smoothing transitions to retirement. Awareness of the nuances of the TPS although higher among older teachers was low at the point of its reform and further research is required to see if this has changed. A number of misconceptions about the scheme were identified during research immediately after its implementation. Most teachers surveyed did not regularly familiarise themselves with pensions information and investigated pensions when close to retirement age.

Smoothing the transition to retirement would require a greater focus on phased retirement including options of reducing hours e.g. part-time working. However, given that phased retirement can trigger early exit, it will need to be combined with management support to extend working lives. A larger majority of headteachers believed that classroom teachers would reduce their working lives than those predicting that classroom teachers would work longer under TPS. Careful communication will be needed to ensure teachers understand pensions and working time options. Like other professions, teachers are mostly not active retirement planners and will require support to make the most appropriate individual decisions for their circumstances.

8. Final conclusions

Nature of the Evidence

Appendix 3 below gives a detailed breakdown of the sources used and an assessment of their relative quality and relevance to this review. The mix of policy papers, Union press releases, and peer reviewed journal articles gives a wide picture of available evidence, and ensures diversity of opinion is considered. The studies varied from large econometric analyses to small qualitative studies, encompassing a broad range of methodologies and data. The date filter ensured that, in most cases, data was up to date enough to still apply to the teaching profession in 2015, despite the changes to the pension schemes that occurred in 2008.

In general, there was considerably more literature that focused on the broad area of retention and attrition, and somewhat more on pensions, than the other research questions. Flexible working and employment practices revealed considerable overlaps in the literature, and had a generally smaller body of literature than the two aforementioned topics. Literature on pathways was quite well researched, although there was a lack of research on alternative pathways for teachers, and a large body of literature excluded for this review on relevance grounds focused on the variety of pathways into teaching itself for beginning teachers.

The majority of the literature to pass all the exclusion checks was from the UK and the USA. Generally the two complemented each other well; the USA literature filled gaps that were lacking in the UK literature, whilst the UK papers were more directly transferable to address the research questions with greater relevance. All papers were published in English with the exception of one Belgian study in French (Hansez et al., 2005); this is likely due to the search terms being in English. This is unlikely to have altered the conclusions of this review; comparative European literature tended to be in English, and the transferability of the education regimes of other EU member states is questionable.

Evidence Gaps

References to retention and attrition focus disproportionately on early career teachers, with very little material addressing attrition among older teachers. This means that, whilst there is literature on retirement, there is still an evidence gap around mid-career teachers' attrition. There is little work about contextual factors related to location which explain teachers leaving the profession, except work looking at London separately to the rest of the UK. This is in contrast to the USA literature that breaks down more readily by location and social demographic factors.

The evidence on employment practices that might support experienced teachers in working longer is limited. There are a large number of publications that make recommendations concerning supportive employment practices for preventing teacher attrition, especially from the USA, but these are not evidence-based. There is a notable

lack of evaluation in this area; if employment practices are evaluated at all, these are usually small-scale qualitative studies.

The following types of employment practices are potentially important, but characterised by a lack of reliable evidence:

- Practices targeted at improving experienced teachers' working conditions and reducing stress.

- Discriminatory employment practices: hiring, promotion, and training provision or redundancy/capability practices that disadvantage older teachers[20].

In the area of career (exit) pathways, there are a number of areas that suffer from a lack of evidence. While there is literature on access to school leadership positions, there appears to be relatively limited evidence on alternative career pathways for teachers, and how this affects their readiness to remain in the profession in the long term. There is also limited evidence on the impact of continuing professional development on encouraging teachers to work longer. This is in spite of numerous studies that undertook survey analysis highlighting the importance of career development in retention and attrition. In addition, there is some evidence on working in education after eligible pension age among teachers, but this is mostly focused on the USA or in studies of supply teaching. There appears to be no detailed exploration of factors affecting teacher choices in the UK, which might either mark the low incidence of this practice or a gap in the literature. There is relatively limited evidence on provision of options for flexible working to older teachers, and their role in supporting teachers working longer. While there is a large number of policy papers and advice for school leaders on the practice, especially from the USA teacher retention literature, there is a notable lack of evaluation. This may reflect lack of current activity by schools in targeting flexible working to support older teachers, and that the research literature has not so far explored its impact from this perspective.

While there is an extensive literature on teacher pensions systems, the incentive effects of different pensions arrangements, and their impact on retirement patterns, the pensions literature has a number of notable gaps:

- There appears to be no recent evidence on teachers' levels of awareness and uptake of the new TPS flexibilities. This review located no independent survey of teachers' attitudes in this area since the 2008 report commissioned by the DCSF shortly after the implementation of the changes to the TPS (Peters et al., 2008).

- There is a large amount literature set in the USA, which is not directly transferable to the UK's pension regime. Some of the studies are replicable, in the UK, using longitudinal pensions and retirement data.

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[20] Whilst the teaching unions provide evidence of age discrimination based on their casework, there appears to be a shortage of robust research on this issue.

- More generally, the pension literature did not join up with other studies that looked at broader contextual factors which encourage retirement and/or leaving teaching.

An area not included in the initial list of questions for the REA, but which has emerged as significant, concerns the attitudes and approaches of school leaders to retaining older teachers. The existing evidence suggests that the quality of school leadership and support offered by leaders to teaching staff is a factor that influences decisions among the wider population of teachers about whether to remain in the profession. School leaders are central in determining the recruitment, promotion, and retirement practices which older teachers are exposed to, and in regulating access to flexible working or retirement arrangements. If they are uninterested in supporting older teachers in working longer or unwilling to make the required adjustments, this is likely to have a large impact on teachers' working longer. This study found no systematic assessment of school leaders' attitudes in this area since the 2008 report commissioned by the DCSF shortly after the implementation of the changes to the TPS (Peters et al., 2008).

There is a clear lack of evidence on the impact of employment practices, including flexible working arrangements, on the retention of veteran teachers. This seems to reflect both low prevalence of such practices in schools and a lack of evaluations of existing practices.

Conclusions

Explaining patterns of attrition and retention for teachers

In the decade since 2000, there have been higher attrition rates for teachers of all ages, with teachers typically most likely to leave the profession within the first five years or aged over 55. However, the number of returners in recent years has increased. Female returners are coming back at a younger age and there is an increase in the number of men aged over 50 re-entering teaching. Retention through the whole teaching career appears to be lower in the UK than in other European countries, and lower for some comparative graduate occupations

Early attrition for junior teachers is triggered by events such as establishing a family while for some headteachers, a loss of motivation was identified after seven to ten years in the role. For older teachers, factors can be divided into those which encourage exit and those which encourage retention. These include the external pull of non-work related factors such as desire to spend time with family, hobbies and travel; financial circumstances affecting decisions about whether to work; push factors such as dissatisfaction with elements of the job including workload, long hours and changes in education policy which may contribute to ill-health; and the presence of supportive management and leadership which encourage retention. In deciding whether to leave teaching in later life, financial affordability is an initial criterion of whether leaving is feasible. Factors such as level of job enjoyment and the level of supportive management and leadership then affect the decision of whether to stay. Evidence shows that management support is linked to teacher wellbeing which is important because a major

cause of attrition is mental health conditions arising from work-related stress and burnout. These problems can be exacerbated by job workload and perceived lack of autonomy.

Career pathways and exit pathways

The dominant career pathway for teachers seeking to stay in their school or profession but move out of full-time classroom roles is progression into management through assistant, deputy and headteacher roles or wider system leadership.

The main focus of the evidence is on vertical progression rather than lateral moves within the education sector, or to roles in other sectors with the option of returning to a teaching role. For teachers seeking to remain in a classroom-based role, opportunities include roles with special educational needs/outreach, pastoral, subject specialist responsibilities. Evidence on the (now closed) Advanced Skills Teacher scheme to accredit teaching skills led to positive self-reported benefits from teachers in the form of greater professional respect and recognition of expertise though no link was sought with impact on retention.

Provision of informal leadership roles embodying notions of 'distributed leadership', supervision and mentoring of other teachers and special curriculum projects are suggested to help increase teacher satisfaction and morale although there is no definitive evaluative evidence to confirm their impact on retention. There is evidence of clear appetite among the majority of teachers to engage in continuous professional development regardless of age or length of service. For older teachers, support in management training for those in senior roles, and emotional wellbeing for those experiencing challenges in resilience appear important. Evidence suggests that ambition diminishes as teachers age, partly because some older teachers perceive opportunities as being more likely for younger staff, although teachers from ethnic minority groups are open to seeking promotion at older ages than white teachers.

The evidence suggests limited formal provision to help teachers think about alternative career pathways which permit them to stay working within the teaching profession or the school/education system context. The main alternative pathway to full-time classroom teaching was supply teaching, commonly pursued by older teachers aged over 50. The attraction of supply teaching for older teachers is availability of part-time hours, a commensurately lower workload and no administrative tasks required. For a substantial proportion, supplementing retirement income is also a major motivation for undertaking it. For senior staff with experience of headship, more options are available including education consultancy work for local authorities, co-headship roles to mentor newly promoted heads, and school improvement roles which are attractive because they offer more flexible working with less responsibility.

Employment practices: leadership, organisational culture and salaries

There are no robust evaluation studies which have assessed the impact of initiatives to support older teachers on staff retention or on how such policies are received by the rest of the workforce. This is consistent with the wider management literature across all

sectors of employment, which shares a similar deficit. This could be due to lack of evaluation or few initiatives being in place, and evidence reviewed suggests low implementation of support for older teachers. However, there is some evidence on several key factors that shape employment levels of older teaching staff. These are:

- Leadership support influencing organisational cultures and access to initiatives that may protect health and offer flexible working options to retain older teachers;

- Practices that avoid or permit indirect age discrimination; and

- Salary levels.

Leadership approaches regarded as effective in meeting the needs of older workers and by implication likely to have positive effects on retention stem from efforts to accommodate staff needs across the life course. They might focus on helping staff to manage work/family tensions in earlier career phases while offering more support for emerging health issues in later career. In addition, school leadership shapes organisational cultures and can influence access to sources of support that may help prolong working lives. In practice, there is evidence of limited provision and awareness of occupational health support among teachers. Where such support is available, users reported it was helpful although outcome measures were unspecified.

In practice, there appears to be relatively strong evidence that supporting older staff is not a central priority for the majority of headteachers. Schools are more likely than other sectors to monitor the age profile of staff and less likely to have views on appropriate age ranges for particular jobs. But schools with substantial proportions of older staff are less focused on retaining them and school leaders place operational priorities first with planning future staffing and optimising staff wellbeing not seen as a prime objective. Some literature suggests that cost considerations in employing older staff (under a system that has until the recent pay reforms guaranteed higher wages to more experienced staff) are a key factor affecting staffing decisions and capability procedures may be more widely used among older staff, which can result in exit.

The relative earnings of men with a teaching qualification have declined compared to teaching graduates in other occupations over the past 25 years, although female qualified teachers still earn comparatively more in teaching than in other work. Combined with the challenges cited of work volumes, change and pressure in the profession, it is possible that some teachers may judge rewards available as no longer sufficient compared to salary packages outside the sector. Definitive evidence is not available and the evidence on reasons for leaving indicate that financial considerations operate together with other factors. Examples were located in the USA of innovative bonus payments being given to high-performing teachers to assist with housing costs or to encourage them to move to particular schools. Evaluations of specific financial incentives to encourage retention of older teachers were not found in the evidence base.

Flexible working for older teachers: part-time, reduced responsibilities, job sharing, phased retirement

Take-up of flexible working appears polarised at school level for older staff with either high or low levels of teachers using this provision, Overall, nearly a quarter of teachers, mostly women, and over half of teachers aged over 60 work part-time. Attitudes of headteachers are a very strong determinant of implementation. Heads were often able to identify types of roles to which older teachers could move with working time flexibility. There is relatively robust evidence across all types of school are opposed to offering older staff job sharing or part-time working arrangements, due to challenges this poses for continuity in relationships with pupils, timetabling, sharing classrooms and notably costs compared to the salaries of younger staff. Headteachers already offering flexible and part-time working were most positive about extending it further, suggesting that proof of successful implementation may be helpful in fostering further adoption. Where flexible working is offered, heads may use criteria such as relative perceived value of the teacher and scarcity in deciding whether to grant a request. This suggests that market factors affect access to working time flexibility for teachers, which raises questions about equality of access across the wider teacher population. There are perceptions among teaching staff that working part-time, for example, may limit access to professional development, training and promotion opportunities. Evidence from other sectors suggests limited provision of flexible working policies specifically targeted at older staff, and a similarly passive approach from employers. To trial implementation of flexible working for the largest occupational group in a sector where it is not commonly used, HR expertise to assist school leaders is likely to be required.

Although reluctant to consider flexible working for classroom teachers, forms such as job sharing were of interest to school leaders, and are being driven by shortages of senior staff. A growing use of and interest in co-headships, combined with distributed models of leadership across executive head and school management roles were found. This form of working was of particular interest to female primary school leaders. It may be helpful to explore how these kinds of examples can be used to provide role models for flexible working more widely across teaching staff.

The Teachers' Pension Scheme and retirement planning

Reforms to the Teachers' Pension Scheme in 2008 have opened up the possibility of flexible working to teachers aged over 55 through offering a blend of income through salary and pension in a series of phased retirement periods. The impact of the scheme has not yet been evaluated, but early initial research showed that it was anticipated to have mixed effects including encouraging staff to retire earlier rather than later or to continue to work until the same age but on reduced hours. This is consistent with international evidence that reducing responsibilities for older teachers may be linked to improved motivation, reducing hours among older workers in other sectors mostly has either no association or a positive association with earlier full retirement rather than encouraging extended working lives. Older teachers continuing to work for primarily for financial reasons were more likely to consider using the TPS flexibilities, although they

anticipated reluctance from school leaders to offer phased retirement. Men are overall more sensitive than women to levels of pensionable income in making retirement decisions.

Studies in the USA show that overall defined contribution (DC) pension schemes produce a more even distribution of retirements than defined benefits (DB) schemes. DB schemes tend to produce 'spikes' in the distribution of retirement ages when trigger points of length of service are reached.

The key challenges overall for the TPS are likely to be in communication of options and ensuring teachers make appropriate retirement plans. Levels of awareness and understanding just after the 2008 reforms were higher among older teachers but the scheme options are not well understood overall. Teachers rely on unions and colleagues as key sources of information about pensions so optimising these communication channels may be important for raising awareness of scheme features. As a profession, teachers show no major differences from the rest of the population with a minority being active retirement planners. Most people are passive and react to options presented to them rather than seeking out choices. Increases in state pension age have produced inertia as yet, rather than distinct behavioural changes.

Overall, the evidence suggests that two key levers of pensions education for the teaching profession, combined with stimulating interest and effort from school leaders will be required if the goal of extending teachers' working lives is to be achieved.

Appendix 1: Methods, sift process and sift and review pro-forma

This appendix provides detail on the research methods used for the review.

Set-up phase

During the set-up phase, a draft protocol for the search process was agreed with the sub-group covering: the central and secondary research questions and thus relevant search terms, hierarchy of search terms[21] and likely combinations of search terms; inclusion and exclusion criteria, which defines the scope of the review; and search locations.

The sub-group was keen to include grey literature (i.e. materials published informally, difficult to trace via published journals, or not widely accessible, which may include technical reports from government agencies, working papers from research groups or white papers). Hence, in addition to searching traditional academic databases, additional databases were searched, as well as the websites of relevant experts (researchers, policy-makers, lobbyists and commentators).

A key challenge for this phase of the research was to develop a realistic approach to scale and avoid excessive numbers of spurious results, by defining appropriate boundaries for the search. Therefore it was initially decided to:

- Limit the search to evidence which is readily accessible online.
- Limit the search to key databases, websites and publications by focusing on a restricted number of relevant databases, as there are diminishing returns to searching a large number of databases, which are likely to cover the same sources; and searching a limited number of government departments and agencies', academic departments', and research institutes' websites.
- Primarily target English-language evidence to maximise applicability of findings, but look for appropriate international and/or comparative examples from a selected number of relevant international sources such as the European Commission, OECD, and Cedefop; where extending beyond articles in English, the aim was to look for examples of innovative employment practices for teacher retention that had the potential to be applied in the UK.
- Initially prioritise teachers to develop the evidence base specific to the teaching profession – primary, middle and secondary school (not nursery), all subjects, all school environments (including state funded schools, independent schools and sixth form colleges) with the potential to broaden the search to cover related occupations and sectors if few references were generated; hence the keyword 'teacher' (and equivalent terminology) was to be included, and this filter was only

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[21] The distinction between primary and secondary search terms allows the research team to construct tailored search strings and proceed in a systematic way.

to be removed if the searches failed to produce sufficient numbers of high-quality results.

- Set a date limited period for review, from 1990 to the present time (this was an extensive period and could require adjustment if a huge array of evidence was generated).

In scope were issues/evidence relating to retention, later stages of career paths, older workers and employment practices. Out of scope were issues relating to general turnover, recruitment, pedagogy or learning and teaching practices.

An inception meeting between the research team and the Department helped to further refine the scope of the study and to establish relevant definitions:

- **What is meant by 'older teachers' (review question 3).** It was confirmed that the review was interested in experience as well as age, and thus potential loss of experienced teachers. There is a particular interest in those leaving a teaching career after some time (those who had stayed in post for more than 5 years) and therefore retention initiatives are appropriate throughout teachers' (complex) careers rather than just at the end of careers. However the retention of early career teachers was not a primary concern of the Review. No definition of older was established but the sift took account of 'experience' rather than exclusively 'age'.

- **Alternative terminology for teacher.** Alternative terms for 'teacher' were discussed to ensure that the review would capture all eligible members of the Teachers' Pension Scheme (TPS), the complexity of pathways in and out of teaching careers, cover all organisational structures, and cover equivalent posts in other countries. This was particularly important as 'teacher' was to be used as the primary search term or filter. The search terms for the primary filter were amended accordingly (see below for search terms).

- **Potential to reduce the period for the review.** The range of the review was discussed and the potential to restrict the time period to reduce the likely volume of material while increasing the relevance of the materials identified. Key milestones were identified by the Department including: 1997 when the arrangements for premature and ill-health retirement were changed; and 2000 when the Treasury undertook a review of ill-health in the public sector as a whole. It was felt that these milestone events would have stimulated research and thus should be included in the review period. The period was amended to capture materials from 1997 onwards.

- **Potential comparable occupations and countries.** Comparable occupations identified were: lecturers in higher and further education; social work and local government professionals; and, more broadly, professional groups and professional graduate groups (the latter was used in research into executive salaries). Comparable countries suggested were European countries (excluding

Eastern Europe), New Zealand, Australia, Canada and the USA. These were deemed to be countries with similar structure and regulation of labour markets, country demographics and teacher policy history to England and the UK. Research focused on countries outside this list was excluded in the sift process (see below).

To supplement the search stage and help uncover grey literature, the Review group issued a **call for evidence** to key stakeholders including teachers' unions, employers, the Teachers Support Network, and the General Teaching Council in Wales. An initial call asked for details of published and on-going research and for internal documents. The materials provided by the 20 stakeholders were added to those generated by the search.

Searching

Search locations

A number of databases and websites were identified as priority search locations that would enable exploration of a multidisciplinary evidence base, spanning academic specialisms (see Table 2).

Table 2: Details of databases used in the search phase

Name of database	Description
Google Scholar	Search tool for scholarly literature including theses, books, abstracts and articles.
Education Resources Information Center (ERIC)	ERIC, the Education Resource Information Center, provides access to education literature and resources. The database contains more than 1.3 million records and provides access to information from journals included in the Current Index of Journals in Education and Resources in Education Index.
British Education Index	The British Education Index provides information on research, policy and practice in education and training in the UK. Strengths include aspects of educational policy and administration. Sources include education and training journals, mostly published in the UK. Some international literature is included.
Teacher Reference Center	Teacher Reference Center provides indexing and abstracts for 280 periodicals, 96% of which are peer-reviewed. Topics include: Assessment, Best Practices, Continuing Education, Current Pedagogical Research, Curriculum Development, Elementary Education, Higher Education, Instructional Media, Language Arts, Literacy Standards, School Administration, Science & Mathematics, and Teacher Education.
PsychINFO	The PsycINFO®, database is the largest resource devoted to peer-reviewed literature in behavioural science and mental health. It contains over three million records and summaries.

Name of database	Description
Educational Administration Abstracts	Educational Administration Abstracts includes more than 190,000 bibliographic records covering areas related to educational administration, including educational leadership, educational management, educational research, and other areas of key relevance to the discipline.

The agreed search terms

An initial filter was applied to focus the research on teaching. The terms used in this filter were: 'teacher', classroom teacher, senior teacher, headteacher, school leader, lecturer, and instructor. This filter was applied to ALL searches.

Additional terms agreed with the Review group and the employment practice sub-group are presented in the table below. The primary terms were used alone but also in combination with the corresponding secondary terms[22].

Table 3: Agreed search terms

Primary search terms	Secondary search terms
Employment, human resources management, HRM, HR, human resources, personnel, (retention/retain)	Policies, practices, initiatives, processes, interventions, projects, experience, support
Career, stepping down	Trajector*, pathway, progression, bridge, route, ladder, third, encore, change, planning, promotion, demotion, role, deployment
Flexible, part-time	Working, schedule, hours, job, pattern, job share
Retention, retain, drop-out, redeployment, wastage, attrition, leavers,	Challenge, problem, issues, career break, sabbatical
Retirement, pension, working longer, post-retirement employment	Phased, early, decision, transition, terms, ill-health, premature, options, retirement planning, support, prepar*, flexibility
Ageing, old*, ageism, discrimination	Performance, productivity, stress, burnout, coping, capability

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[22] Terms with an asterisk (*) denote a truncation which allows researchers to pick up all words with this root, broadening the literature collected and ensuring plurals were picked up.

The search results

The initial search generated 14,308 references (with duplicates removed), an extremely large number of references, and was one of the key challenges identified for the research.

The most productive search terms (after the teacher or equivalent filter was used) were found to be:

- career AND (trajector* OR pathway OR progression OR bridge OR route OR ladder OR encore OR change OR planning OR promotion OR demotion OR role OR deployment)

- (retention OR retain) AND (challenge OR problem OR issues OR career break OR sabbatical)

- employment AND (policies OR practices OR interventions OR initiatives OR processes OR projects OR experience OR support)

The search results from Google Scholar and Web of Knowledge combined provided fewer than 2,000 items, which was lower than expected from past experiences of using Google Scholar. The largest volume of references was generated by searches in education focused databases, the combined total from the ERIC, BEI, EAA and TRC search was 9,061 references. Psychinfo also produced a large volume, 2,372 references.

Added to the references were documents resulting from the Review group's call for evidence. A total of 21 documents were received from National Association of Schoolmasters and Union of Women Teachers (NASUWT), National Union of Teachers (NUT), National Association of Headteachers (NAHT), and Teachers' Support Network (TSN) in April 2015.

Given the volume of material it was not deemed necessary to broaden the search to comparable occupations or to general reviews, or to broaden out to the original time period suggested, but instead to focus on the more recent evidence directly relating to teachers.

Sifting

As the initial search identified a large volume of materials, a series of sift criteria were applied to apply a successively finer mesh, to ensure only the most relevant, informative studies were retained and reviewed in full. At each stage, materials meeting the inclusion criteria were put through to the next stage, and items which fell outside of the review focus were recorded together with reasons for exclusion. This resulted in an iterative sifting process comprising five distinct stages. The sift process and results it produced are shown in Figure 2 below.

Figure 2: Summary of the sift process
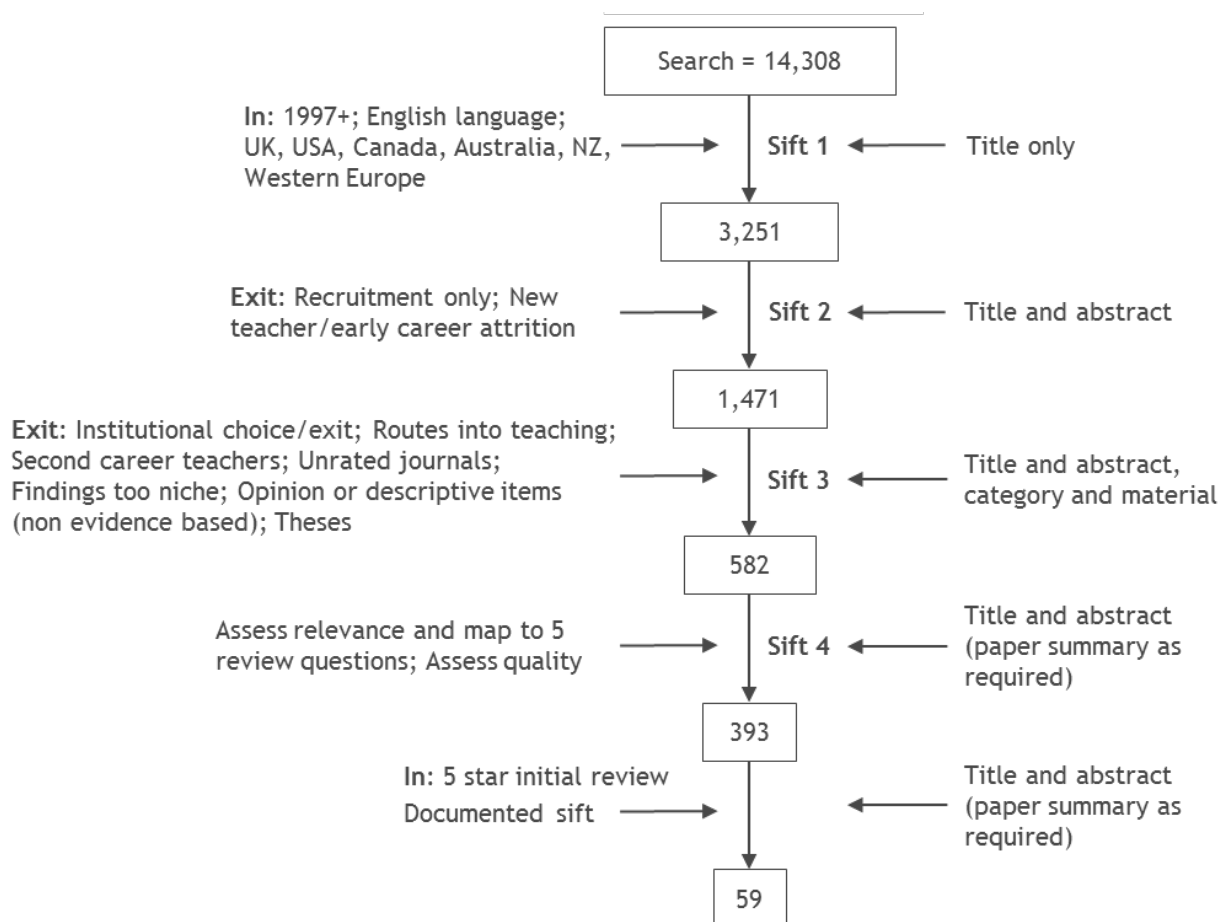
The **first sift** applied the fairly broad exclusion criteria initially agreed with the Department and the employment practice sub-group: a) excluding references before 1997; b) (largely) excluding documents not published in English; and c) excluding documents concerning countries other than Western Europe, USA, Canada, Australia and New Zealand. In this first sift, researchers also scanned the titles of documents to eliminate those that were clearly not relevant. At this stage, an inclusive 'better-in-than-out' strategy was adopted, so where titles or their relevance to the review questions were unclear the items were retained for further review. The first sift was strict enough to allow for a substantial reduction in the volume of material but loose enough to be confident that relevant items would not be lost. It notably excluded material concerning career education, teaching practices, and student drop-out/retention. It also identified that a large proportion of material was from the USA, and that the literature was spread right across the date range (and not weighted towards the early part of the date span), which had been highlighted as a potential challenge for the review. The first sift resulted in 3,251 references to go forward to the next stage.

The **second sift** involved the application of stricter exclusion criteria and a scan of abstracts rather than titles alone. The additional exclusion criteria were: a) excluding references referring solely to teacher recruitment; and b) excluding references focused on attrition among early-career teachers (or new or beginning teachers). As a quality

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assurance mechanism, materials were sifted by a different member of the research team. The second sift resulted in 1,471 references to go forward to the next stage.

The **third sift**, again based on title and abstract (or quick scan of the paper if no abstract was provided) involved applying further exclusion criteria. The additional criteria involved: a) excluding items focused on the problems of teachers leaving particular types of schools (rather than leaving the profession altogether); and b) excluding references relating to alternative routes into teaching. The material was categorised into 4 types and different inclusion criteria were applied to each of the 4 categories:

- For **research reports and policy/strategy documents**, only those that were evidence-based, and focused on the UK or had findings applicable to UK settings were included.

- For **journal articles**, only those from highly rated journals were included. The 2013 Social Sciences Citation Index (SSCI) impact factor ratings[23] was used as the criterion for inclusion. Articles in non-SSCI rated journals were initially excluded, but those which were particularly relevant were retained following a further review of items excluded on this criterion.

- For **news articles**, only those that referenced sources and statistics were included (thus excluding those that merely contained opinion or descriptions of current policy).

- The decision was made to exclude **theses**, on the assumption that those with a relevant focus and of sufficient quality should result in peer-reviewed publications.

The third sift resulted in 582 references to go forward to the next stage.

The **fourth sift** and mapping exercise again used titles and abstracts, and mapped the references against the five review questions (taking into account that some references mapped against multiple questions due to their coverage/focus). Material that failed to map onto any of the review questions was then excluded.

In this final sift stage, materials identified for review were mapped against the research questions and assessed for quality using an initial quality rating based on: relevance to the review questions, breadth of research (niche coverage or wider generalisability), and quality of approach (robust methodology, sound findings etc.). The ratings applied were: 1 star (for the least relevant documents characterised by low generalisability and under-specified or limited methodology, often USA based highly specific and small scale

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[23] The SSCI is an interdisciplinary citation index developed by the Institute for Scientific Information (ISI) from the Science Citation Index. It covers approximately 2,500 world leading journals of which 229 journals cover the whole spectrum of education research. The criteria for inclusion of journals are based on publishing standards and editorial content and number of citations, and a Journal Ranking based on 'impact factor' which is the average number of citations received in a year by papers in that year and the preceding years. In addition, specialised journals relevant to the research questions which received lower-ranked journals were included.

qualitative studies which were too niche for wider applicability), 3 star (of some relevance/broader coverage and of reasonable quality) and 5 star (for the best and most relevant materials). The materials mapped to the review question focused on the role of pensions were also assessed for quality and relevance by the PPI researchers. The country of focus for the research was also recorded, and a note was made of any references that could also have relevance to the other REA[24]. This resulted in 393 references: 118 rated as 1 star, 206 rated as 3 star and 69 rated as 5 star.

The sift process was managed using EndNote (a research and reference management software tool). This allowed the research team to define criteria for exclusion at each stage and to document the reasons why and points at which individual items had been excluded. It also allowed for easy searching of the databases from previous stages of the sift in order to control for whether relevant items had been excluded.

Table 4 shows that the largest volume of materials was found for the review theme of employment practices, with 143 materials. This theme was interpreted very broadly (as described below) and could include any aspects relating to working environment, working conditions and working practices. The second largest volume of materials was found for the review theme of career pathways (112). However for both these themes, a relatively small proportion of material was deemed to be strongly relevant and robust (i.e. 5 star). This reflects the fact that a large proportion of the material in these areas consisted of guidance material for practitioners or USA reports on practices in individual states or school districts. There were fewer references found for the theme of retention and attrition (96) but a large proportion of these were felt to be of sufficient quality and relevance to warrant further consideration. Finally there were few references relating to the role of pensions (62) and even fewer on flexible working (16), although again a higher proportion of these materials tended to be considered relevant.

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[24] This separate REA literature explores: the impacts of ageing on the physical, mental and emotional demands on teachers (particularly the medical health conditions affecting the schools workforce); evidence-based suggestions to address including access to occupational health and other support/health services and use of pension scheme ill-health provisions.

Table 4: Volume of materials by review theme and initial quality rating after sift 4

Theme (review question)	Total Number	Initial rating		
		1 star	3 star	5 star
Career (exit) pathways	112	40	61	11 (9%)
Employment practices	143	48	73	22 (15%)
Retention and attrition	96	13	52	31 (32%)
Role of Pensions	62	17	30	15 (24%)
Flexible working	16	3	5	8 (50%)
Call for evidence	21	6	11	4 (19%)
Total (including duplicates)	**450**	**127**	**232**	**91 (20%)**
Total (excluding duplicates)	**393**	**118**	**206**	**69 (18%)**

Source: IES/PPI, 2015

Table 5 maps the geographical location of the research evidence against the review themes. This illustrates that overall most evidence assessed during the final sift comes from the USA and/or Canada (179 items or 46%). However there was a substantial volume of evidence from the UK (131 or 33%). The UK evidence was particularly marked among the material on pensions, the small set of items around flexible working, and among the sources recommended by stakeholders during the call for evidence. Evidence from North America particularly dominated the review themes of career pathways and employment practices, where there were twice as many references from the USA/Canada as there were from the UK.

Table 5: Volume of materials by review theme and country of focus after sift 4

Theme (review question)	Total Number	Country of focus				
		UK	USA Canada	Other*	Comparative or theoretical	Unclear
Career (exit) pathways	112	27	55	10	3	17
Employment practices	143	33	82	4	11	14
Retention and attrition	96	33	27	15	7	14
Role of Pensions	62	38	22	0	0	2
Flexible working	16	11	2	2	1	0
Call for evidence	21	17	4	0	0	0
Total (including duplicates)	**450**	**159**	**192**	**31**	**22**	**46**
Total (excluding duplicates)	393	131	179	27	20	36

*Note: other includes Australia and New Zealand, and Western Europe. Materials from other countries were screened out during earlier sifts.

Source: IES/PPI, 2015

After rating the materials, all those rated 5 star were put through a **final documented sift** process. Any 3 star materials resulting from the call for evidence were also included, in order to ensure that materials considered relevant by UK stakeholders were given due consideration. In total, 80 items were assessed (see below for the sift and review pro-forma). The documented sift was undertaken to record for each document: the type of evidence represented; the methodology used; the contribution to the review and relevance to the core questions (including sub-themes); and final recommendation for or against full review with reasons for the decision. At this stage, a screen was also undertaken to eliminate multiple items based on the same study; generally, the most detailed and/or most recent piece was selected, or if relevant the version published in a peer-reviewed journal. A final shortlist of 59 papers was put forward for approval by the Department and the employment practice sub-group. This list is provided as appendix 2[25].

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[25] The list provided in Appendix 2 reflects the fact that some additional source were added subsequently based on the suggestions of the sub-group, and some were excluded based on the in-depth review as part of the final stage of the REA. The final list below hence encompasses 58 items. The references added were: Aegon (2015), Aegon UK (2015), and Wilson et al. (2006). For exclusions, cf. footnote 5 below. The initial list agreed with the sub-group is available in the interim report.

Review, analysis and synthesis

As part of the full review, the selected materials were reviewed in detail against a standard pro-forma (see below). Outcomes, findings and conclusions relevant to each of the five review questions guiding the review was extracted. The recommendations made by the research, either policy-based, actions for key stakeholders, or recommendations for further research, were documented in the pro-forma. As part of the review process, the materials were also subjected to a detailed assessment of:

- The methodological approach taken including validity of the conceptualisation, operationalisation, quality of the underlying data, reliability, whether the analysis supports the conclusions drawn, likely limitations including applicability to the central research themes or ability to draw firm conclusions based on the method adopted and whether any limitations identified are adequately addressed in the analysis.

- The scope of research including the populations covered (i.e. any specific teacher characteristics, sub-groups or school settings), and the geographies and date range involved; and thus likely applicability/transferability of findings and recommendations to UK issues and settings.

- The research context and aims and how these may influence the findings and conclusions drawn (including research commissioner, key questions to be addressed and target audience).

- Whether a seminal study provides confirmatory or contrary evidence.

Based on this detailed critique and assessment of the validity of the research, the research team assigned materials a weighting (-,+,++). This was used to indicate what final weight should be placed on their findings, especially where different sources had contradictory conclusions. A summary of the extracted data in tabular form (bibliographical information, brief overview of method, weighting) is provided as Appendix 3. However a number of the materials were subsequently excluded from the initial shortlist agreed with the sub-group at the full review and analysis stage, as the in-depth review revealed them to be less relevant than suggested by the initial review, or showed them to be insufficiently methodologically robust.[26]

Sift and review documentation

The following proforma was used to document the sift results.

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[26] The papers excluded were: Brown (2010), CIPD (2004), Foster (2010), Kimball et al. (2005), NASUWT (2013), and OECD (2005). Day (2008) was substituted with the more general report, Day et al. (2008).

Figure 3: Review proforma

Documented sift	
Paper/Report Reference Full bibliographic ref incl author date, title.	
Weblink	
Source Search or call for evidence	
Evidence type Delete those that do not apply, and add categories if these are not suitable	Research report Statistical data (i.e. SFR) Literature review (e.g. review of reviews) Academic journal article/book chapter Conference paper Other journal/commentary/think piece Policy document (including consultations and responses) Policy impact assessment Other – please specify
Methodology (if research) a) Qualitative, quantitative or mixed methods. b) Literature review approach: systematic, rapid, critical c) Brief details of coverage: number and characteristics of individuals researched i.e. role, gender , location, age. **To include type of organisational setting – school type, sector type for other organisations etc.)**	
Contribution to this study (relevance to core Qs) Delete those that do not apply.	**Career (exit) pathways:** The various career pathways which could support teachers working longer, and the extent to which teachers are prepared throughout their careers for moving on to alternative pathways. **Employment practices**: What good employment practices look like, which would support teachers to work longer, and how these practices could be developed/promoted/shared. **Retention and attrition**: The extent to which and the reasons why older teachers drop out of the labour market, including the employment experience of older teachers. **Role of pensions**: The extent to which TPS flexibilities (e.g. phased retirement) are understood and utilised by employers and teachers to support working longer, and any barriers to their usage. **Flexible working:** The extent of current flexible working within the teaching profession (e.g. managed re-deployments between schools, part-time working), the potential options for further flexible working, and how existing and new practice could be used to support teachers working longer.
Recommendation: Would you recommend that we include this paper in the review?	**Include for Full Review** **Exclude for Full Review** **Not sure (second opinion required)**
Paper of relevance to Working Longer Impact REA? (tick if yes)	

Second stage – full review
Research agenda/context: *(incl. Research funder/commission, and author interest in the subject, policy context)*
Scope: *Focus of the research (which ages, disciplines, and school types covered; what teacher characteristics explored)*
Methodology (quality of approach): *Brief description of methods used (incl: sample size, sampling strategy, response rates, non-participation bias, weakness in data and whether this is addressed in analysis).*
Findings/key conclusions: *Please include page numbers for data and quotes* **1: Summary of evidence on teachers' career pathways (progression and exit points) and employment experiences of older teachers** **2: Summary of evidence on the causes of retention problems and drop-out, and the size of attrition in the teaching workforce** **3: Summary of evidence on employment practices and retention initiatives** **4: Summary of evidence on the awareness, understanding and take-up of Teachers' Pension Scheme flexibilities (e.g. phased retirement) and barriers to their usage** **5: Summary of evidence about flexible working practices in the teaching profession (e.g. re-deployment between schools, part-time working, job sharing)**
Recommendations (if appropriate):
Useful citations and references (i.e. potential additional materials):
Critique (reviewer assessment): *Assessment of the validity of the research (what is it measuring, what is missing, is it reliable). Does analysis support conclusions drawn? What weight should be placed on the findings? Seminal, novel confirmatory, or contrary?*

Reviewer initials:	**Date:**

Appendix 2: List of publications reviewed

Initial shortlist

A number of publications from the initial shortlist agreed with the sub-group was excluded at the full review stage, as they were revealed on detailed reading to be irrelevant or of low quality. Some were substituted with alternative publications, i.e. where more relevant versions of a report were identified. A number were also added following requests from the sub-group.

1.   Aegon UK (2015). Aegon UK Readiness Survey. Available at: https://www.aegon.co.uk/content/dam/ukpaw/documents/Third-UK-Readiness-Report.pdf

2.   Aegon (2015). Inspiring a World of Habitual Savers. The Aegon Retirement Readiness Survey 2015. Available at: http://www.aegon.com/Documents/aegon-com/Research/2015-Retirement-Survey/Aegon-Retirement-Readiness-Survey-2015-Global-Report.pdf

3.   Avanzi, L., Cortini, M., & Crocetti, E. (2012). When age matters: The role of teacher aging on job identity and organisational citizenship behaviours. Revue Internationale de Psychologie Sociale, 25(3-4), 179-210.

4.   Bal, P. M., & Visser, M. S. (2011). When Are Teachers Motivated to Work beyond Retirement Age? The Importance of Support, Change of Work Role and Money. Educational Management Administration & Leadership, 39(5), 590-602.

5.   Barmby, P. (2006). Improving Teacher Recruitment and Retention: The Importance of Workload and Pupil Behaviour. Educational Research, 48(3), 247-265.

6.   Borman, G. D., & Dowling, N. M. (2008). Teacher Attrition and Retention: A Meta-Analytic and Narrative Review of the Research. Review of Educational Research, 78(3), 367-409.

7.   Bowers, T. (2001). Teacher Absenteeism and Ill-health Retirement: a review. Cambridge Journal of Education, 31(2), 135-157. doi:10.1080/0305764012006119

8.   Brown, J., Gilmour, W.H., & Macdonald, E.B. (2006a). Return to work after ill-health retirement in Scottish NHS staff and teachers. Occupational Medicine-Oxford, 56(7), 480-484.

9.   Brown, J., Gilmour, W. H., & Macdonald, E. B. (2006b). Ill-health retirement in Scottish teachers: process, outcomes and re-employment. Int Arch Occup Environ Health, 79(5), 433-440. doi:10.1007/s00420-005-0060-9

10.   Brown, K. M. (2013). The link between pensions and retirement timing: Lessons from California teachers. Journal of Public Economics, 98, 1-14. doi:10.1016/j.jpubeco.2012.10.007

11.   Buchanan, J. (2009). The Use of Teachers' Expertise in Subsequent Careers: Brain Drain, Skill Spill? Education & Society, 27(1), 25-50.

12.	Cleal, N., Curry, C., Carrera, L., Adams, J., & Redwood, D. (2013). The implications of the Coalition Government's public service pension reforms. London: Pensions Policy Institute.

13.	Costrell, R. M., & McGee, J. B. (2010). Teacher Pension Incentives, Retirement Behavior, and Potential for Reform in Arkansas. Education Finance and Policy, 5(4), 492-518.

14.	Dauksas, L., & White, J. (2010). Should I Stay or Should I Go? How Teacher Leadership Can Improve Teacher Retention. AASA Journal of Scholarship & Practice, 7(2), 27-32.

15.	Day, C., Stobart, G., Sammons, P., Kington, A., Gu, Q., Smees, R., & Mujtaba, T. (2008). Variations in Teachers' Work, Lives and Effectiveness. Research Report RR743. Department for Education and Skills.

16.	Day, C., Elliot, B., & Kington, A. (2005). Reform, Standards and Teacher Identity: Challenges of Sustaining Commitment. Teaching and Teacher Education: An International Journal of Research and Studies, 21(5), 563-577.

17.	Day, C., & Gu, Q. (2007). Variations in the conditions for teachers' professional learning and development: sustaining commitment and effectiveness over a career. Oxford Review of Education, 33(4), 423-443. doi:10.1080/03054980701450746

18.	Day, C., & Gu, Q. (2009). Veteran teachers: commitment, resilience and quality retention. Teachers and Teaching, 15(4), 441-457. doi:10.1080/13540600903057211

19.	DeArmond, M., & Goldhaber, D. (2010). Scrambling the nest egg: How well do teachers understand their pensions, and what do they think about alternative pension structures? Education Finance and Policy, 5(4), 558-586. doi:10.1162/EDFP_a_00010

20.	Disney, R., Emmerson, C., & Tetlow, G. (2010). The Value of Teachers' Pensions in England and Wales. Fiscal Studies, 31(1), 121-150.

21.	Friedberg, L., & Turner, S. (2010). Labor Market Effects of Pensions and Implications for Teachers. Education Finance and Policy, 5(4), 463-491.

22.	Friedberg, L., & Turner, S. (2011). Pensions and public school teacher retirement: An analysis using national teacher data. Research Dialogue Issue, 99.

23.	Fuller, C., Goodwyn, A., & Francis-Brophy, E. (2013). Advanced skills teachers: professional identity and status. Teachers and Teaching, 19(4), 463-474. doi:10.1080/13540602.2013.770228

24.	Furgeson, J., Strauss, R. P., & Vogt, W. B. (2006). The Effects of Defined Benefit Pension Incentives and Working Conditions on Teacher Retirement Decisions. Education Finance and Policy, 1(3), 316-348.

25.	Gaikhorst, L., Beishuizen, J.J., Zijlstra, B.J.H., & Volman, M.L.L. (2014). Contribution of a professional development programme to the quality and retention of teachers in an urban environment. European Journal of Teacher Education, 38(1), 41-57. doi:10.1080/02619768.2014.902439

26.   Gilpin, G. A. (2011). Reevaluating the effect of non-teaching wages on teacher attrition. Economics of Education Review, 30(4), 598-616. doi:10.1016/j.econedurev.2011.03.003

27.   Goldhaber, D., Grout, C., & Holden, K. (2015). Teacher Pension Systems and Mobility Decisions: Evidence from Washington State. Washington, D.C.: American Institutes for Research.

28.   Gu, Q. (2014). The role of relational resilience in teachers' career-long commitment and effectiveness. Teachers and Teaching, 20(5), 502-529. doi:10.1080/13540602.2014.937961

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Literature included during later stages of the process

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Appendix 3: Weighting and methodological details of literature reviewed

Table 6: Key source materials and further details of the methodology used and researcher assessed weighting

Bibliographic details	Peer review?	Brief description of methodology	Weight
Aegon UK (2015). *Aegon UK Readiness Survey*.	No	Quantitative: the report presents the results from the 4th Annual Retirement Readiness Survey, an online survey of 14,400 employees and 1,600 fully retired people in 15 countries (Australia, Brazil, Canada, China, France, Germany, Hungary, India, Japan, Netherlands, Poland, Spain, Turkey, United Kingdom, United States). The survey was conducted in February 2015. The Aegon Retirement Readiness Index is calculated based on the correlation between 6 predictor variables (personal responsibility for income in retirement, level of awareness of need for planning, financial capability and understanding, retirement planning, financial preparedness, level of projected income replacement) and the dependent variable (approaches to saving). The mean scores of the predictor variables are computed and each mean score is multiplied by its 'R' value. The results are summed and then divided by the sum of all correlations to arrive at the ARRI score.	+
Aegon (2015). *Inspiring a World of Habitual Savers. The Aegon Retirement Readiness Survey 2015*.	No	Quanititative: a report based on a survey of over 4000 individuals in the UK. It contains no information on the sampling strategy or sample composition. The Retirement Readiness Index comprises items on financial readiness (financial situation and expectations), awareness of funding requirements of desired retirement lifestyle, and pensions-related behaviours. It is scored as marks out of 100.	+
Aldeman, C., & Rotherham, A.J. (2010). Better Benefits: Reforming Teacher Pensions for a Changing Work Force. Education Sector Reports. Washington D.C.: Education Sector.		Contextual: not cited in report	
Avanzi, L., Cortini, M., & Crocetti, E. (2012). When age matters: The role of teacher aging on job identity and organizational citizenship behaviours. *Revue Internationale de Psychologie Sociale, 25*(3-4), 179-210.	Yes	Quantitative: survey of 515 teachers (85.4% women) divided into settling-in adults (aged 24-39 years), prime working years (aged 40-54 years), and approaching retirement employees (aged 55-64 years). Results were analysed using analysis of variance (ANOVA) and regression to test for statistical significance. The geographic location of the sample is unclear. No funding details were given.	++

Bibliographic details	Peer review?	Brief description of methodology	Weight
Bal, P. M., & Visser, M. S. (2011). When Are Teachers Motivated to Work beyond Retirement Age? The Importance of Support, Change of Work Role and Money. *Educational Management Administration & Leadership, 39*(5), 590-602.	Yes	Quantitative: survey of 123 teaching staff at Roman-Catholic secondary schools in 4 locations in mid-sized cities in the Netherlands. The response rate was 44% (out of 281 teachers in total). The sample was demographically representative of the school. The survey comprised 5-point Likert-type items. The reliability of the scales employed was found to be at acceptable levels (Cronbach's alpha > 0.84 in all cases).Gender, age, tenure in the current organisation, and job satisfaction were captured as control variables. The research hypotheses were tested using moderated hierarchical regression analysis.	++
Barmby, P. (2006). Improving Teacher Recruitment and Retention: The Importance of Workload and Pupil Behaviour. *Educational Research, 48*(3), 247-265	Yes	Mixed: Literature review: quasi-systematic literature review, involving a search of the British Education Index database using specified search terms in January 2004. It excluded literature not concerned with the UK, and articles published before 1999. Additional references identified as important sources for the included publications were included, and irrelevant search results excluded. Overall, the review covered 41 sources. Full details in Barmby and Coe, 2004. Quantitative: a telephone survey (January-June 2004) with 246 teachers in England in Wales, teaching English, maths and science, identified as shortage subjects by the Teacher Training Agency. A random sample of participants in the Repayment of Teachers' Loans Scheme teaching the relevant subjects, stratified by region. The response rate was 39%. Sample selected for 25% working in London, and 75% working in the rest of England and Wales to achieve sample numbers for meaningful comparisons. The sample was representative of the original population in terms of gender.	++
Borman, G. D., & Dowling, N.M. (2008). Teacher Attrition and Retention: A Meta-Analytic and Narrative Review of the Research. *Review of Educational Research, 78*(3), 367-409	Yes	Quantitative: meta-analysis of 34 studies on teachers' career trajectories and attrition/retention. Examines 63 attrition moderators. Literature for the analysis was identified using a keyword search of reference databases (Education Resources Information Clearinghouse; PsychINFO; JSTOR; The Scholarly Journal Archive; Social Sciences Full Text; Academic Search; and Education Full Text), the internet and citations in key (review) articles. Quantitative articles or research reports published between 1980 and 2005 only. Articles were sifted to identify those providing data on the probability of attrition. Final study included 34 articles, each based on independent data sets or samples and with varying sample sizes. Effect sizes were calculated for each study. Statistical analyses were conducted on the log odds ratios of attrition, using weights equal to the inverse of the sampling error variance of the effect sizes, such that the contribution of each effect size was proportionate to its reliability. Significant results, effect sizes as odd ratio, logged odds ratio values and z-values were reported.	++

Bibliographic details	Peer review?	Brief description of methodology	Weight
Bowers, T. (2001). Teacher Absenteeism and Ill-health Retirement: a review. *Cambridge Journal of Education, 31*(2), 135-157	Yes	This paper reviews research into teacher illness and absenteeism. Includes studies from Europe and North America. It examines the definition and measurement of absenteeism, its cost, and the relationship between absenteeism and student attendance and school performance. It examines research comparing teacher absenteeism data with figures for other public employees. It reviews approaches to managing absenteeism, including policy development and implementation, and considers possible causes of teachers' early retirement because of disability in a context of management practice, educational reform and making best use of 'older' employees.	++
Brown, J., Gilmour, W.H., & Macdonald, E.B. (2006a). Return to work after ill-health retirement in Scottish NHS staff and teachers. *Occupational Medicine-Oxford, 56*(7), 480-484		Supplemented by later report below	++
Brown, J., Gilmour, W. H., & Macdonald, E. B. (2006b). Ill-health retirement in Scottish teachers: process, outcomes and re-employment. *Int Arch Occup Environ Health, 79*(5), 433-440	Yes	Quantitative: 537 teacher ill-health retirees in Scotland between April 1998 and March 2000 were randomly selected by the Scottish Public Pensions Agency to receive a postal or telephone questionnaire in January 2002. 282 participants returned the survey (response rate 53%). 38% of participants were male and 62% were female. 42% taught in secondary education, 37% in primary, 9% in further, 7% special needs, 3% nursery and 2% in independent schools. The research investigated the likelihood of taking up employment after IHR. The survey data was analysed using tests of statistical significance including chi-squared, unadjusted odds ratios and multiple logistic regression models. There may be issues with non-response bias and under-reporting, due to the sensitive nature of the issues covered.	++
Buchanan, J. (2009). The Use of Teachers' Expertise in Subsequent Careers: Brain Drain, Skill Spill? *Education & Society, 27*(1), 25-50	Yes	Qualitative and Literature Review. Qualitative: semi-structured telephone interviews with twenty ex-teachers (fifteen females, seven males) who had left school teaching mid-career to take up non-teaching positions. Their experience ranged from a few months to more than 20 years. The sample excluded ex-teachers who had moved into professions involving a significant teaching role, like academics. The sample was recruited via snowball sampling starting from suggestions by the author's colleagues. Literature review: the article includes a short overview of the literature to motivate the qualitative research. The review methodology is not described.	++

Bibliographic details	Peer review?	Brief description of methodology	Weight
Cleal, N., Curry, C., Carrera, L., Adams, J., & Redwood, D. (2013). The implications of the Coalition Government's public service pension reforms. London: Pensions Policy Institute	No	Quantitative: in order to provide comparisons of the value of the benefits offered by alternative Defined Benefit pension schemes, such as a final salary scheme and a career average scheme, the PPI calculated the Effective Employee Benefit Rate (EEBR) of different schemes for scheme members with different characteristics. The EEBR translates the value of the pension benefit offered into an equivalent percentage of salary that the scheme member would need to be given to compensate for the loss of the pension scheme. The modelling in this project assumes increases in SPA approximating a combination of current legislation and announced Government policy. The PPI has used this measure in a previous assessment of the implications of the Labour Government's reforms to public service schemes (PPI 2008).The PPI has also used this measure in analysis conducted for the Independent Public Service Pension Commission (IPSPC) on the implications of different reform options.	++
Costrell, R. M., & McGee, J. B. (2010). Teacher Pension Incentives, Retirement Behavior, and Potential for Reform in Arkansas. *Education Finance and Policy, 5*(4), 492-518	Yes	Quantitative: uses a longitudinal data set linking administrative data on teachers with pension system data for period 2000/01-2007/08. The data set covers 36,657 teachers, for a total of 209,721 person-year observations, of which 8,194 were separations. The teachers in the data set were 80.5% female, 89.6% white, with mean average age 42.4. The research calculates how teachers accumulate pension wealth with each year of employment, and assumes salary increases at 2.5% inflation, a 5% interest rate and use the most current female mortality tables from the Center for Disease Control and Prevention. The analysis tests for statistical significance using a multivariate regression model.	++
Dauksas, L., & White, J. (2010). Should I Stay or Should I Go? How Teacher Leadership Can Improve Teacher Retention. *AASA Journal of Scholarship & Practice, 7*(2), 27-32	Yes	Literature review: explores attributes of teacher leaders and conditions that affect teacher retention. It compares characteristics of teacher leaders with the opportunities and conditions that reportedly have a positive influence on teacher retention. Suggestions are provided for principals to cultivate teacher leaders, thus positively impacting teacher retention and student learning. The review methodology is not described.	++
Day, C., Stobart, G., Sammons, P., Kington, A., Gu, Q., Smees, R., & Mujtaba, T. (2008). *Variations in Teachers' Work, Lives and Effectiveness*. Research Report RR743. Department for Education and Skills.	No	Mixed: Sample of 300 teachers, drawn from seven nationally and geographically representative local authorities. An initial survey led to the selection of one hundred schools and three hundred case study teachers. Half of the sample were primary teachers from seventy five primary schools, half secondary teachers of maths or English from twenty five schools. The schools were representative in terms of phase, SES, size, and overall attainment, and the teachers were broadly representative of the profession in terms of age/gender/experience. The sample overrepresented deprived schools on the assumption that they would experience higher mobility/drop-out. Teachers in Years 2, 6 and 9 were selected so that the key stage national curriculum test results could be used as pupil outcome measures. Effectiveness was measured by teachers' perceptions of their own effectiveness and their impact on pupils' educational outcomes.	++

Bibliographic details	Peer review?	Brief description of methodology	Weight
		Qualitative: semi-structured recorded interviews conducted twice-yearly with teachers to monitor perceptions of effectiveness and the positive and negative influences upon these. Quantitative: multi-level analyses of value-added to pupils' progress and attainment and an annual pupil attitude survey to measure pupil outcomes and explore differences between classes and teaching groups. Qualitative and quantitative data were used to create profiles of teachers to identify patterns in terms of perceived and relative (value-added) effectiveness.	
Day, C., Elliot, B., & Kington, A. (2005). Reform, Standards and Teacher Identity: Challenges of Sustaining Commitment. *Teaching and Teacher Education: An International Journal of Research and Studies, 21*(5), 563-577	Yes	Qualitative: an exploratory study involving 20 experienced teachers aged 45-55, selected on an opportunistic basis from groups engaged in professional development at the authors' universities. Among the Australian participants, six were primary and six secondary teachers. Among the English sample, four were primary, three secondary, one headteachers, and two LEA advisers. Data was collected via open qualitative interviews. They were coded in line with the principles of grounded theory.	++
Day, C., & Gu, Q. (2007). Variations in the conditions for teachers' professional learning and development: sustaining commitment and effectiveness over a career. *Oxford Review of Education, 33*(4), 423-443	Yes	Mixed: The data is drawn from a four-year large scale, mixed methods research project on variations in teachers' work, lives and effectiveness (VITAE) involving three hundred teachers in one hundred primary and secondary schools in 7 Local Authorities (LAs) (Day et al., 2006a). All were broadly representative of the national age, experience and gender profile of teachers and of the SES/attainment profile of schools. Qualitative: data on teachers' perceived effectiveness were collected through twice yearly semi-structured, face-to-face interviews with teachers, and supplemented by document analysis and interviews with school leaders and groups of pupils. Quantitative: improvements in pupils' progress and attainment were collected through matching baseline test results at the beginning of the year, with pupils' national curriculum results at the end. This article presents 2 case studies and presents counts for various comparison groups with an N <100. No statistical tests for significance are used.	++
Day, C., & Gu, Q. (2009). Veteran teachers: commitment, resilience and quality retention. *Teachers and Teaching, 15*(4), 441-457	Yes	Mixed – but appears more qualitative. Drawing upon a range of research, this paper seeks to investigate how and why teachers in the third and fourth decades of their professional lives sustain or do not sustain their beliefs and sense of commitment to teaching at its best. This paper sees retention as a process rather than a result. It thus addresses the conditions which help teachers to sustain their commitment to high quality teaching over time.	++

Bibliographic details	Peer review?	Brief description of methodology	Weight
DeArmond, M., & Goldhaber, D. (2010). Scrambling the nest egg: How well do teachers understand their pensions, and what do they think about alternative pension structures? *Education Finance and Policy, 5*(4), 558-586	Yes	Mixed – although appears largely quantitative. In this article the authors focus on2 questions: How well do teachers understand their current pension plans, and what do they think about alternative plan structures? The data come from administrative records and a 2006 survey of teachers in Washington State	++
Disney, R., Emmerson, C., & Tetlow, G. (2010). The Value of Teachers' Pensions in England and Wales. *Fiscal Studies, 31*(1), 121-150	Yes	Quantitative: The paper calculates the value of the pension right accrued by members of the TPS under the pre- and post-reform rules, and calculates the additional value of incremental accrued rights as a fraction of salary on an annual basis. It also compares these rights with those under2 defined contribution pension schemes, taking into account differences in typical age-earnings profiles. Coverage: full- and part-time primary and secondary school teachers employed in local authority maintained schools, as recorded in the Database of Teacher Records (DTR), who were aged between 23 and 59 (inclusive) as of March 2007. '87% of primary school teachers and 61% of secondary school teachers are women. On average (looking at both the mean and median ages), teachers are in their early 40s, with half of teachers being aged between their early 30s and their early 50s. The distribution of female teachers' ages is slightly younger than that of male teachers' ages.' (128-129)	++
Friedberg, L., & Turner, S. (2010). Labor Market Effects of Pensions and Implications for Teachers. *Education Finance and Policy, 5*(4), 463-491	Yes	Literature review	-
Friedberg, L., & Turner, S. (2011). Pensions and public school teacher retirement: An analysis using national teacher data. *Research Dialogue Issue*, 99	Yes	Quantitative: Analysis of the impact on state school teachers' retirement decisions of the incentives embedded in public defined benefit pensions plans (the way they accumulate pension wealth as a function of workers' age, tenure and earnings) Based on a nationally representative sample of teachers from the Schools and Staffing Survey (SASS) and Teacher Follow-up Survey (TFS).	++

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Bibliographic details	Peer review?	Brief description of methodology	Weight
Fuller, C., Goodwyn, A., & Francis-Brophy, E. (2013). Advanced skills teachers: professional identity and status. *Teachers and Teaching, 19*(4), 463-474	Yes	Mixed: Using survey data from 849 ASTs (Advanced Skills teachers) and in depth interviews with 31, this paper seeks to explores the ways that the AST designation impacts or not on teachers' perceptions of their professional identity. – examines how this affects teacher status and retention	++
Furgeson, J., Strauss, R. P., & Vogt, W. B. (2006). The Effects of Defined Benefit Pension Incentives and Working Conditions on Teacher Retirement Decisions. *Education Finance and Policy, 1*(3), 316-348	Yes	Quantitative: The retirement behaviour of Pennsylvania public school teachers in 1997-98 and 1998-99, a period when state early retirement incentives were temporarily increased, is modelled using a choice framework that emphasises both pecuniary and non-pecuniary factors of the retirement decision under a defined benefit retirement plan. We find each to have large and statistically significant effects on the decision to retire.	++
Gaikhorst, L., Beishuizen, J.J., Zijlstra, B.J.H., & Volman, M.L.L. (2014). Contribution of a professional development programme to the quality and retention of teachers in an urban environment. *European Journal of Teacher Education, 38*(1), 41-57	Yes	The quantitative element of the study uses a quasi-experimental design (N=133 – 66 treatment, 67 control): The contribution of participation was measured using a knowledge test and questionnaires to assess professional orientation, self-efficacy, motivation, and career choices prior to and after the intervention. The treatment group was formed of all teachers who wanted to participate in the programme. Participants were matched to members of the control group on several variables: work environment (major city), potential (control group also participated in development programme), years of experience, gender. Multilevel modelling was used to analyse the data, with measurement occasions being treated as nested in teachers. To understand teachers' perspectives on the programme, semi-structured telephone interviews were conducted (N=42 – equal proportion of teachers/principals). The results were analysed using CAQDA. Limitations: It is not clear whether the matching compensates for the self-selection bias of the experimental part of the study. Competences are operationalized as knowledge, which the authors themselves recognise as problematic. Career choices are measured using questions about career plans and actual steps taken to leave the sector.	++
Gilpin, G. A. (2011). Reevaluating the effect of non-teaching wages on teacher attrition. *Economics of Education Review, 30*(4), 598-616	Yes	Quantitative: In this paper, we use non-teaching wages of former teachers to estimate the determinants of teacher attrition, including the wage differential between teaching and non-teaching occupations, as well as the teacher work environment. This study follows the careers of around 5000 public school teachers employed in U.S. public schools between 1999–2000 and 2004–2005 school years. The data come from a sample of public school teachers contained in the restricted-access version of the Teacher Follow-up Survey (TFS) for school years 2000–2001 and 2004–2005	++

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		along with school characteristics from the Schools and Staffing Survey (SASS) for school years 1999-2000 and 2003-2004.	
Goldhaber, D., Grout, C., & Holden, K. (2015). Teacher Pension Systems and Mobility Decisions: Evidence from Washington State. Washington, D.C.: American Institutes for Research	Yes	The data is drawn from the Washington State teacher retirement data, which includes information on plan enrolment, mandatory/voluntary enrolment, contribution rate choice for the hybrid scheme, and retirement dates up to January 2010. These data were merged with administrative record from the Washington State Office of the Superintendent of Public Instruction (OSPI) S-275 personnel reporting system, which provides information on teacher demographics, assignment type (duty codes identify teaching staff and activity codes identify positions involving direct instruction), school system and school of employment, salary, experience level, and subject areas in which a teaching endorsement is held; based on this data, a panel of observations can be constructed for each year in which an individual is employed as a public school teacher in Washington state during the school years ending between 1985 and 2014. The sample consists of 72,085 unique teacher observations and 757,339 person-year observations. The teachers in the DB plan tend to be older and are more likely to be female. The paper first compares the quit rates for a 1987 worker cohort that is mandated into traditional pension plans to a 1996 worker cohort that is mandated into hybrid plans; this is shown to be sensitive to extraneous cohort and contextual differences. The paper then draws comparisons using alternative methods that limit the time difference between cohorts, comparing one-year quit rates for teachers hired before 1996 who are mandated into the traditional pension plan to teachers hired after 1996 who are mandated into the hybrid plan. Finally, it compared quit rates among a cohort of teachers hired after 2007, who are allowed to choose their pension plan. The model uses discrete-time hazard models to estimate the likelihood of quitting in each year of service. The models control for the observable characteristics of teachers on some specifications, to test for whether selection on observable characteristics is responsible for some part of the higher quit propensities of the hybrid plan, or whether selection is correlated with teachers'	+
Gu, Q. (2014). The role of relational resilience in teachers' career-long commitment and effectiveness. *Teachers and Teaching, 20*(5), 502-529	Yes	Quantitative: The empirical basis of the paper draws upon analyses of twice yearly semi-structured face-to-face interview data from 300 teachers in different phases of their careers in 100 primary and secondary schools in England over a consecutive three-year period. Through these analyses, the paper contributes additional empirical evidence to the emerging but still limited literature on the factors which influence teachers' capacity to be resilient.	++

Bibliographic details	Peer review?	Brief description of methodology	Weight
Guarino, C. M., Santibanez, L., & Daley, G. A. (2006). Teacher Recruitment and Retention: A Review of the Recent Empirical Literature. *Review of Educational Research, 76*(2), 173-208	Yes	The literature review included all studies meeting criteria of relevance to teacher recruitment/retention in the USA (published in 2004 at the latest and covering data reaching to 1990 or later), scholarship (articles published in peer-reviewed journals as well as books/chapter of empirical nature), empirical nature (no review of reviews – included publications must be based on qualitative or quantitative research and analysis) and quality (reliability/validity, warranted interpretations). The search strategy relied on electronic searches of relevant databases and table-of-contents searches of recognised education journals, as well as recommendations from experts in the field. The total number of papers reviewed was 46. The article adopts a rational choice model of teacher recruitment and retention (p. 174-177). The review recognises that its conclusions may be affected by 'publication bias' against publishing no-effect results. It notes limitations in the quality of individual studies included in the review throughout.	++
Hancock, C.B. (2009). National Estimates of Retention, Migration, and Attrition: A Multiyear Comparison of Music and Non-Music Teachers. *Journal of Research in Music Education, 57*(2), 92-107	Yes	Quantitative: Estimates the magnitude of retention, migration, and attrition of music teachers; the transfer destinations of those who migrated; the career path status of those who left; and the likelihood that former music teachers would return to teaching. Analyses data on music (n = 881) and non-music teachers (n = 17,376). Data from 1988-1989, 1991-1992, 1993-1994, and 2000-2001 waves of the National Centre for Education Statistics' Teacher Follow-up Survey, a USA national survey designed to compile comprehensive data concerning changes in the teacher labour force.	++
Hansez, I., Bertrand, F., De Keyser, V., & Peree, F. (2005). Career end for teachers: Towards a better understanding of stress and early retirement. *Travail Humain, 68*(3), 193-223	Yes	Quantitative: Statistical analyses of survey among teachers and results from subjective stress measure.	++
Hughes, G.D. (2012). Teacher Retention: Teacher Characteristics, School Characteristics, Organisational Characteristics, and Teacher Efficacy. *The Journal of Educational Research, 105*(4), 245-255	Yes	The data for this research are the results of an online survey administered to teachers at 70 schools, recruited from a random stratified sample of 400 schools in the state obtained from the Department of Education's website (response rate 17.5%). Principals were asked to invite teachers to participate in an online survey. 789 teachers completed the survey (response rate unknown). Participants were based in elementary (41% of participants), middle/intermediate/junior (34%), high (25%), and other public schools. The participants were 86% female, with an average age of 44 years, and almost exclusively Caucasian. Close to a third each had less than 10 years and between ten and twenty years of experience, and more than a third had more than 20 years of experience (p. 249).	++

Bibliographic details	Peer review?	Brief description of methodology	Weight
		The potential issues relating to non-response bias arising from this sampling strategy, both at the school and teacher level, were not addressed in the analysis. The author further noted potential biases arising from the overrepresentation of schools with students on free school meals and that of teachers from large schools relative to the population of the state. Finally, the article attempts to draw conclusions about retention/attrition based on a survey of teachers who remain in the profession. The survey comprised sixty items designed for the study and subjected to peer validation and tests of internal consistency reliability. The data were analysed using block-entry logistic regression.	
Hutchings, M. (2010). *What impact does the wider economic situation have on teachers' career decisions? A literature review*. London: Department for Education	No	The review draws on literature from labour economics (patterns of supply/demand, wages, employment levels etc. – based on longitudinal or cohort data sets – often focused on UK due to availability of data) and education research (focusing on teachers' own explanations for their career decisions). It considers the limitations of research from a labour economics perspective, notably its narrow focus on economic determinants of career decision making and its neglect of factors like workload, stress, pupil behaviour etc. It also considers the variety of measures of pay differences used, and considers the role of government policy in determining exit and entry. With regard to the education research literature, the review considers the limitations arising from limited survey evidence and the biases potentially arising from survey questions.	+
Hutchings, M., Smart, S., & Minty, S. (2008). *To what extent can pension scheme changes increase retention of older teachers?* Paper presented at the BERA Conference, Heriot Watt University, Edinburgh	No	The research (reported in full in Peters et al., 2008, also reviewed) involved • Surveys of local authorities, headteachers in their role as employers (N=672), and teachers aged 49-60 who were members of the Teachers' Pension Scheme (including headteachers in their role as employees; N=3865). • Case studies in twelve schools: qualitative interviews with headteachers, teachers, and governors. Qualitative interviews with individuals who had indicated on the survey that they planned to take advantage of the new provisions (N=91).	++
Kirkman, S. (1997). Too exhausted to carry on in post? *TES: Times Educational Supplement* (4212), 18	No	N/A – Newspaper Article	++
Kirkman, S. (2001). Escape from the great classroom burn-out. *TES: Times Educational Supplement* (4413), 29	No	N/A – Newspaper Article	++

Bibliographic details	Peer review?	Brief description of methodology	Weight
Kirkman, S. (2003). Why not a 3-day week? *TES: Times Educational Supplement* (4555), 2-2	No	N/A – Newspaper Article	++
Koedel, C., Podgursky, M., & Shi, S. (2013). Teacher Pension Systems, the Composition of the Teaching Workforce, and Teacher Quality. *Journal of Policy Analysis and Management, 32*(3), pp. 574-596	Yes	The research relies on longitudinal administrative microdata from Missouri. It comprised a sample of 7275 teachers across 942 schools, as well as over 200,000 unique students. It measures classroom effectiveness in terms of value added, based on student test scores in maths and reading linked to classroom-teacher assignments from the school years 2008/09, 2009/10, and 2010/11 as well as prior test scores. All test scores are standardised by subject, grade, and year. It identifies three groups of retirees based on when in the incentive structure of the system they retired, based on personnel data from 2011-2012. The regression model uses year t information about students, school characteristics, and teachers, year t-1 information about students' test scores, and the classification of teachers and then devises a model of student achievement designed to distinguish performance differences across teachers observed as retiring on different segments of the incentive structure. The findings are shown to be robust to changing the way that students are linked to teachers and to changing definitions of the retiree groups. To control for the possibility that unobserved differences in the working conditions for teachers could contribute to the observed retirement behaviours as well as to student achievement, which would make the retirement variables endogenous, a secondary regression analysis is conducted, which indicates that no such bias is present.	+
Macdonald, D. (1999). Teacher attrition: a review of literature. *Teaching and Teacher Education, 15*(8), 835-848	Yes	Literature Review	++
Mackenzie, S. (2012). 'I can't imagine doing anything else': why do teachers of children with SEN remain in the profession? Resilience, rewards and realism over time. *Journal of Research in*	Yes	The sample was of nineteen teachers, all of whom have been working for fifteen years or more. All were SENCOs or former SENCOs still working in education in some capacity. Ten teachers were from the primary sector and nine from secondary schools. All, but one, were female. Six had been teaching for fifteen years, five for sixteen to nineteen years and eight for more than twenty years (three in the primary sector, five in the secondary sector). The sample was drawn from a wider study of SENCOs, TAs and teachers (n = 44). All participants were interviewed using a life history/narrative approach.	++

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Special Educational Needs, 12(3), 151-161			
NASUWT (2001). *Age Discrimination in Employment. Evidence submitted to the House of Commons Employment Sub-Committee*. Birmingham: NASUWT	No	Policy recommendations. Very brief with little evidence in report.	-
NASUWT (2014). *Teachers' satisfaction and wellbeing in the workplace – 2014. Research in Brief.* Birmingham: NASUWT	No	Weighted survey of 505 teachers in England, November 2014	++
National Union of Teachers. (2011). *NUT Pensions Survey November 2011*. London: National Union of Teachers	No	Quantitative: Results of survey on teachers' attitudes to working longer and their views on the fairness of the Government's proposals Sample: 6,433 NUT members	++
National Union of Teachers. (2013). *Misuse of Capability Survey*. London: National Union of Teachers	No	Quantitative: Results of survey of division secretaries with a view to finding out the extent to which capability procedures, both formal and informal, were being misused in schools Sample: 54 division secretaries	-
Ni, S., & Podgursky, M. (2011). Teacher Pension Incentives and the Timing of Retirement. Unpublished manuscript	No	Quantitative: Estimates an option-value model of individual teacher retirement using an administrative data set for Missouri teachers, and then uses estimated structural parameters to simulate retirement behaviour under alternative pensions rules.	+

Bibliographic details	Peer review?	Brief description of methodology	Weight
Ni, S., Podgursky, M., & Ehlert, M. (2009). *Pension Incentives and Labor Market Behavior: Evidence from Missouri Administrative Teacher Data.* Paper presented at the Vanderbilt University: National Center on Performance Incentives. Conference Paper	No	Quantitative: Based on a new longitudinal state data set linking longitudinal SEA data records to state pension records, for all teachers employed in Missouri public school districts covered by the PSRS scheme between 1991/92 and 2007/08.	++
Peters, M., Hutchings, M., Edwards, G., Minty, S., Seeds. K., & Smart, S. (2008). *Behavioural Impact of Changes in the Teachers' Pension Scheme*. Research Report DCSF-RR024. London: Department for Children, Schools and Families	No	Mixed methods Survey with local authorities pensions staff (N=67, response rate 48%) and HR staff (N=39, 28%) Survey with headteachers in their role as employers (N=672, 34%). Survey with employees aged 49-60 who were members of TPS (3865 responses in total – N=939 for headteachers, 47%; N=2926 for other teachers, 44%) Case studies of twelve schools and qualitative follow-up interviews Literature review	++
Shen, J. (1997). Teacher Retention and Attrition in Public Schools: Evidence from SASS91. *The Journal of Educational Research, 91*(2), 81-88	Yes	Quantitative: Discriminant function analyses on data gathered from the 1990–1991 Schools and Staffing Survey and the 1991–1992 Teacher Follow-up Survey Sample: 3,612 individuals	++
Stinebrickner, T.R. (1998). An empirical investigation of teacher attrition. *Economics of Education Review, 17*(2), 127-136	Yes	Quantitative: Current duration analysis techniques used to examine the first spell in teaching for a sample of certified elementary and secondary school teachers Sample: 341 individuals who became certified to teach at some point between 1975 and 1985, based on NLS-72 and follow-up surveys in 1973, 1974, 1976, 1979, and 1986	++

Bibliographic details	Peer review?	Brief description of methodology	Weight
Strauss, R.P., & Liu, J. (2009). *Patterns of Retirement and Return Employment of Pennsylvania's Professional School Personnel: 1984-2006*. Conference Paper 2009-07. Nashville: National Center on Performance Incentives	Yes	Quantitative; statistical modelling Retiring and returning teachers in the Pennsylvania school system	+
Teacher Support Network (2014). *Education Staff Health Survey 2014 report*. London: Teacher Support Network	No	Quantitative Survey of education staff (teachers, lecturers, support staff, admin staff)	++
Tye, B. B., & O'Brien, L. (2002). Why Are Experienced Teachers Leaving the Profession? *Phi Delta Kappa, 84*(1), 24	No	Quantitative: Results of survey of experienced graduates Sample: 114 graduates of Chapman Uni. who had completed a teaching credential in the five years between 1990-91 and 1994-95, and who had presumably been teaching from six to ten years	++
US Department of Education, International Affairs Office, and National Council on Teacher Quality (2004). *Attracting, Developing, and Retaining Effective Teachers: Background Report for the United States*. Washington D.C.: US Department of Education	No	Literature Review	+
Van Droogenbroeck, F., & Spruyt, B. (2014). To stop or not to stop: an empirical assessment of the determinants of early retirement among active and	Yes	Quantitative analysis of survey data	++

Bibliographic details	Peer review?	Brief description of methodology	Weight
retired senior teachers. *Res Aging, 36*(6), 753-777			
Whitener, S. D., Gruber, K. J., Lynch, H., Tingos, K., Perona, M., & Fondelier, S. (1997). *Characteristics of Stayers, Movers, and Leavers: Results from the Teacher Followup Survey: 1994-95.* US Department of Education, National Center for Education Statistics	No	Quantitative: Results of US Teacher Follow-up Survey: 1994-95. Schools and Staffing Survey concerning characteristics of stayers, movers, leavers; descriptive	++
Wilson, V., Powney, J., Hall, S., & Davidson, J. (2006). Who Gets Ahead? The Effect of Age, Disability, Ethnicity and Gender on Teachers' Careers and Implications for School Leaders. *Educational Management, Administration & Leadership, 34*(2), 239-255	Yes	Qualitative; analysis of survey responses and case study interviews	++
Worth, J., Bamford, S. and Durbin, B. (2015). *Should I Stay or Should I Go? NFER Analysis of Teachers Joining and Leaving the Profession.* Slough: NFER.	No	Representative survey of teachers in England using School Workforce Survey analysis. Analysis of Labour Force Survey using a sample of 6,896 teachers, including 936 that left teaching and 774 that joined teaching over a fourteen year period (2001-2015).	++