Teacher retention seminar

20 March 2018

Session 1. ‘Government initiatives to improve teacher retention’

Chair: Professor David Read, University of Southampton

Gareth Conyard, Department for Education
Session 2. ‘Teacher retention: facts and factors’

Chair: Professor David Read, University of Southampton

Nick Creagh, TES Global Ltd
Welcome!

When teachers go
understanding the difference between Teacher Recruitment; School Recruitment; and, Retention

Where it hurts – STEM
the shortage of Maths teachers across the country

How teachers think
an analysis of news articles published on Tes.com in the last 12 months
the results of survey & segmentation work with YouGov in Jan ’17

What next
When teachers go

Understanding the difference between Teacher Recruitment, School Recruitment, and Retention
Teacher recruitment and retention: How does it work?

1. Teacher exits profession
   - Retirement
   - Quitting teaching to work in other sector
   - Moving to teach abroad
   - Some short-term absences
   - [New role created]

2. School recruitment
   - School A
     - [Role redundancy]
     - New role created
   - School B
     - Asst head takes up headship
   - School C
     - [Role redundancy]

Solved by improved retention
- Workload and staff management
- UK profession competitiveness
- Career management, training and CPD

Solved by recruitment best practice
- Increased school attractiveness
- Standing out from the crowd
- Thinking about recruitment differently
- Improved school retention policies

Solved by improved enrolment
- NQTs and trainees
- Returners to teaching
- International returners
- [Role redundancy]

System issue
- Increased school attractiveness
- Standing out from the crowd
- Thinking about recruitment differently
- Improved school retention policies

System issue
- NQT gets first job in school

School issue
- [Role redundancy]

System issue
- [New role created]
Teacher recruitment and retention: Why is it hard?

1. **Teacher exits profession**
   - More teachers leaving than ever before
     - 27% more teachers have quit teaching before retirement in 2014-16 than in 2011-13
   - Teachers leaving profession earlier
     - 26% of teachers leave the profession within three years – up from 20% in 2009
   - Expansion of International schools market
     - International schools currently employ c.430k teachers. By 2021, this will be nearer 580k – a 36% increase

2. **School recruitment**
   - Increased competition for staff between schools
   - Additional pressure

3. **New entrant enrolment**
   - Training targets missed consistently
     - Over the last four years, secondary trainee targets have been missed by an average of 10%
   - Attractiveness to graduates
     - Training applications are down c.30% vs last year
   - More training schools
     - Nearly half of trainees now qualify through school-led schemes

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Source: School Workforce Census, November 2016; TIE; UCAS
Where it hurts

The shortage of Maths teachers across the country
School recruitment is tough – STEM recruitment is brutal

Higher turnover, smaller pools – and more specialist graduates

1. Teacher exits profession
   - Net out (2016)
     - Primary: 10.1k
     - Secondary: 7.7k

2. School recruitment
   - 16,000+ schools
     - Primary: 12.8k
     - Secondary: 2.5k
   - 250,000 teachers in service
     - Primary: 12.1k
     - Secondary: 3.1k
   - % of in-service base
     - Primary: 4.8%
     - Secondary: 9.1%

3. New entrants
   - Qualified teachers (2016)
     - Primary: 34k teachers in service
     - Secondary: 38k teachers in service
   - 2018 target enrolments
     - Primary: 2.5k
     - Secondary: 2.4k
   - Addressable graduates p.a.
     - Primary: 7.7k
     - Secondary: 14.1k
   - % needed to go into teaching
     - Primary: 40.3%
     - Secondary: 17.0%

Primary Teacher exits profession

- Maths: 1.8k
- English: 2.2k
- Physics: 0.5k
- History: 0.8k
- Chemistry: 1.0k
- MFL: 1.7k

Secondary Teacher exits profession

- Maths: 34k teachers in service
- English: 38k teachers in service
- Physics: 7k teachers in service
- History: 17k teachers in service
- Chemistry: 8k teachers in service
- MFL: 17k teachers in service

- Qualiﬁed teachers (2016)
  - Maths: 2.5k
  - English: 2.4k
  - Physics: 0.7k
  - History: 0.9k
  - Chemistry: 1.0k
  - MFL: 1.4k

- 2018 target enrolments
  - Maths: 3.1k
  - English: 2.4k
  - Physics: 1.1k
  - History: 1.2k
  - Chemistry: 1.1k
  - MFL: 1.5k

- % of in-service base
  - Maths: 9.1%
  - English: 6.3%
  - Physics: 7.0%
  - History: 15.7%
  - Chemistry: 13.7%
  - MFL: 8.8%

- Addressable graduates p.a.
  - Maths: 7.7k
  - English: 14.1k
  - Physics: 14.4k
  - History: 22.2k
  - Chemistry: 12.0k
  - MFL: 6.2k

- % needed to go into teaching
  - Maths: 40.3%
  - English: 17.0%
  - Physics: 8.3%
  - History: 9.2%
  - Chemistry: 24.2%
How teachers think &
What teachers believe

YouGov surveys and Tes News articles
What teachers read – a guide to what teachers think?

30.6% Page views of articles on teacher workload

26.9% Page views of articles on examination concerns / errors

It’s no surprise teachers read problem stories...

Source: Internal Tes.com data
... and they usually read exam stories during exam time...
... but workload stories are read consistently all year round.

Source: Internal Tes.com data
Understanding our audience – What teachers believe

• Tes & YouGov surveyed 1,000 teachers from across the UK following up with focus groups and interviews

• Looked at:
  – Attitudes to teaching (policy & practice)
  – Digital and online behaviours
  – Classroom behaviours

• Derived six segments to understand the difference in attitudes and behaviours
Understanding our audience – What teachers believe

Teacher A  
The Bedrock
29% of the teaching population
• Stressed out due to time and paperwork pressures
• Traditional
• Structured
• Principled
• Resistant to change
• Value credibility, reliability and accuracy

Teacher B  
The Champion
17% of the teaching population
• Time poor
• Optimistic
• Active planners
• Creative & Flexible
• Digitally savvy
• Confidence
• Fearful of change

Teacher C  
The Disillusioned Crusader
21% of the teaching population
• Passionate & Opinionated
• At risk of burnout due to perceived lack of autonomy & support
• Pessimistic
• Strict
• Perfectionists
• Principled
• Value resilience & determination

Teacher D  
The Muse
15% of the teaching population
• Creative
• Flexible
• Relaxed
• Inquisitive
• Love the good things in life
• Sociable
• Sharing
• Child-centred

Teacher E  
The Careerist
10% of the teaching population
• Driven & Focused
• Proactive
• Career-minded
• Sharing
• Value efficiency
• Action-oriented
• Fact-seeking; driven to find and use information

Teacher F  
The Maverick
8% of the teaching population
• Confident
• Opinionated
• Passionate
• Bullish
• Courageous
• Sociable
• Connected
• Flexible
• Unique

Source: YouGov study, commissioned by Tes, Nov ’16 – Feb ’17
Understanding our audience – What teachers believe

Attitudinal segments reflecting the beliefs and thoughts of the teaching community
What next?
Primary and secondary schools: teachers and pupils

Primary FTE Pupils and Teachers, actual and estimated

- In 2015, the IFS predicted the number of teachers would need to increase by 30,000 between 2016 and 2020.
- Using a similar but updated methodology, Tes predict this to be 34,000 teachers between the same period.
- If we extrapolate further taking into account future pupil projections, schools would need an extra 47,000 secondary teachers and 8,000 primary teachers by 2024.

Secondary FTE Pupils and Teachers, actual and estimated

Questions?
Session 3. ‘New insights: findings from the past year’

Chair: Nicole Morgan, Royal Society of Chemistry

Jack Worth, National Foundation for Educational Research
Nancy Wilkinson, The Wellcome Trust
Jenni French, The Gatsby Charitable Foundation
Sam Sims, Education Datalab
Teacher Retention

Is The Grass Greener Beyond Teaching?

Jack Worth
Teacher retention seminar at Royal Society
Tuesday 20th March 2018

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@worth_jack @TheNFER
NFER teacher workforce research

- Nuffield Foundation-funded research on teacher retention and turnover
  - Identifying factors affecting teachers leaving and moving
  - Exploring destinations of teachers who leave
  - Comparing teaching with nursing and policing

- Research with Greater London Authority on London’s teacher labour market

- www.nfer.ac.uk/research/school-workforce
Methods for researching teacher retention

- **Survey teachers**, identify those considering leaving
  - *Engaging Teachers* (NFER 2016)
  - Intentions ≠ actions
- **Survey ex-teachers**
  - Very difficult to get a representative sample
- **Administrative data**, e.g. School Workforce Census
  - Little reliable data on post-teaching destinations
- **Employment surveys**, e.g. Labour Force Survey
  - *Should I Stay or Should I Go?* (NFER 2015)
  - *Is The Grass Greener Beyond Teaching?* (NFER 2017)
Understanding Society

- Use data from the Understanding Society survey
- Survey of 40,000 UK households
- Longitudinal follow-up of every individual
- Seven waves of data (2009/10 – 2015/16)
- Extensive data on individuals’ employment, education, family life, health and well-being
- 1,205 state-sector teachers in England, 444 leavers
Where do teachers go?

Teacher in a school (private sector) 33%
Teaching assistant (1%)
Non-teaching role in a school (9%)
Employed in non-school public sector (5%)
Employed in private sector (5%)
Employed outside England (~0%)
Looking after family (5%)
Unemployed (4%)
Student (2%)
Sick, injured or disabled (1%)
Retired (29%)
Self-employed (5%)
Maternity leave (2%)
Other (1%)
What happens to their pay?

Change in real-terms monthly pay

Years before/after leaving teaching
Teachers work long hours

Average weekly working hours

- Full-time teachers (term time)
- Full-time nurses
- Full-time police officers

Total annual working hours

- Full-time teachers (scenario 1)
- Full-time teachers (scenario 2)
- Full-time nurses
- Full-time police officers
What happens to working hours after leaving?

All individuals

<table>
<thead>
<tr>
<th>Change in weekly working hours</th>
<th>40%</th>
<th>20%</th>
<th>0%</th>
<th>-20%</th>
<th>-40%</th>
<th>-60%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years before/after leaving teaching</td>
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</tbody>
</table>

Full-time to full-time only

<table>
<thead>
<tr>
<th>0%</th>
<th>20%</th>
<th>40%</th>
<th>60%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<tr>
<td>-5</td>
<td>-4</td>
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<tr>
<td>-1</td>
<td>0</td>
<td>1</td>
<td>2</td>
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<tr>
<td>3</td>
<td>4</td>
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<tr>
<td>independent</td>
<td>insights</td>
<td>breadth</td>
<td>connections</td>
</tr>
</tbody>
</table>
What happens to part-time working?

Change in part-time (percentage points)

Years before/ after leaving teaching

Primary

Secondary

-40% -20% 0% 20% 40% 60%

-5 -4 -3 -2 -1 0 1 2 3 4

-5 -4 -3 -2 -1 0 1 2 3 4

-4 -3 -2 -1 0 1 2 3 4 5

-5 -4 -3 -2 -1 0 1 2 3 4

-5 -4 -3 -2 -1 0 1 2 3 4

-5 -4 -3 -2 -1 0 1 2 3 4
What happens to job satisfaction?

Change in job satisfaction (effect size)

Years before/after leaving teaching
Conclusions

• Leavers are not primarily motivated by increased pay
  – More motivated by improved job satisfaction and more flexible working arrangements

• Doesn't necessarily imply that increasing teachers’ pay will have no impact on teacher retention
  – Increase must compensate for lower job satisfaction

• Are STEM teachers different?
  – Better outside option than most teachers
  – But they are still teachers!
NFER provides evidence for excellence through its independence and insights, the breadth of its work, its connections, and a focus on outcomes.

This project was funded by the Nuffield Foundation, but the views expressed are those of the authors and not necessarily those of the Foundation.
THE ROLE OF SALARY IN RETAINING TEACHERS
CHARACTERISING THE EARNINGS AND OUTCOMES FOR PHYSICS TEACHERS

Rebecca Allen, Jack Britton, Luke Sibieta and Anna Vignoles
IFS

Uses sources including HMRC and Labour Force Survey data and School Workforce Census to look at the career and earnings of physics graduates compared with graduates of other subjects.
Physicists outside of teaching generally earn more than other graduates and have more career options available to them.

In schools, physics graduates seem to earn the same or even less than other teachers despite having higher prior achievement. Schools are not using their freedom of pay to reward physics teachers more than teachers in non-shortage subjects.

Physics graduates are more likely than the average teacher of other subjects to leave both their school and the profession as a whole. Forty per cent of physics graduates who are teaching six-months after graduation leave the profession within three and a half years of graduation.
THE ROLE OF SALARY IN RETAINING TEACHERS
Why do we have a teacher shortage?
Things we learned in 2017.

Sam Sims
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Who remembers this?

“In England, what is needed most of all is decisive action to free our teachers from constraint and improve their professional status and authority…”
Recruitment against ITT targets

Source: Sims (Unpublished PhD Thesis)
Teacher balance (STEM)

Source: Sims (Unpublished PhD Thesis)
Inequalities in access to subject-specialists

**Figure 3.** Proportion of teachers with an academic degree in the subject they are teaching by school deprivation quintile, upper secondary schools. Data labels refer to lowest and highest quintile bars. Note: n = (number of teachers in sample across all subjects) = 50,993.

Sims & Allen (2018)
Oh dear.
Suspects in the teacher shortage “whodunnit”

1. The Pupils (too many of them)

2. The Government (aren’t paying enough)

3. Ofsted / Schools (put teachers off)
Suspect 1: The Pupils (too many of them)

Source: DfE (2017)
Suspect 2: The Govt (aren’t paying enough)

Source: STRB (2017)
Suspect 2: The Govt (aren’t paying enough)

### Table 1: Average Career-Wide Earnings Inside and Outside Teaching by Degree Subject

<table>
<thead>
<tr>
<th>Degree Subject</th>
<th>Median Salary of Teachers</th>
<th>Median Salary of Non-Teachers</th>
<th>Difference (for Teachers)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-teachers are paid more</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physics</td>
<td>£31,600</td>
<td>£38,000</td>
<td>£6,400</td>
</tr>
<tr>
<td>Maths</td>
<td>£35,500</td>
<td>£40,000</td>
<td>£4,500</td>
</tr>
<tr>
<td>All Science</td>
<td>£32,000</td>
<td>£35,000</td>
<td>£3,000</td>
</tr>
<tr>
<td>Biology</td>
<td>£31,000</td>
<td>£32,600</td>
<td>£1,600</td>
</tr>
<tr>
<td>Teachers are paid more</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>English</td>
<td>£28,000</td>
<td>£25,300</td>
<td>£2,700</td>
</tr>
<tr>
<td>MFL</td>
<td>£31,200</td>
<td>£27,700</td>
<td>£3,500</td>
</tr>
<tr>
<td>History</td>
<td>£34,100</td>
<td>£29,400</td>
<td>£4,700</td>
</tr>
<tr>
<td>PE</td>
<td>£33,100</td>
<td>£25,000</td>
<td>£8,100</td>
</tr>
</tbody>
</table>

**Note:** Shows only selected subjects. Chemistry not shown due to small sample sizes. This should not be interpreted as causal evidence, because differences in pay may be due to the type of people who choose to go into teaching, as well as being due to the job itself. Source: Sims (2018)
Suspect 2: The Govt (aren’t paying enough)

Source: Sims (2018)
If early-career retention frozen at 2009 levels, there would now be an additional 4,398 teachers.

For context, the total shortfall of EBACC teachers is currently 2,080.
Suspect 3: Ofsted/Schools (put teachers off)

- 577 NQTs left these schools 2010-14
- “Excess attrition” of 376 NQT teachers
- Equivalent to 22 per cent of the nationwide shortfall in 2015

Sims & Allen 2018
Suspect 3: Ofsted/Schools (put teachers off)

Figure 1.1: Average weekly hours worked by type of teacher, 1994-2013

Highton et al 2017
Teacher characteristics are not related to job satisfaction or turnover intentions.

Working conditions really do matter:
• leadership/management
• teacher collaboration
• discipline
• workload
• CPD
Improving retention through leadership

Exploring the Causal Impact of the McREL Balanced Leadership Program on Leadership, Principal Efficacy, Instructional Climate, Educator Turnover, and Student Achievement

Robin Jacob
University of Michigan
Roger Goddard
Ohio State University
Minjung Kim
University of South Carolina
Robert Miller
Texas A&M University
Yvonne Goddard
Ohio State University

This study uses a randomized design to assess the impact of the Balanced Leadership program on principal leadership, instructional climate, principal efficacy, staff turnover, and student achievement in a sample of rural northern Michigan schools. Participating principals report feeling more efficacious, using more effective leadership practices, and having a better instructional climate than control group principals. However, teacher reports indicate that the instructional climate of the schools did not change. Furthermore, we find no impact of the program on student achievement. There was an impact of the program on staff turnover: with principals and teachers in treatment schools significantly more likely to remain in the same school over the 3 years of the study than staff in control schools.

Keywords: randomized design, principal professional development, teacher turnover, principal turnover, principal leadership, principal efficacy
Improving retention through CPD
Summary

Pay matters for STEM graduates

Govt is now commissioning evaluations of the Phased Maths Bursaries, which will help us understand this more.

Workload is one among several working conditions that relate to retention.

We need more evidence on is the causal effect of working conditions on retention and what policymakers and school leaders can do to improve them (GL, ASCL)
Session 4. ‘Supporting a Government-led strategy on retention’

Chair: Professor David Read, University of Southampton

Verity Prime, Department for Education