


# The link between absence and attainment at KS2 and KS4

## 2012/13 academic year

**Research report**

**February 2015**

# Background and Context

This research report investigates the link between key stage 2 (KS2) and key stage 4 (KS4) attainment and different levels of pupil absence. The key findings of this release are based on the attainment of pupils at the end of KS2 and KS4 in state-funded mainstream schools in the 2012/13 academic year, compared to their level of absence across all years in the relevant key stage. Time series data for absence and attainment in the 2008/09 to 2012/13 academic years have also been included in the accompanying data tables.

This report updates findings previously published in the 2011 research paper 'A profile of pupil absence in England' based on data from the 2009/10 academic year.

Absence is not the only factor that has a link to a pupil's attainment. There are other complex relationships, such as the strong link from prior attainment and the link between different pupil characteristics and attainment, which should also be taken into account. This release aims only to provide an overview of the link between pupil absence and attainment based on available evidence.

Parents of children of compulsory school age (aged between 5 and 15 at the start of the academic year) are, by law, required to ensure that their children receive a suitable education through regular attendance at school or otherwise. The Department for Education collects each pupil enrolment's overall sessions missed and number of possible sessions available to them, where a session is equivalent to half a day of school. Technical notes which provide further definitions and detail on the methodology used in this release are available at the end of this document.

A wider note expanding on the findings in this release and updating figures for the 2013/14 academic year is intended for publication in summer 2015 and will provide further analysis of the link between absence and attainment, including reason for absence and pupil characteristics.

# Key findings

## The link between absence and attainment at key stage 2

KS2 exams are taken by pupils at the end of primary school education, with this key stage being taught over four years (from year three to year six). By the end of KS2 pupils are expected to reach level 4 of the National Curriculum in each taught subject. In this release, the proportion of end of key stage 2 pupils achieving the key measures of level 4 or above in reading and maths tests and level 5 or above in reading and maths tests have been considered. See technical note 3 for details of how to find out more information on the way attainment is measured at the end of KS2.

### Attainment in KS2 tests by levels of overall absence split into percentage point bands

Figure 1: Percentage of pupils achieving stated levels at the end of KS2 in the 2012/13 academic year by percentage of sessions missed over KS2

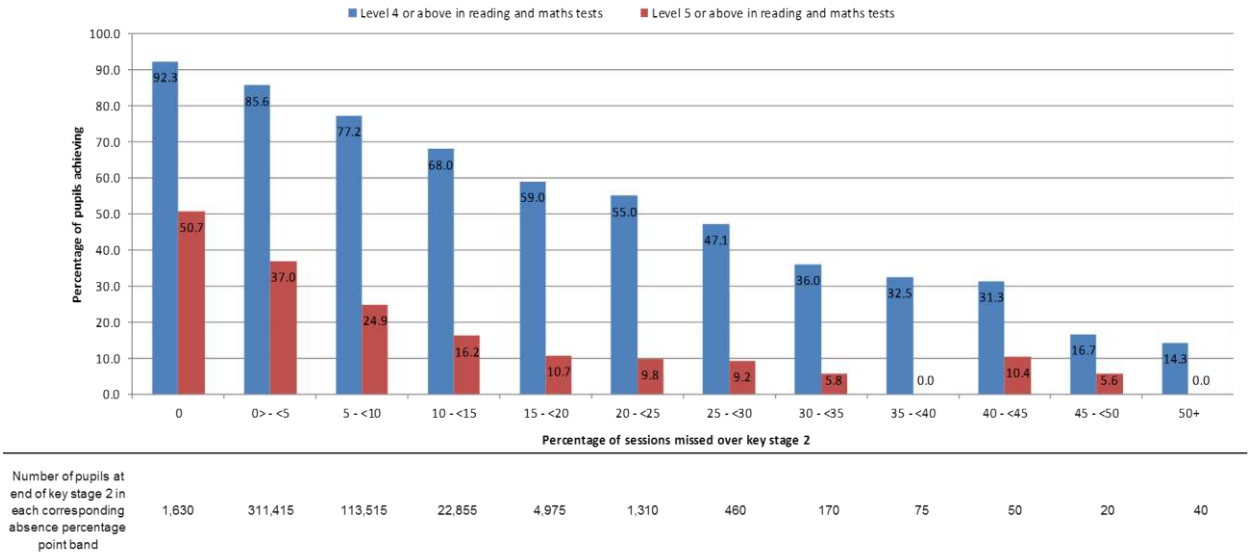



Figure 1 shows that in general the higher the percentage of sessions missed across the key stage, the lower the likely level of attainment at the end of KS2. In particular, pupils with no absence are 1.6 times more likely to achieve level 4 or above, and 4.7 times more likely to achieve level 5 or above, than pupils that missed 15-20 per cent of all sessions.

The relationship between absence and KS2 attainment remained similar over the past five academic years.

The number of pupils in the 20-25 absence rate percentage point band and above represent a small proportion of pupils at the end of key stage 2 (around 0.4 per cent). Thus, any conclusions about absence rates above 20 per cent are highly volatile.

### Attainment in KS2 tests by levels of overall absence split into pupil percentile bands

Figure 2 shows an alternative presentation of the information, this time showing KS2 attainment by levels of overall absence split into bands with equal numbers of pupils in each (e.g. so that the first band includes the five per cent of all pupils with the lowest overall absence rates). See technical note 6 for further information on how the data has been grouped into bands in this chart.

Figure 2: Percentage of pupils achieving stated levels at the end of KS2 in the 2012/13 academic year based on grouping pupils into percentile bands according to their overall level of absence over KS2

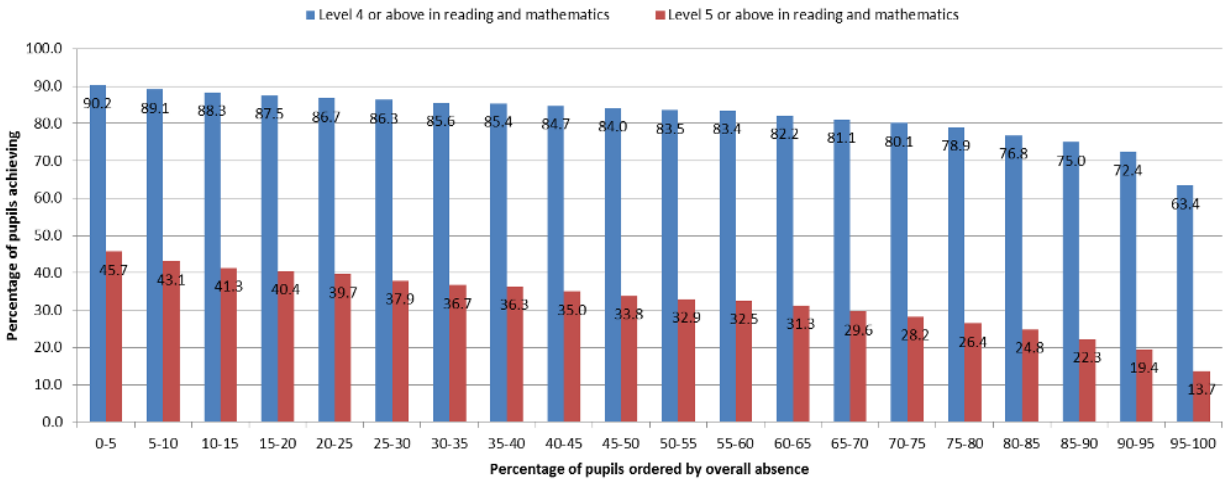



Figure 2 shows a gradual decrease in KS2 achievement as overall absence rates increase. Specifically, pupils with the lowest five per cent of overall absence rates are 1.4 times more likely to achieve level 4 or above in reading and maths tests and 3.3 times more likely to achieve level 5 or above in reading and maths tests than pupils with the highest five per cent of overall absence rates.

Equivalent time series data for the 2008/09 to 2012/13 academic years for Figures 1 and 2 are included in the accompanying data tables.

## The link between absence and attainment at key stage 4

KS4 exams are taken by pupils at the end of secondary school education, with this key stage being taught over two years (from year 10 to year 11). These exams are designed so that by the end of KS4 most pupils are expected to achieve A*-C in English and maths. In this release the number of end of KS4 pupils achieving 5+ GCSEs A*-C or equivalent, 5+ GCSEs A*-C or equivalent including English and maths GCSEs and those achieving the English Baccalaureate have been considered. See technical note 4 for details of how to find out more information on the way attainment is measured at the end of KS4.

### Attainment in KS4 qualifications by levels of overall absence split into percentage point bands

Figure 3: Percentage of pupils achieving stated qualifications at the end of KS4 in the 2012/13 academic year by percentage of sessions missed over KS4

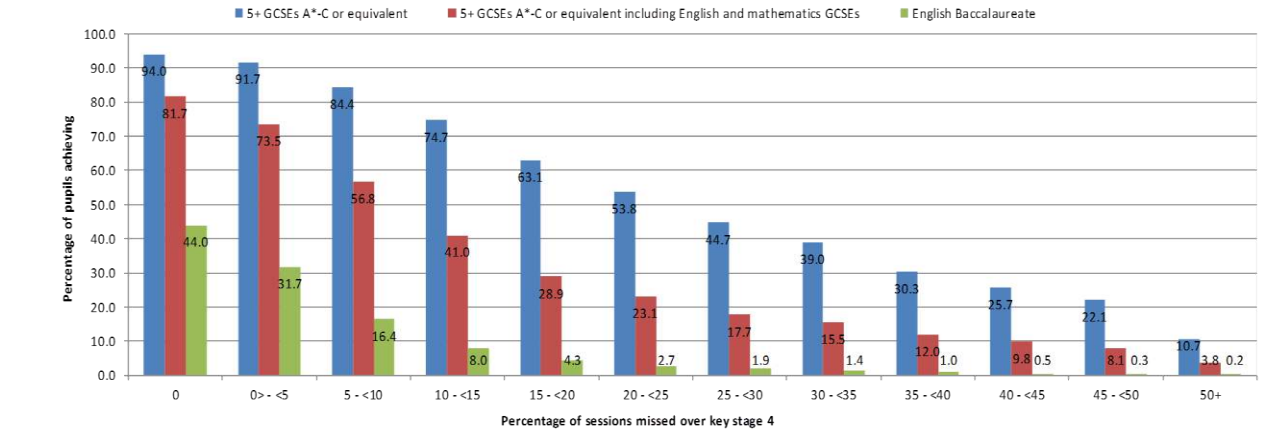



Figure 3 shows that in general the higher the percentage of sessions missed across the key stage, the lower the likely level of attainment at the end of KS4. Specifically, pupils with no absence are 1.5 times more likely to achieve 5+ GCSEs A*-C or equivalent and 2.8 times more likely to achieve 5+ GCSEs A*-C or equivalent including English and mathematics than pupils missing 15-20 per cent of KS4 lessons. The difference in achievement is also evident with the English Baccalaureate, where pupils with no absence are around 10.2 times more likely to achieve the English Baccalaureate than pupils missing 15-20 per cent of KS4 lessons.

The relationship between absence and KS4 attainment remained similar over the past five academic years.

The number of pupils in the 30-<35 absence rate percentage point band and above represent a small proportion of pupils at the end of key stage 4 (around 1.8 per cent). Thus, any conclusions about absence rates above 30 per cent are highly volatile.

## Attainment in KS4 qualifications by levels of overall absence split into pupil percentile bands

Figure 4 shows an alternative representation of the information, showing KS4 attainment by levels of overall absence split into bands with equal numbers of pupils. Again, technical note 6 provides further information on how the data has been grouped.

Figure 4: Percentage of pupils achieving stated qualifications at the end of KS4 in the 2012/13 academic year based on grouping pupils into percentile bands according to their overall level of absence over KS4

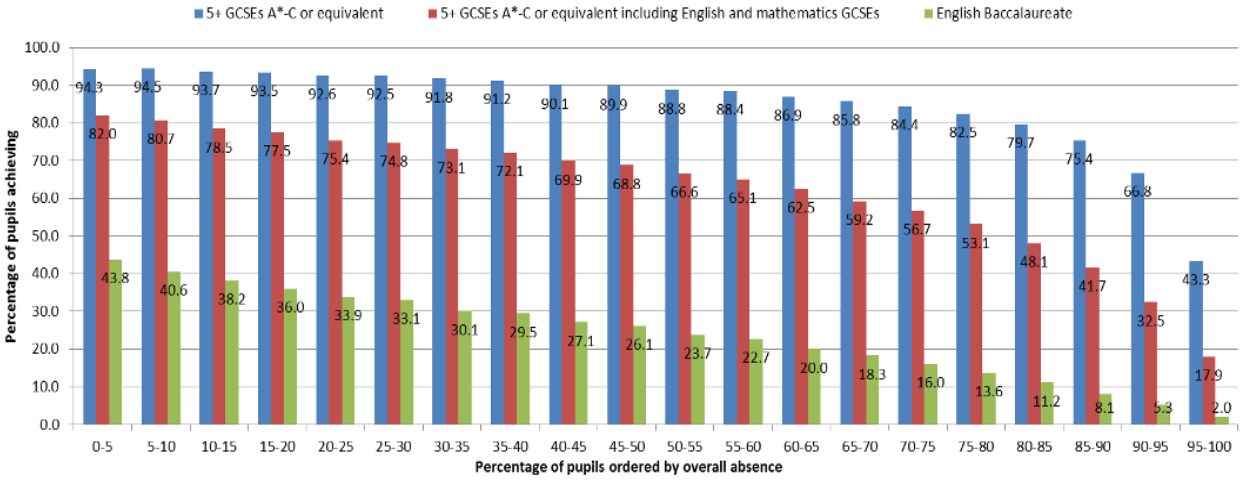



Figure 4 suggests a steady decrease in KS4 achievement as overall absence rates increase. In particular, pupils with the lowest five per cent of overall absence rates are 2.2 times more likely to achieve 5+ GCSEs A*-C or equivalent and 4.6 times more likely to achieve 5+ GCSEs A*-C or equivalent including English and mathematics than pupils with the highest five per cent of overall absent rates. This difference in achievement is also apparent with the English Baccalaureate, where pupils with the lowest five per cent of overall absence rates are around 21.9 times more likely to achieve the English Baccalaureate than pupils with the highest five per cent of overall absent rates.

Equivalent time series data for the 2008/09 to 2012/13 academic years for Figures 3 and 4 are included in the accompanying data tables.

# Annex A: Technical notes

## Definitions

1. The Department for Education has published 'Advice on School Attendance', which explains how schools should apply the Education (Pupil Registration) (England) Regulations 2006 and subsequent amendments and the use of the national codes to record pupil attendance and absence in schools.

2. Further information on absence data can be found in the technical notes section of the 'Pupil absence in schools in England: 2012 to 2013' Statistical First Release.

3. Further information on KS2 attainment data can be found in the 'Attainment in primary schools in England' quality and methodology information section.

4. Further information on KS4 attainment data can be found in the 'GCSE and equivalent results in England' quality and methodology information section.

## Calculation of derived variables

5. The overall absence rates in this release are based on all of the absences (authorised and unauthorised) pupils have accrued across their full key stage:

$$\frac{Total\ overall\ absence\ sessions\ across\ KS2/KS4}{Total\ sessions\ possible\ across\ KS2/KS4} \times 100$$

   For KS4 pupils, to account for high levels of study leave and other authorised absence at the end of KS4, absence data in the 5th half term of pupils' final KS4 year has not been included.

   For KS2 pupils in 2008/09 absence data only includes absence for years four, five and six, this is due to absence data first being collected at enrolment level for all schools in 2006/07.

   Further details, including other calculations, can be found in the metadata specification document in the underlying data section of this release.

6. Tables 2 and 4 (Figures 2 and 4) show absence levels grouped by pupil percentiles, designed so a similar number of pupils are present in each bracket. Pupils were placed in ascending order of overall absence rates across KS2/KS4 and then grouped into five per cent bands (i.e. a similar numbers of pupils are included in each band). For example, the 0- <5 per cent band includes the five per cent of pupils with the lowest overall absence rates across KS2/KS4 and the 95-100 per cent bracket contains the five per cent of pupils with the highest overall absence rates across KS2/KS4.

## Presentation

7. This release includes pupils in state-funded mainstream schools including academies, free schools and city technology colleges, **excluding** state-funded special schools, independent schools, independent special schools, non-maintained special schools, hospital schools and alternative provision including academy and free school alternative provision and pupil referral units. Information on children not registered at a school is not included.

## Data collection

8. Absence information is collected termly through the School Census. The School Census guidance includes information on the collection of pupil absence data. A technical specification is also available, which gives detailed explanations of what data are collected and what validation processes are carried out.

9. Attainment data for all pupils at the end of key stage 4 is collected from the awarding bodies by the Department's contractor. Further information can be found in the 'GCSE and equivalent results in England' quality and methodology information section.

   Attainment data for all pupils at the end of KS2 is collected by the Standards and Testing Agency (STA), an executive agency of the Department. Further information can be found in the 'Attainment in primary schools in England' quality and methodology information section.

## Data coverage and quality

10. The figures presented in this report relate to attainment data from the 2012/13 academic year for the end of KS2 and end of KS4 pupils. However, absence data from across all years relevant to each key stage has been used. Specifically, for pupils at end of KS2 in 2012/13, absence data from 2009/10 to 2012/13 has been used to calculate overall absence rates, similarly for pupils at the end of KS4 in 2012/13 absence data for 2011/12 and the first two terms of 2012/13 have been used to calculate overall absence rates. Time series information for academic years 2008/09 to 2012/13 is available in data tables.

11. The absence information collected via the School Census counts the number of pupil enrolments rather than the number of pupils. Where a pupil has moved school during the year, they will be counted more than once as they have recorded attendance data in more than one school. Pupil absence is recorded for the period a pupil is enrolled at a school. Where a pupil has a dual registration their absence may be returned from both schools, if both schools return absence data via the School Census. For the purposes of this release, the data has been aggregated to pupil level, i.e. only counting the absence from a pupils main enrolment (where they were enrolled for the longest period of time) each year.

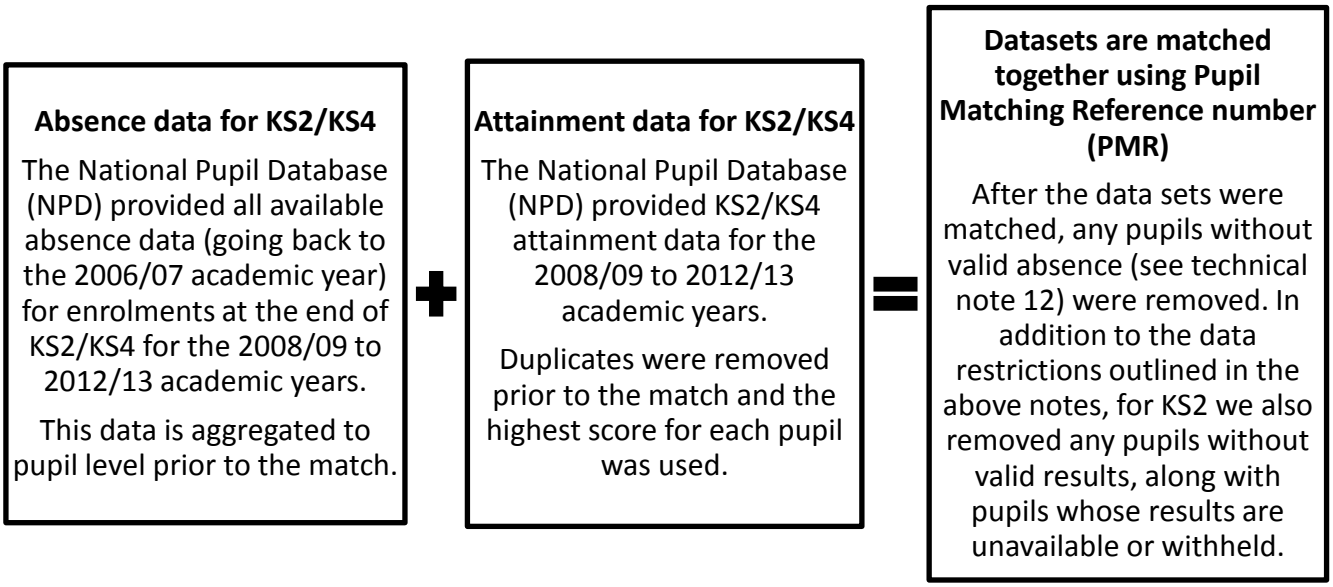
This is not the standard approach for the Department's other pupil absence releases, however this is necessary when matching to attainment data.

12. Only pupils with valid absence data have been included in this analysis. A pupil has valid absence if the number of possible sessions in a term is greater than zero/not missing and is more than the total number of sessions missed due to authorised or unauthorised absence, and if the total number of possible sessions is within the limit for the term.

13. In KS2 the state-funded school participation rate in 2010 was 74 per cent due to industrial action, as a result of this there are lower numbers of pupils at the end of KS2 included in the 2009/10 academic year analysis.

14. The pupil absence and attainment data used in this release have been created by matching data cuts from the National Pupil Database (NPD), a longitudinal database which holds a wide range of pupil level data for schools across England.

    The data was matched as follows:



Department for Education

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