



Department  
for Education

# **Attainment by pupils in academies 2012**

## **Supplementary analysis to the Academies Annual Report 2011/12**

**June 2013**

**Infrastructure, Funding and Longitudinal  
Analysis Division**

**Department for Education**

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## Introduction

The Government has laid before Parliament its second Academies Annual Report. The report draws on a wide range of statistical information published by the Department for Education on the attainment and characteristics of pupils attending academies. These are available through the Government's website [www.gov.uk](http://www.gov.uk) and the Performance Tables <http://www.education.gov.uk/schools/performance/>

The report also includes analysis of attainment that examines:

- comparisons between sponsored academies and a group of local authority maintained schools operating in similar circumstances;
- the rate of improvement of sponsored academies; and
- the rate of improvement of sponsored academies by pupil characteristics.

Whilst much of this information can be derived from the underlying data published in the Performance Tables it is not readily available to the lay reader nor is analysis of performance by pupil characteristics as requires the use of the National Pupil Database.

Therefore, the purpose of this note is to set out and provide context to the new analysis that has been used in the Academies Annual Report. It does not include all of the statistics used in the Annual Report, however links to a range of relevant statistical publications are provided at the end of this note.

## Part 1: Results in sponsored academies at Key Stage 4 in comparison to a group of similar schools

The sponsored academies included in analyses of Key Stage 4 results largely replaced previously failing schools with low outcomes overall and therefore comparing them directly to all other schools will not necessarily be meaningful. Instead, it is necessary to select a group of non-academy schools that are as similar as possible to the group of Sponsored academies.

There are a variety of ways in which this might be done, such as making comparisons to schools with similar levels of prior attainment or with similar levels of deprivation. It is important to recognise that no comparison group is perfect. It is difficult for any such group to fully reflect what would have happened to the predecessor schools if they had not become academies and there are a range of other factors that cannot be captured that might affect the overall outcomes in a school.

The Department's preferred approach is to use a group of schools that are identified as having a similar probability of becoming an academy, using a technique called propensity score matching. This technique was endorsed and used by the National Audit Office in 2010 in their independent assessment of the academies programme.<sup>1</sup>

Using this method, a probability of becoming an academy, based on levels of prior attainment, deprivation and previous outcomes, is calculated for each mainstream state-funded school. Sponsored academies are then matched to a non-academy school that had a similar, modeled, propensity to become a sponsored academy. This then provides a group of comparator schools.<sup>2</sup>

The group of comparator schools and sponsored academies had similar rates of eligibility for free school meals, special educational needs and previous outcomes. The proportion of White pupils was slightly higher amongst the group of sponsored academies.

Over time this approach will become less feasible for the analysis of results at Key Stage 4 since the continued expansion of the academies programme will limit the pool of similar local authority maintained schools.

Comparing attainment in sponsored academies at Key Stage 4 with a group of local authority maintained schools with similar characteristics shows that:

- **Having started from a similar point, results for pupils in sponsored academies were marginally higher than in a group of similar schools in 2012.** Amongst the group of sponsored academies<sup>3</sup>, 49.7% of pupils achieved 5+ A\*-C including English and mathematics. In the group of similar schools, 48.5% of pupils achieved 5+ A\*-C including English and mathematics. See *Figure 1.1*

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<sup>1</sup> National Audit Office (2010) "Department for Education: The Academies Programme"

<sup>2</sup> Analysis is based on sponsored Academies that had results published for at least two years and had results published as a predecessor school (i.e. are not new provision). This gives 244 sponsored Academies which were then matched on a one to one basis without replacement to other state-funded schools. Hence the group of comparator schools also contains 244 schools.

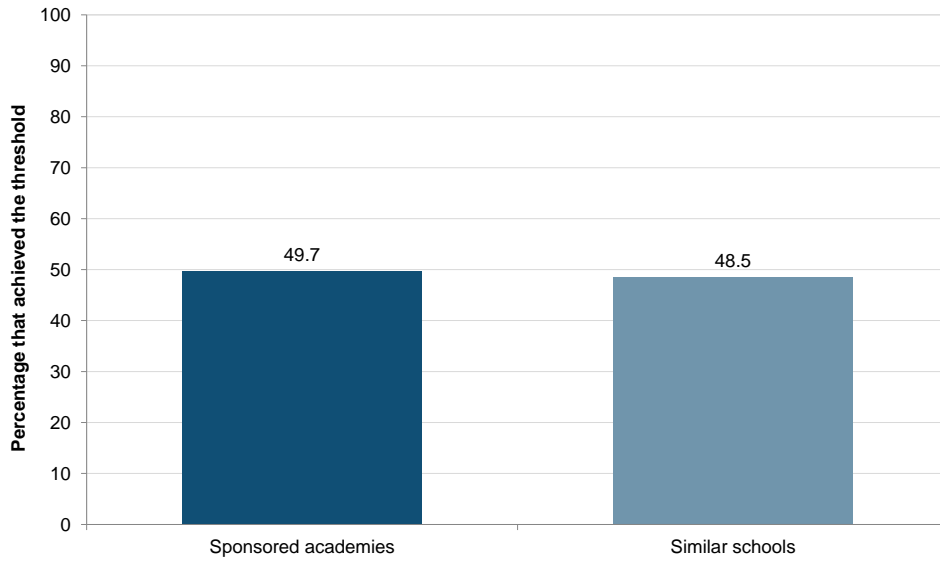
<sup>3</sup> Comparator group of sponsored academies refers to the 244 sponsored Academies in the comparison group. As such, this does not include all sponsored Academies.

- **Results for FSM pupils were broadly the same in sponsored academies and the group of similar schools. Non-FSM pupils performed marginally better in sponsored academies than in the group of similar schools.** Amongst the group of sponsored academies, 36.3% of FSM pupils achieved 5+ A\*-C including English and mathematics. In the group of similar schools it was 37.3%. As part 2 shows however, results for FSM pupils improved faster in sponsored academies than in a group of similar schools. In the group of sponsored academies, 54.5% of non-FSM pupils achieved 5+ A\*-C including English and mathematics. In the group of similar schools, attainment for non-FSM was broadly the same at 52.8%. *See Figure 1.2*
- **Results for pupils with and without SEN were marginally better in sponsored academies than in the group of similar schools.** Amongst the group of sponsored academies, 21.0% of SEN pupils achieved 5+ A\*-C including English and mathematics. In the group of similar schools, attainment for SEN pupils was 19.7%. Amongst the group of sponsored academies, 60.7% of non-SEN pupils achieved 5+ A\*-C including English and mathematics. In the group of similar schools, attainment for non-SEN pupils was at 59.3%. *See Figure 1.3*
- **In both sponsored academies and the group of similar schools, White pupils were the lowest performing ethnic group.** The majority of the broad ethnic groups had similar attainment in similar schools to sponsored academies.<sup>4</sup> Amongst the group of sponsored academies, White pupils were the lowest performing (48.1% achieved 5+ A\*-C including English and mathematics) and this was also true in the group of similar schools where 46.8% achieved 5+ A\*-C including English and mathematics. *See Figure 1.4*
- **In both sponsored academies and the group of similar schools, pupils with first language other than English performed at a similar level to pupils whose first language was English. Results for both groups were marginally higher in sponsored academies than in the group of similar schools.** In the group of sponsored academies, 49.6% of pupils whose first language was English achieved 5+ A\*-C including English and mathematics. In a group of similar schools, attainment for such pupils was marginally lower at 48.4%. Amongst the group of sponsored academies, 50.2% of pupils whose first language was other than English achieved 5+ A\*-C including English and mathematics. In the group of similar schools, attainment for such pupils was marginally lower at 48.6%. *See Figure 1.5*

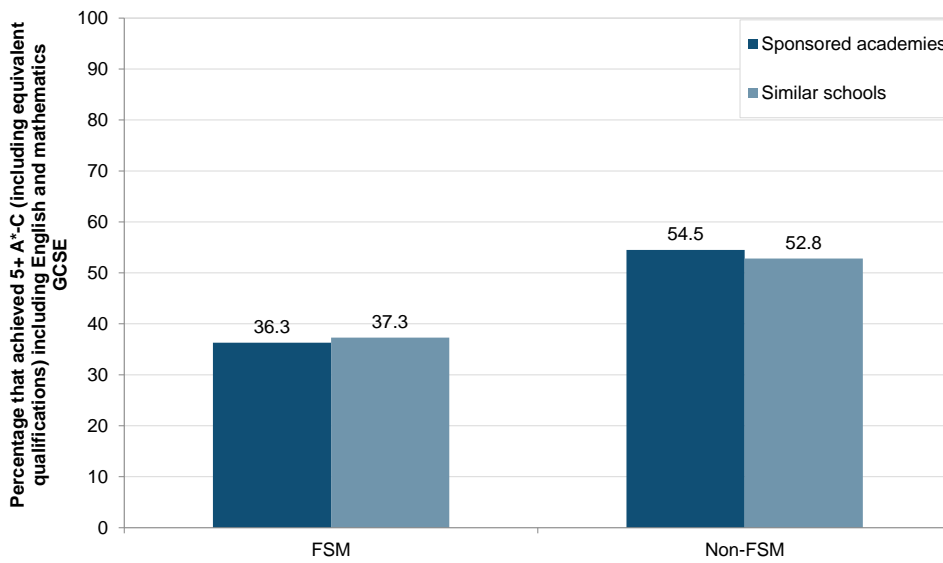
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<sup>4</sup> Attainment for Chinese pupils was lower in similar schools but this is based on small numbers.

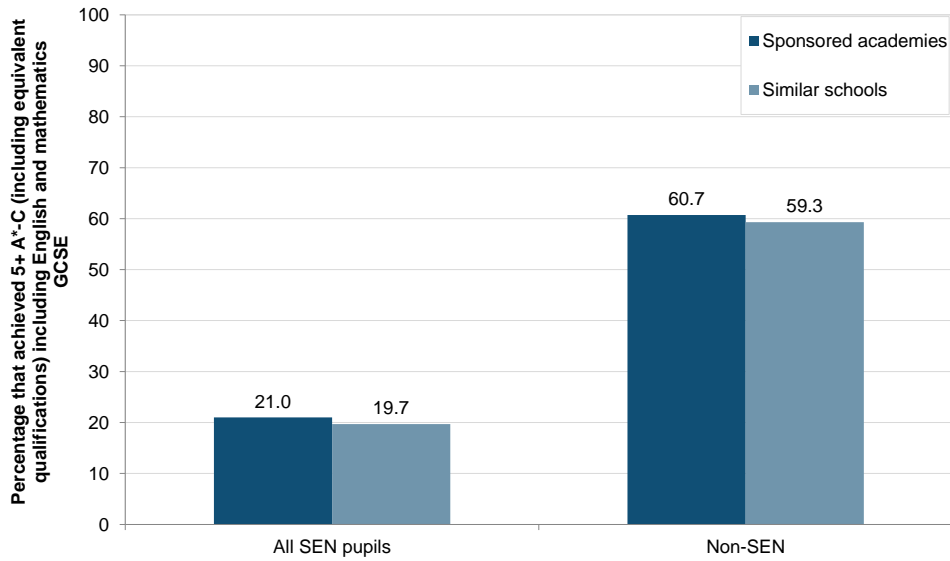
**Figure 1.1: Percentage of pupils in sponsored academies and in a group of similar schools that achieved 5+ A\*-C (including equivalent qualifications and including English and mathematics GCSE)**



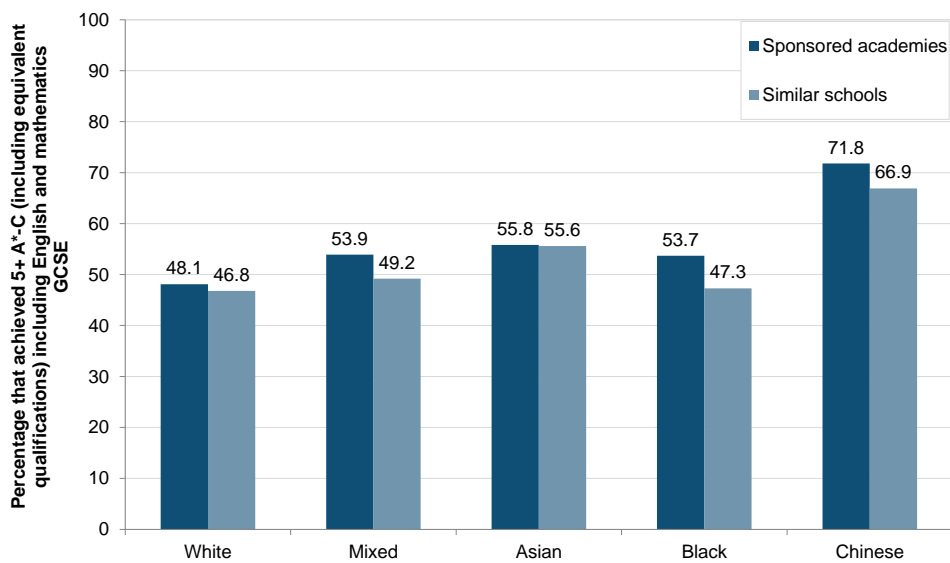
**Figure 1.2: Percentage of pupils in sponsored academies and in a group of similar schools that achieved 5+ A\*-C (including equivalent qualifications and English and mathematics GCSE) by eligibility for free school meals (FSM)**



**Figure 1.3: Percentage of pupils in sponsored academies and in a group of similar schools that achieved 5+ A\*-C (including equivalent qualifications and English and mathematics GCSE) by special educational needs (SEN)**

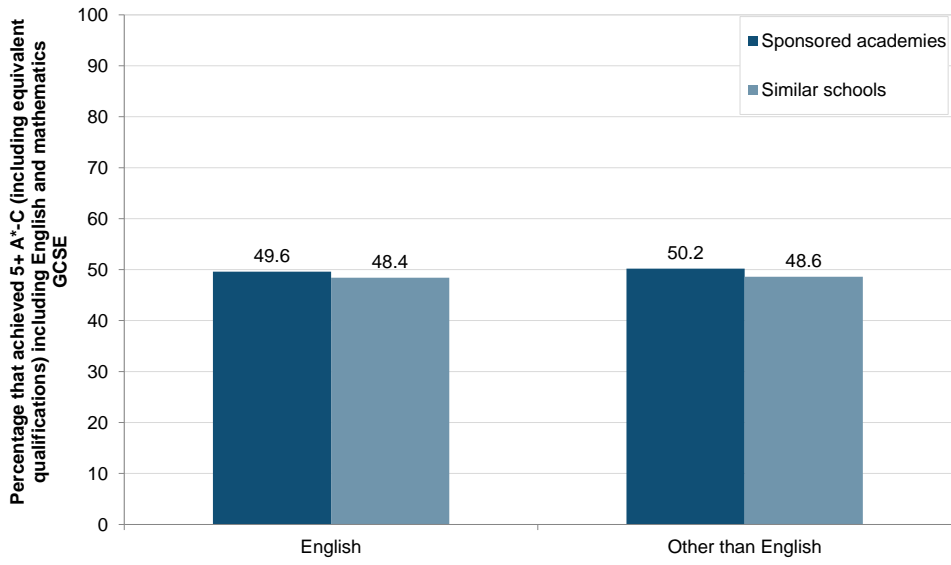


**Figure 1.4: Percentage of pupils in sponsored academies and in a group of similar schools that achieved 5+ A\*-C (including equivalent qualifications and English and mathematics GCSE) by broad ethnic group**





**Figure 1.5: Percentage of pupils in sponsored academies and in a group of similar schools that achieved 5+ A\*-C (including equivalent qualifications and English and mathematics GCSE) by first language**



## Part 2: The rate of improvement in sponsored academies at Key Stage 4

Drawing meaningful year-on-year comparisons in headline statistics for academies is difficult since the group of schools included changes from year to year. Rather than compare published headline results in each year, it is necessary to calculate figures for 2011 and 2012 based only on those schools that have results in both years – either as an academy or as the predecessor school.

The different starting points for schools also mean that their scope for improvement varies considerably with schools starting from a lower point having more scope to show large improvements than those further up the attainment distribution. This effect can be taken into account for sponsored academies by again drawing a comparison with the group of similar schools (since those schools have similar previous outcomes).

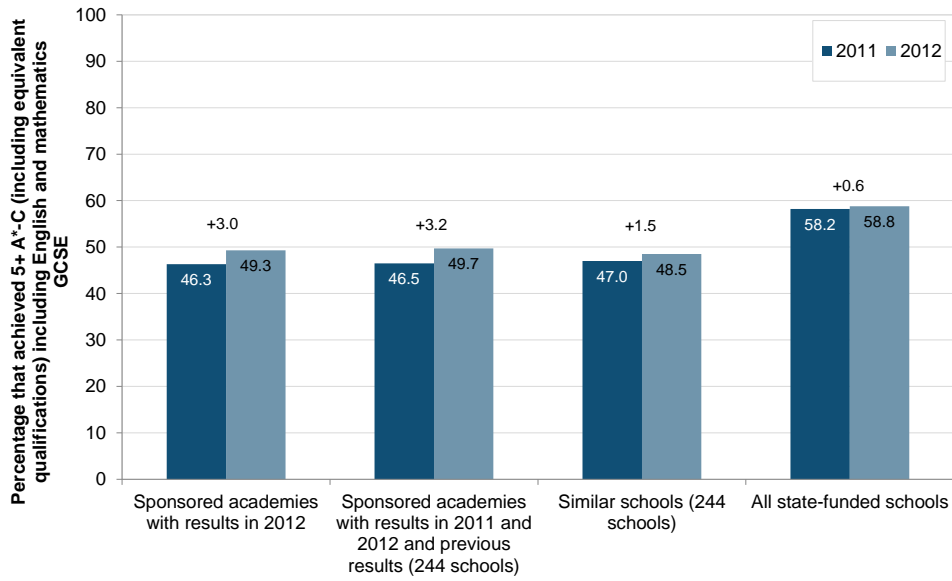
The analysis shows that:

- **Results in sponsored academies were on average lower, but improved at a faster rate, than in all state-funded schools.** In sponsored academies the percentage of pupils who achieved 5+ A\*-C including English and mathematics increased by 3.0 percentage points. This compares to 0.6 percentage points in all state-funded schools. *See Figure 2.1*
- **Results in sponsored academies were marginally higher than in a group of similar schools and improved at a faster rate.** Amongst the group of comparator sponsored academies, 49.7% of pupils achieved 5+ A\*-C including English and mathematics in 2012; an increase of 3.2 percentage points since 2011.<sup>5</sup> Amongst the group of similar schools, 48.5% of pupils achieved 5+ A\*-C including English and mathematics in 2012 - an increase of 1.5 percentage points since 2011. *See Figure 2.1*
- **Results for FSM pupils in sponsored academies improved at a faster rate than similar pupils in all state-funded schools and in a group of similar schools.** Amongst the group of comparator sponsored academies, 36.3% of FSM pupils achieved 5+ A\*-C including English and mathematics in 2012; an increase of 2.4 percentage points since 2011. Amongst all state-funded schools the increase was 1.7 percentage points and amongst the group of similar schools it was 0.9 percentage points. *See Figure 2.2*
- **Results for SEN pupils in sponsored academies improved at a faster rate than similar pupils in all state-funded schools and in a group of similar schools.** Amongst the group of comparator sponsored academies, 21.0% of SEN pupils achieved 5+ A\*-C including English and mathematics in 2012; an increase of 3.1 percentage points since 2011. Amongst all state-funded schools the increase was 0.3 percentage points and amongst the group of similar schools it was 0.3 percentage points. *See Figure 2.2*

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<sup>5</sup> Similar schools analysis is again based on sponsored academies that had results published for at least two years with the additional condition that they had results published as a predecessor school (i.e. are not new provision). Hence this is a set of 244 schools.

**Figure 2.1: Increase in the proportion of pupils in sponsored academies, a group of schools similar to sponsored academies and all state-funded schools that achieved 5+ A\*-C (including equivalent qualifications) including English and mathematics GCSE between 2011 and 2012**



**Figure 2.2: Increase in the proportion of pupils in sponsored academies, a group of schools similar to sponsored academies and all state-funded schools that achieved 5+ A\*-C (including equivalent qualifications) including English and mathematics GCSE between 2011 and 2012 by pupil characteristics**

	Sponsored academies with results in 2011 and 2012 and previous results (244 schools)			Similar schools (244 schools)			All state-funded schools		
	2011	2012	Change	2011	2012	Change	2011	2012	Change
<b>All pupils</b>	<b>46.5</b>	<b>49.7</b>	<b>3.2</b>	<b>47</b>	<b>48.5</b>	<b>1.5</b>	<b>58.2</b>	<b>58.8</b>	<b>0.6</b>
Girls	49.7	53.7	4.0	49.8	52.7	2.9	61.9	63.6	1.7
Boys	43.5	46.1	2.6	44.5	44.6	0.1	54.6	54.2	-0.4
Free school meals	33.9	36.3	2.4	36.4	37.3	0.9	34.6	36.3	1.7
All other pupils	50.6	54.5	3.9	51.1	52.8	1.7	62.0	62.6	0.6
Asian	53.1	55.8	2.7	55.0	55.6	0.6	61.8	62.7	0.9
Black	52.9	53.7	0.8	48.1	47.3	-0.8	54.3	54.6	0.3
Chinese	72.1	71.8	-0.3	75.8	66.9	-8.9	78.5	76.4	-2.1
Mixed	48.2	53.9	5.7	46.4	49.2	2.8	58.5	59.8	1.3
White	44.8	48.1	3.3	45.1	46.8	1.7	58.0	58.6	0.6
Any other ethnic group	47.6	51.8	4.2	43.1	46.2	3.1	54.0	56.0	2.0
Unclassified	41.4	47.4	6.0	39.2	46.2	7.0	56.3	58.5	2.2
No identified SEN	58.5	60.7	2.2	59.0	59.3	0.3	69.5	69.2	-0.3
All SEN pupils	17.9	21.0	3.1	19.4	19.7	0.3	22.1	22.4	0.3
SEN without a statement	18.5	21.7	3.2	20.0	20.5	0.5	24.7	25.2	0.5
SEN with a statement	10.9	13.0	2.1	11.8	10.8	-1.0	8.5	8.4	-0.1

## Part 3: The rate of improvement in sponsored academies at Key Stage 2

In 2012, the Department for Education expanded the range of Statistical First Releases that include data on attainment in academies. Alongside data for secondary academies, attainment data for academies in the primary phase was published for the first time.

This section presents improvement rates in terms of the proportion of pupils achieving level 4 or above in each subject at Key Stage 2 in sponsored academies in comparison to all state-funded schools.

The number of academies with results at primary level is still relatively small and so it is not possible to produce the full set of analyses that is available at Key Stage 4. At this stage, the similar schools approach used in Part 1 and Part 2 for Key Stage 4 is not possible for Key Stage 2. The group of sponsored academies at Key Stage 2 is both small and is far more mixed in its nature - largely being made up of long standing all-through academies – than sponsored academies at Key Stage 4. In the longer term, it may be possible to adopt a similar approach to the analysis of results at Key Stage 2.

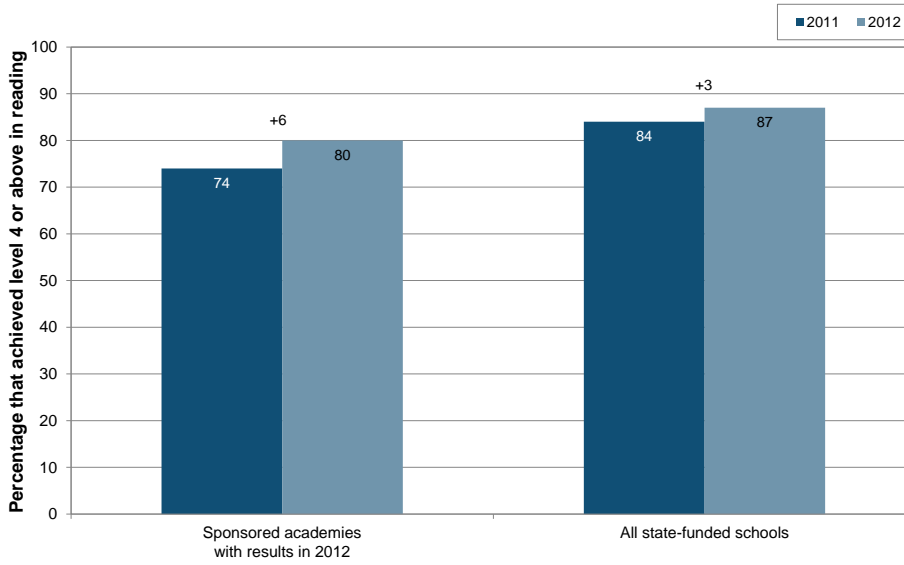
There were significant changes to the Key Stage 2 assessment arrangements in 2012 that affect the calculation of rates of improvement in English.

In 2012, schools were no longer required to administer a writing test and submit this for external marking. As a result, measures based on teacher assessments for writing have been introduced for the first time and so the figures for English cannot be compared to the figures for English that were published in earlier years, which were based solely on tests. Therefore, the rates of improvement in reading, mathematics and reading and mathematics are presented instead.

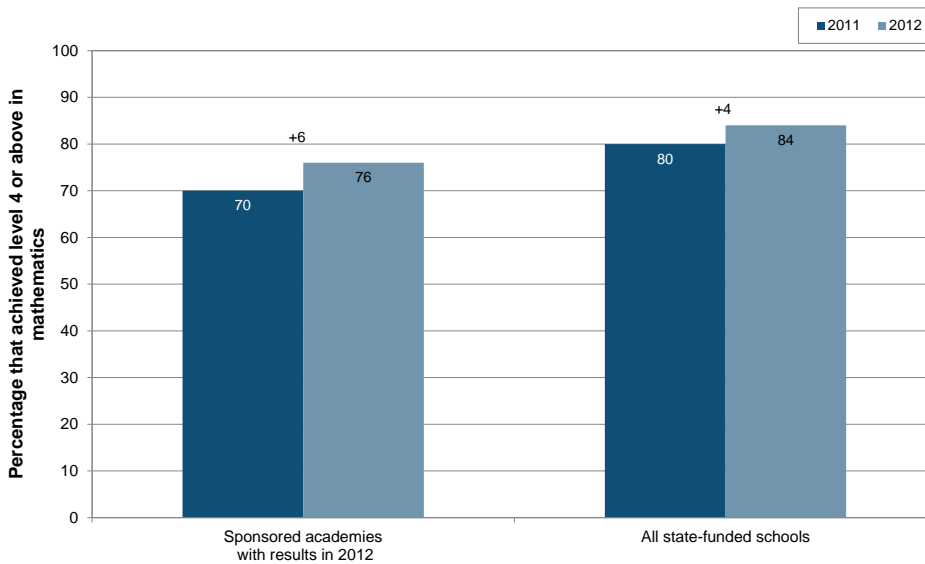
Analysis of the rates of improvement at Key Stage 2 shows that:

- **The proportion of pupils that achieved level 4 or above in each of reading and mathematics in sponsored academies improved at a faster rate than in all state-funded schools.** In sponsored academies the percentage of pupils who achieved level 4 or above increased by 6 percentage points in reading and 6 percentage points in mathematics. This compares to an increase in all state-funded schools of 3 percentage points in reading and 4 percentage points in mathematics. *See Figure 3.1 and Figure 3.2*
- **The proportion of pupils that achieved level 4 or above in reading and mathematics in sponsored academies improved at a faster rate than in all state-funded schools.** In sponsored academies the percentage of pupils who achieved level 4 or above in reading and mathematics increased by 8 percentage points. This compares to an increase of 5 percentage points in all state-funded schools. *See Figure 3.3.*

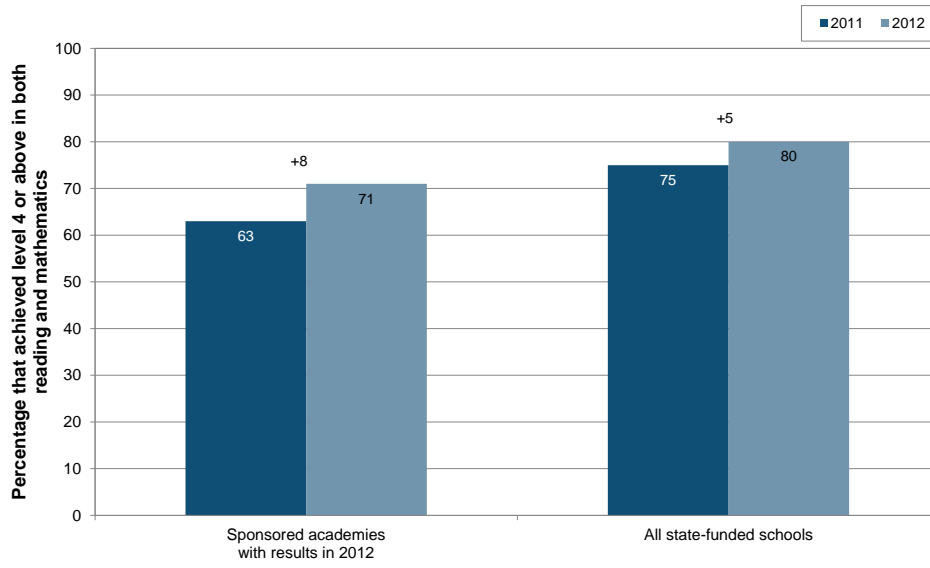
**Figure 3.1: Increase in the proportion of pupils in sponsored academies and in all state-funded schools that achieved level 4+ in reading between 2011 and 2012**



**Figure 3.2: Increase in the proportion of pupils in sponsored academies and in all state-funded schools that achieved level 4+ in mathematics between 2011 and 2012**



**Figure 3.3: Increase in the proportion of pupils in sponsored academies and in all state-funded schools that achieved level 4+ in reading and mathematics between 2011 and 2012**



## Other useful publications

National Audit Office (2010): Department for Education: The academies Programme  
<http://www.nao.org.uk/publications/1011/academies.aspx>

DfE (2012a): Schools, Pupils and their Characteristics January 2012  
<https://www.gov.uk/government/publications/schools-pupils-and-their-characteristics-january-2012>

DfE (2012b): Attainment at Key Stage 4 by Pupils in academies 2011  
<https://www.gov.uk/government/publications/attainment-at-key-stage-4-by-pupils-in-academies-2011>

DfE (2012c): Phonics Screening Check and National Curriculum Assessments at Key Stage 1 in England, 2011/2012  
<https://www.gov.uk/government/publications/phonics-screening-check-and-national-curriculum-assessments-at-key-stage-1-in-england-2012>

DfE (2012d): National Curriculum Assessments at Key Stage 2 in England 2011/2012 (Revised)  
<https://www.gov.uk/government/publications/national-curriculum-assessments-at-key-stage-2-in-england-academic-year-2011-to-2012>

DfE (2013a): GCSE and Equivalent Results in England, 2011/12 (Revised)  
<https://www.gov.uk/government/publications/revised-gcse-and-equivalent-results-in-england-academic-year-2011-to-2012>

DfE (2013b): GCSE and Equivalent Attainment by Pupil Characteristics in England, 2011/12  
<https://www.gov.uk/government/publications/gcse-and-equivalent-attainment-by-pupil-characteristics-in-england>

DfE (2013c): A level and Equivalent Examination Results in England, 2011/12 (Revised)  
<https://www.gov.uk/government/publications/revised-a-level-and-equivalent-examination-results-in-england-academic-year-2011-to-2012>

DfE (2013d): Open academies and academy projects in development  
<http://www.education.gov.uk/schools/leadership/typesofschools/academies/open>

DfE (2013e): 2012 Performance Tables  
<http://www.education.gov.uk/schools/performance/>



## Glossary

### School types

#### **State-funded schools**

Comprehensive, modern and selective schools, academies, City Technology Colleges and maintained special schools (excluding hospital schools, Pupil Referral Units, Alternative Provision and independent schools).

#### **Sponsored academy**

All-ability, state-funded schools established and managed by sponsors from a wide range of backgrounds, including high performing schools and colleges, universities, individual philanthropists, businesses, the voluntary sector, and the faith communities.

### Data and pupil characteristics

#### **First language**

The language to which a child was initially exposed during early development and continues to be exposed to this language in the home or in the community.

#### **Free school meals (FSM)**

Children are eligible for free school meals if they are living in families in receipt of any of the following:

- Income Support income-based Jobseeker's Allowance
- income-related Employment and Support Allowance
- support under Part VI of the Immigration and Asylum Act 1999
- the Guarantee element of State Pension Credit
- Child Tax Credit, provided they are not entitled to Working Tax Credit and have an annual income of £16,190 or less
- Working Tax Credit 'run-on' - the payment someone may receive for a further four weeks after they stop qualifying for Working Tax Credit

#### **National Pupil Database (NPD)**

Longitudinal database linking pupil/student characteristics to school and college learning aims and attainment information for all children in state-funded schools in England. Individual pupil level attainment data for pupils is also included for non-state-funded and independent schools who partake in the tests/exams.

#### **Special Educational Needs (SEN)**

Pupils with special educational needs have learning difficulties or disabilities that make it harder for them to learn than most pupils of the same age. Pupils with special educational needs comprise those at School Action, School Action Plus or with statements of SEN:

- School Action – where extra or different help is given, from that provided as part of the school's usual curriculum.
- School Action Plus – where the class teacher and the SENCO receive advice or support from outside specialists (the specialist teacher, an educational psychologist, a speech and language therapist or other health professionals).

- Statement – a pupil has a statement of SEN when a formal assessment has been made. A document setting out the child's needs and the extra help they should receive is in place.

## Annex: School Coverage

### Overall results

Results are based on school status as published in the School Performance Tables 2012 and Statistical First Releases; this means schools that were open as academies as at 12 September 2011 had their results published as such, otherwise results were published under the previous school name and type.

The tables below set out the number of sponsored academies at each Key Stage, and the number of pupils that were in those academies, for the purposes of the analysis in this publication. The size of these groups should be taken into consideration when interpreting the results.

**Figure A1: The number of eligible pupils at each Key Stage in 2011/12**

	Number of end of Key Stage 2 pupils	Number of end of Key Stage 4 pupils
Sponsored academies	1,439	48,299

**Figure A2: The number of schools at each Key Stage in 2011/12**

	Key Stage 2	Key Stage 4
Sponsored academies	31	299

### Year on year comparisons

Year on year comparisons are based on those academies that had two years of results (including results from predecessor schools). At Key Stage 2 this is 29 sponsored academies and at Key Stage 4 this 293 sponsored academies.

These groups are only used for year on year comparisons not for the overall performance of all academies.

### Comparison to similar schools

Our group of sponsored academies used for a comparison to similar is based on those sponsored academies with two years of results (published as a sponsored academy) with the additional criteria that schools had results published as a predecessor school (i.e. are not new provision); this gives 244 schools. These are matched to a group of non-academy schools that, based on previous outcomes, deprivation and prior attainment at Key Stage 2, would have had a similar propensity to become an academy.



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