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English as an Additional Language, proficiency in English and pupils' educational achievement: An analysis of Local Authority data

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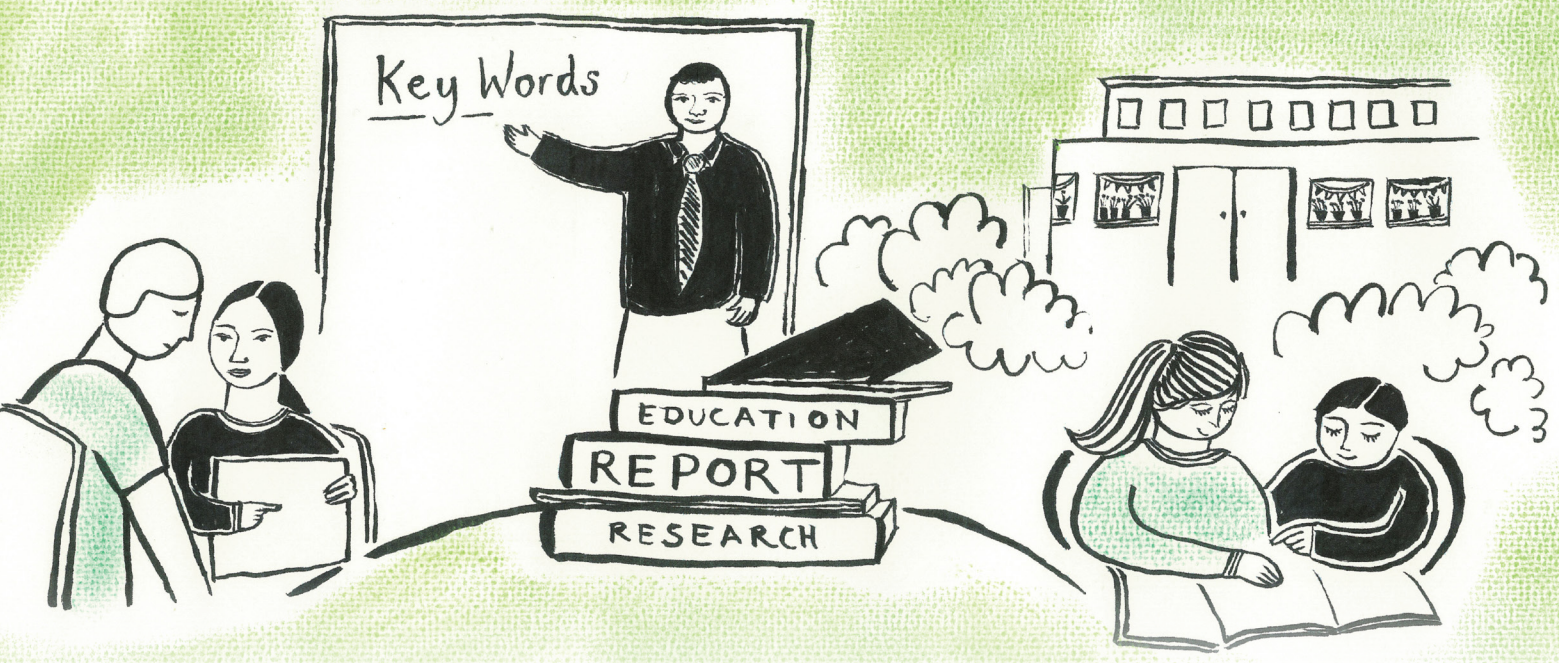

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About The Bell Foundation

The Bell Foundation is a charity which aims to overcome exclusion through language education by working with partners on innovation, research, training and practical interventions. Through generating and applying evidence, we aim to change practice, policy and systems for children, adults and communities in the UK disadvantaged through language.

The Foundation works in two key areas:

- **The EAL Programme aims to improve the educational outcomes of children with English as an Additional Language in the UK to benefit the individual child and society as a whole. The Foundation works in partnership with a range of organisations across the education system to provide training and resources in order to build capacity, develop and evaluate models of good practice, and provide thought leadership.**
- **The Criminal Justice Programme seeks to break down the language barrier to accessing justice and rehabilitation for individuals in contact with the criminal justice system for whom English is an additional language. In 2017 the Foundation developed a long-term strategy for its work in the sector, with a focus on both victims and offenders of crime. The Foundation works through interventions in research, policy, practice and service support.**

About Unbound Philanthropy

Unbound Philanthropy is an independent private grant-making foundation that works to ensure that migrants and refugees are treated with respect and engage with their new communities. We support pragmatic, innovative and responsive approaches to immigration and immigrant integration in the United States and United Kingdom.

Contents

Executive Summary

Background

This report presents an analysis of data from a new variable in the English School Census, recording the Proficiency in English (PIE) of pupils with English as an Additional Language (EAL). In the January 2017 census, schools were asked to rate all their EAL pupils on their proficiency in English on a five-point scale (A-E) from New to English (A) through to Fluent (E) (see Appendix 1). This scale was introduced following the recognition that the simple binary definition of EAL in the School Census masks huge variability in pupils' educational achievement, variability that can largely be explained through differences in pupils' proficiency in English (Strand & Demie, 2005; Strand, Malmberg, & Hall, 2015). The new Proficiency in English Scale promises to be a valuable tool to understand variability in EAL pupils' educational achievement and to plan targeted support.

Despite these potential promises, the only analysis reported by the Department for Education (DfE) has been a single line, reporting the number of pupils at stage A-E based on the total number of pupils aged 5-16 in January 2017 (DfE, 2017a). We requested the national data from the DfE so we could undertake a proper analysis, but the request was refused as we were told the DfE has chosen to exclude proficiency in English from the National Pupil Database (NPD). No researchers are therefore able to fill the void left by the lack of any published DfE analysis. There are therefore many unanswered questions, including:

1. **What factors are associated with the proficiency in English of EAL pupils? How does proficiency in English vary by pupils' age or in relation to other demographic factors such as gender or entitlement to Free School Meals (FSM)?**

2. **Is EAL pupils' proficiency in English linked to their educational attainment at age 5, 7, 11 and 16? Is the relationship consistent at different ages? How does the performance of EAL pupils Competent (Stage D) or Fluent (Stage E) in English compare to that of monolingual English speakers?**

3. **How much of the variation between EAL pupils' attainment can be explained by their proficiency in English? Is there evidence of discriminant validity, i.e. stronger correlations between proficiency in English and reading achievement compared to mathematics achievement?**

The Dataset

Since the DfE has excluded the Proficiency in English Scale from the NPD, we were not able, despite requests, to access the national data to answer the above questions. As an alternative, we established a data-sharing project with a number of Local Authorities in England who agreed to share fully anonymised pupil level results so we could address the above questions.

Our dataset consists of the results of 140,000 pupils, from 1,569 schools across six Local Authorities (LAs). These represented a good spread including one inner London borough, two outer London boroughs, a large southern shire county, a substantial West Midlands conurbation, and a large northern city. The sample has a slightly higher proportion of EAL pupils than the national average (25% vs. 19%), because we wanted to include some LAs with high proportions of EAL pupils. It was representative of the country in terms of ethnicity, entitlement to FSM, gender, and in relation to educational achievement at all ages (5, 7, 11 and 16 years).

The LAs provided the proficiency in English data on all their Reception, Y2, Y6 and Y11 pupils so we could match proficiency in English and achievement in national tests and examinations at age 5, 7, 11 and 16 years respectively. LAs also supplied the data for all their pupils, including those whose first language was English, so we could compare the results for EAL pupils who were Competent or Fluent in English with their monolingual English peers.

Results

Proficiency in English and pupil characteristics

- **EAL pupils varied widely in terms of their degree of proficiency in English. In the context of mainstream schooling in England this is not a trivial observation. Teaching is almost entirely delivered through the medium of English language (be it texts, video or audio materials, or in classroom discussions). A group of pupils who can only access this information to a limited degree is also less likely to perform to their full potential.**
- **What matters most for EAL pupils' degree of English proficiency was not their gender or FSM eligibility, but their age. At the end of Reception, more than half (55%) of EAL pupils are acquiring proficiency in English (rated as New to English, Early acquisition or Developing competence). At the end of KS1, still almost half (49%) of EAL pupils are acquiring proficiency. At the end of KS2 though, this drops to under a quarter (23%) and by KS4, just one in six (15%). Looking at the other end of the spectrum, by KS4 the vast majority of EAL pupils (85%) are Competent or Fluent in English, compared to 30% of EAL pupils at Reception.**
- **Levels of missing data for the Proficiency in English Scale was relatively low with 11% of EAL pupils not having been rated (9% nationally). Analysis of the dataset indicated that for around 50% of pupils, the data was missing at a whole school level. This probably reflects schools adjusting to the new requirements and the level of missing data would be expected to be much lower in the 2018 census[1].**

[1] We are not able to test this hypothesis because the DfE has excluded the PIE scale from the NPD.

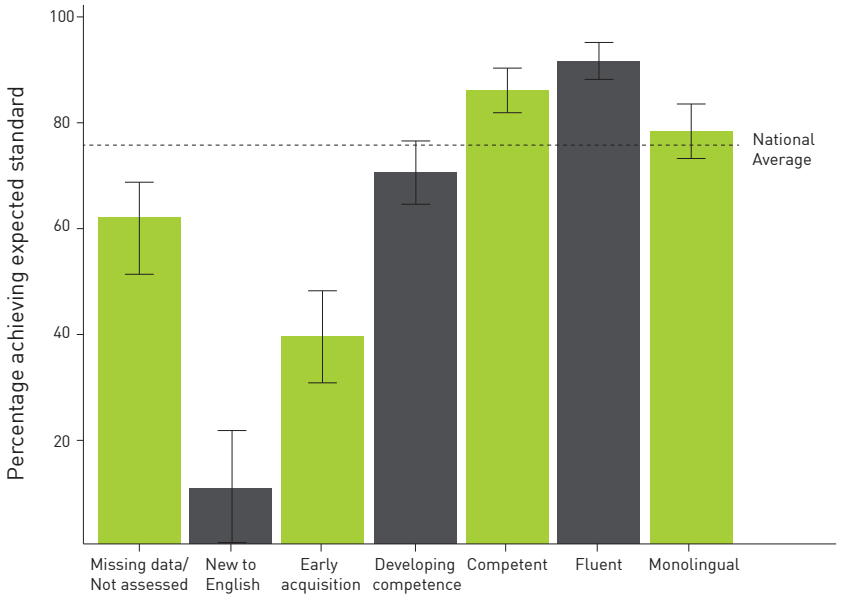
Proficiency in English and educational attainment

Across all ages 5-16 and all subjects, three points came out very strongly:

- **EAL pupils with different levels of proficiency in English vary greatly in their achievement.**
- **Pupils' attainment increases with greater English proficiency, indicating a strong link between proficiency in English and educational achievement.**
- **While EAL pupils who are New to English or at the Early acquisition stage score below the national average, those who are Developing competence are very close to the national average and those who are Competent or Fluent score significantly above the national average. Indeed the latter two groups of EAL pupils score significantly higher than monolingual English speakers.**

To illustrate these points we present below the data from the reading assessment at the end of KS1 (age 7). The results are discussed fully in the main report, but the graph serves to illustrate the above points. Similar results are found at age 5, 11 and 16.

Age 7 reading achievement by proficiency in English



'Missing data/Not assessed' are EAL pupils who had not yet been assessed for their proficiency in English at January 2017, around 11% of our sample. Monolingual are monolingual English speakers.

Proficiency in English allows us to explain up to 22% of the variability in EAL pupils' achievement, compared to a typical 3%-4% explained by other pupil characteristics. This underlines how important proficiency in English is in understanding the achievement of EAL pupils, explaining between four to six times as much variation in achievement as gender, FSM and ethnicity combined. As expected, the relationship between proficiency in English and achievement was particularly strong in language-heavy subjects (such as reading and English) compared to mathematics. This further indicates a level of discriminant validity for the Proficiency in English Scale.

Conclusions

EAL itself is a poor indicator of pupils' likely level of educational achievement – proficiency in English is central to understanding achievement and levels of need among pupils with EAL

EAL researchers and practitioners have for a long time discussed the imprecision of the binary EAL measure in the School Census that masks huge differences in English language skills (Strand & Demie, 2005; Demie & Strand, 2006; Strand et al., 2015; Hutchinson, 2018). The EAL definition groups together a diverse and heterogeneous group of pupils (e.g. those who are recent arrivals to the country with little or no English and those who have an additional language as part of their cultural heritage but are also fully Fluent in English) all in a single group, irrespective of their actual language skills. In an English-medium education system, a pupil's likelihood to succeed will be strongly influenced by their mastery of the language of instruction. Our results demonstrate conclusively that EAL is a poor indicator of pupils' likely level of educational achievement. The results confirm that the Proficiency in English Scale is a vital indicator of EAL pupil's language proficiency and the best predictor of their educational attainment.

English language support is most needed in the early years and KS1, but there is a need for support at all ages

The low levels of fluency in English in the early years suggest that language support is most warranted in Reception and KS1. Early support would be particularly beneficial since the earlier the pupil gains fluency in the language of instruction, the earlier they can access the curriculum. In later years, support may be needed for fewer pupils, but is still warranted, particularly for pupils who are new to the country. If the aspiration of the school system is to provide full access to the (English language) curriculum to all pupils, language support would still be needed for one in six EAL pupils at KS4, where 15% were judged less than Competent in regard to their proficiency.

Bilingualism can have positive associations with achievement

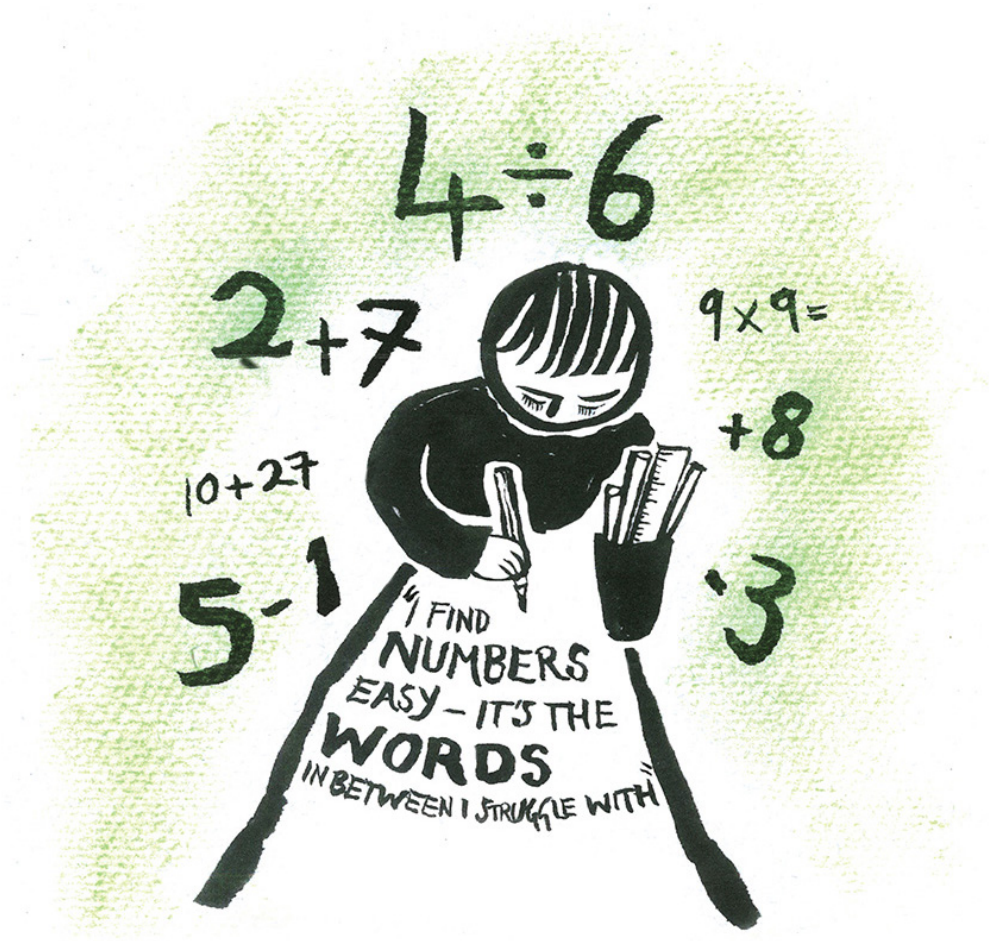
It is important to recognise that being bilingual is not a barrier to learning. It is possible to succeed in the English school system while reaping the benefits of growing up with more than one language. Indeed, we see that pupils with EAL who are rated as Competent or Fluent in English typically have significantly higher educational achievement than their monolingual peers. What can be a barrier to learning is low proficiency in the language of instruction. Pupils need to be supported adequately so that all children can acquire the proficiency in English they need to develop to their full potential.

The Proficiency in English Scale should be retained in the School Census and the data should be available in the National Pupil Database (NPD)

It was very welcome that following the publication of the report by Strand et al. (2015), the Government recognised the need for the assessment of learners with EAL and responded by introducing the Proficiency in English Scale in 2016. This brought England into line with best practice in Wales and Scotland both of which have been collecting data on pupils' proficiency in English for many years. However, the DfE has recently announced it will no longer require schools to complete the Proficiency in English Scale from January 2019. This is a retrograde step and potentially a damaging one. We strongly urge the DfE to consult with schools and reconsider this decision. The data that has been collected should also be released in the National Pupil Database (NPD), so that further research can be conducted.

The DfE should provide schools with guidance on best practice

The DfE should provide guidance on best practice in EAL assessment to schools, to LAs, and to Multi-Academy Trusts which draws on what has been learnt from the introduction of the scale. It would be valuable if this included reference to the EAL Assessment Framework developed by The Bell Foundation (2017) and considered issues around expertise, training and moderation. We urge schools to continue to record the proficiency in English of their EAL pupils and to use the data to identify need and target support.



Introduction

This report presents an analysis of a new data item in the English School Census recording the Proficiency in English (PIE) of pupils with English as an Additional Language (EAL). In January 2017, schools were asked to rate all their EAL pupils on their proficiency in English on a five-point scale (A to E) from New to English (A) to Fluent (E). The scale is included as Appendix 1. The scale was introduced following recognition by the government that the binary EAL measure in the census masks huge variability in achievement, variability that can largely be explained through differences in pupils' proficiency in English (Demie & Strand, 2006; Strand & Demie, 2005; Strand, Malmberg, & Hall, 2015). The Proficiency in English Scale promises to be a valuable tool to understand variability in EAL pupils' educational achievement and to plan targeted support.

Despite these potential promises, the only analysis reported by the Department for Education (DfE) has been a single line, reporting the number of pupils at each stage A-E based on the total number of pupils aged 5-16 (Department for Education, 2017a). We requested the national data from the DfE but the request was refused as we were told the DfE has chosen to exclude proficiency in English from the National Pupil Database (NPD). The following key questions therefore currently remain unanswered:

- **What is the distribution of EAL pupils across the five proficiency in English stages? Does this change between the age of 5 and 16 years, e.g. are older pupils more likely to be Fluent in English?**
- **Is EAL pupils' proficiency in English linked to their educational attainment? Is the relationship consistent at different ages? Do any achievement gaps narrow for older pupils?**
- **How does the performance of EAL pupils who are Competent (Stage D) or Fluent (Stage E) in English compare to that of monolingual English speakers?**
- **Do we see evidence of discriminant validity, e.g. stronger correlations between proficiency in English and reading achievement than with mathematics achievement?**
- **How much of the variation between EAL pupils' in their attainment can be explained by their proficiency in English? How does this compare to other pupil background factors?**

To answer these questions, we collaborated with six Local Authorities (LAs) in England to establish a fully anonymised pupil level dataset. The following section describes the process of data acquisition and processing, the dataset created, and descriptive statistics on the Proficiency in English Scale. This will establish the basis for following analyses of proficiency in English and achievement at each key stage.

Methodology

Data requested

The data was collected by contacting Local Authorities (LAs) through research meetings and personal contacts of the first author. We asked LAs for anonymised individual pupil level data including year group, gender, ethnicity, whether English was an Additional Language (EAL), the specific additional language if English was not the main language, current entitlement to a Free School Meal (FSM), whether the pupil had ever been entitled to a FSM at any time in the last six years (EVER6), and their Proficiency in English (PIE).

In order to investigate the link between proficiency in English and pupil attainment at key milestones, we asked for the above data for pupils who had completed Early Years Foundation Stage Profile and end of KS1, KS2 and KS4 national assessments in 2017, i.e. all Reception, Y2, Y6 and Y11 pupils respectively.

To enable comparisons between EAL pupils rated Competent or Fluent in English and monolingual English pupils, we asked for data on the achievement of all pupils in the relevant LAs, not just those with EAL.

Appendix 2 gives a copy of the Project Information Pack sent to participating LAs. Every LA also signed an Information Sharing Agreement (ISA) that detailed secure ways to share and handle the data for all parties involved. We requested the following pupil achievement measures (see Appendix 2 for further detail):

End of Reception (age 5)

- **Early Years Foundation Stage Profile (EYFSP) total point score.**
- **Whether the pupil achieved the threshold for a Good Level of Development (GLD).**

End of Key Stage 1 (age 7)

- **KS1 teacher assessed levels for reading and for mathematics (below, at, or above expectation).**

End of Key Stage 2 (age 11)

- **KS2 scaled scores in the national reading and mathematics tests (80-120).**
- **KS2 progress scores in reading and mathematics (progress age 7-11 centred on 0 which indicates the average/typical progress).**

End of Key Stage 4 (age 16)

- GCSE English language, English literature and mathematics grade (1-9).
- Attainment 8 score: Pupil's summed score across eight qualifications including mathematics (double weighted), English (double weighted), three qualifications that count in the English Baccalaureate (EBacc) and three further qualifications that can be GCSE qualifications (including EBacc subjects) or vocational awards from the DfE approved list.
- Progress 8 score: Pupil's progress from KS2 to KS4 (value-added score, centred on 0 which indicates expected progress).

The Sample

We received data from six Local Authorities (LAs). These represented a good demographic spread with one inner London borough, two outer London boroughs, a large southern shire county, a West Midlands conurbation and a large northern city. We described the LAs in a little more detail below and in Table 1:

- Local Authority 1 (LA1) is an inner London borough and provided the data of 5,779 pupils, 58.7%[2] of whom were EAL pupils (n=3,381). The large proportion of EAL pupils is above the national average of 18% (DfE, 2017c), but typical for the linguistically diverse capital that is London (Strand et al., 2015).
- Local Authority 2 (LA2) is a large southern shire that provided the data of 58,093 pupils, 6.4% of whom were EAL pupils (n=3,746). The small proportion of EAL pupils is below the national average, but typical of the low numbers of EAL pupils in many shires and similar geographical regions.
- Local Authority 3 (LA3) is an outer London borough that provided the data of 12,548 pupils, 61.6% of whom were EAL pupils (n=7,587). As was the case for LA1, the proportion of EAL pupils in LA3 is high compared to the national average, but typical for a London borough.
- Local Authority 4 (LA4) is another outer London borough that provided the data for 15,755 pupils, 63.4% of whom were EAL pupils (n=9,978). Again, the proportion of EAL pupils is high compared to the national average, but typical for a London borough.
- Local Authority 5 (LA5) is a large metropolitan borough in the West Midlands that provided the data of 12,691 pupils, 27.3% of whom were EAL pupils (n=3,466). The proportion of EAL pupils is slightly higher than the national average.
- Local Authority 6 (LA6) is a city in the North of England that provided the data of 36,100 pupils, 20.2% of whom were EAL pupils, close to the national average.

[2] Proportions out of pupils with recorded EAL status.

Table 1 summarises the pupil characteristics of each LA and compares them to the whole sample and the national average.

Table 1: Overview of pupils in each Local Authority (LA) in comparison to total sample and national population

LA	Description	N	%EAL[b]	%FSM[b]	%BAME[a]	%Girls[b]
1	Inner London borough	5,777	58.7	26.7	38.7	50.9
2	Southern shire county	58,093	6.4	6.3	13.0	48.7
3	Outer London borough	12,548	61.6	13.7	80.2	47.6
4	Outer London borough	15,755	63.4	14.0	85.3	48.5
5	West Midlands met. borough	12,691	27.3	22.5	53.3	49.0
6	Northern city council	36,100	19.2	17.4	19.9	48.6
	Total sample	140,964	24.8	12.9	33.5	48.7
	National average[c]		19.4	14.3	32.0	48.8

(a) BAME = Black and Asian Minority Ethnic (all ethnic groups other than White British).
(b) %EAL, %FSM and %Girls as a proportion of all valid values.
(c) National average calculated from ASC 2017 for pupils in the same year groups as the sample (Reception, Y2, Y6 and Y11).

The whole sample contains records for 140,964 pupils. Just under one quarter (24.8%) were recorded as EAL (n=35,074). Since we contacted primarily LAs with large proportions of EAL pupils, the proportion of EAL pupils in our dataset is slightly higher than the national average. For other measures such as entitlement to Free School Meals, ethnic minority pupils and gender, the sample average is very close to the national average. Furthermore, in terms of educational achievement, the average scores for the sample at each key stage were identical to the national averages. The relevant figures are given in Tables 9-14 of the results section.

Missing data

Table 2 summarises the proportion of missing data in the whole sample for each variable. Overall the level of missing data was very low.

Table 2: Missing data in whole dataset by variables

Variable	Number of missing values	Percent of whole data
EAL status	348	0.4
Ethnicity	94	0.2
FSM eligible	291	0.2
FSM eligible last 6 years	3,493	2.5
Gender	0	0.0
Language	212	0.2
EYFSP Point Score	9	0.0
EYFSP Achieved GLD	0	0.0
KS1 Maths Score	77	0.2
KS1 Reading Score	80	0.2
KS2 Reading Scale Score	427	1.3
KS2 Maths Scale Score	398	1.2
KS2 Reading Progress Score	963	2.8
KS2 Maths Progress Score	977	2.9
KS4 English Language grade[a]	0	0.0
KS4 English Literature grade[a]	0	0.0
KS4 English grade[a]	0	0.0
KS4 Maths grade[a]	0	0.0
KS4 Attainment 8 Score	3	0.0
KS4 Progress 8 Score	1,143	3.9

(a) Missing data for these scores was recoded as 0 (see Appendix 3: Variable description).

Some missing values are expected. For example, for progress scores, missing values would be expected for all pupils who do not have any prior achievement data on national tests, for example, because they entered from outside England during the key stage. While such numbers are low overall, they tend to be much higher for EAL learners. For example, Strand et al. (2015) report that at the end of KS2 in 2013, 14.4% of EAL pupils had no prior age 7 scores, compared to only 2.1% of monolingual English speakers. At the end of KS4, the difference was even greater, 19.1% of EAL pupils compared to 2.2% of monolingual English speakers having no prior age 11 score.

We also found that EAL pupils were slightly over-represented among those with missing KS2 test scores, particularly for reading (see Appendix 4). This means that when thinking about the relationship between proficiency in English and pupil attainment, the gap will be underestimated if pupils with missing scores are excluded. For this reason, it is important to recode N (not enough marks or beneath the level of the test) to a value in the valid range.

Missing values were generally defined as missing and excluded case-wise from analyses. Exceptions were:

- **For KS2 scaled scores in reading and mathematics, we distinguished between missing scores from pupils who were absent from the test (who we coded as missing), and pupils who scored below the level of the test (who we gave a score of 79, just below the lowest score in the valid range 80-120).**
- **For KS4, we gave all pupils who received an 'Ungraded' result in GCSE or who did not sit the relevant GCSE a 0, a score that again is just below the valid grades (which are 1-9).**

Having described the data acquisition process and the obtained datasets, we will now move on to describe the key variable, namely the Proficiency in English Scale.

Description of the Proficiency in English Scale

A copy of the Proficiency in English Scale is included as Appendix 1. This gives the full statements about English language skills that teachers refer to in making a 'best fit' judgement as to the proficiency in English of each EAL pupil.

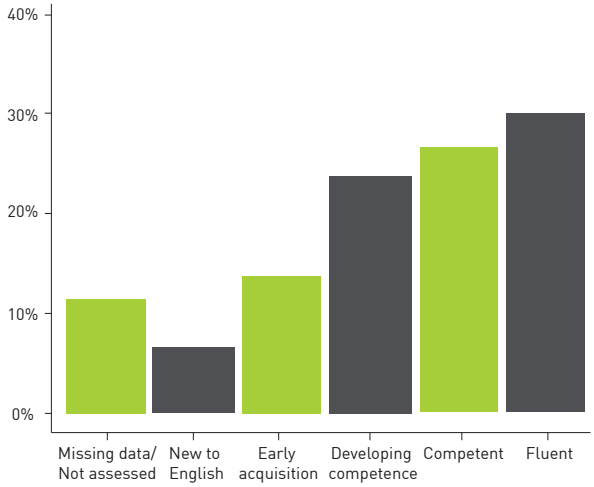
Table 3 and Figure 1 show how EAL pupils were rated on the Proficiency in English Scale across our sample. The percentage of EAL pupils who were missing a proficiency in English score or allocated N for 'not yet assessed' is given as a percentage of all EAL pupils. The percentages at each stage A-E are given as percentages of all pupils who were rated (i.e. excluding missing data).

Table 3: Distribution of Proficiency in English (PIE) scores in our sample and national average

	Missing data / NA	New to English	Early acquisition	Developing competence	Competent	Fluent
Sample	11.2	6.4	13.7	23.5	26.7	29.7
National	8.7	5.8	11.5	21.2	24.9	36.5

Missing data are percentages of all EAL pupils, PIE stages are percentages of valid cases (excluding missing data). National figures from DfE (2017).

Figure 1: Proportion of pupils by proficiency in English level: whole dataset



Missing data/Not assessed is given as a percentage of all EAL pupils. The percentages at each stage A-E are given as percentages of all pupils who were rated (excluding missing data).

Across all EAL pupils, the majority are rated as Fluent in English, with slightly fewer pupils being rated as Competent and Developing competence. Smaller groups of pupils were categorised as being early in their acquisition or New to English. This spread in proficiency in English is substantial. These are all EAL pupils, but while just under half are rated by their teachers to have limited English language skills (New to English through to Developing competence), over half are rated as Competent or Fluent. Given that English is the language of instruction for all these pupils, such a range in pupils' language skills is not trivial.

We have focused here on the whole sample regardless of pupils' age. We do this because the DfE (2017a) report does not break the data down by year group, it reports only a single figure for all pupils at KS1 or above (age 5-16), and so this is the only national comparator. However, we shall see later that these figures vary substantially depending on pupils' age, with increasing levels of proficiency for older pupils compared to younger pupils. Our sample has a slightly lower proportion of Fluent EAL pupils, but also a slightly higher number of missing proficiency in English scores (11.2%) than the national average. We will have a closer look at the missing data question in the following section.

Reasons for missing proficiency in English data

As discussed above, 11.2% of the EAL pupils in our sample were coded as missing or as N (not yet assessed) where the school had not yet had time to assess the proficiency of the pupil. Proficiency in English could therefore be missing because teachers felt unable to judge the proficiency of a particular individual pupil, or because some schools might have been less well prepared to implement the new assessment on time. To detect the latter possibility, we checked how many of the missing proficiency in English ratings were missing on a whole school level (i.e. none of the EAL pupils in the school had been rated).

School-level missing data was defined as schools that failed to report proficiency in English data for any of their EAL pupils. We found that this was the case for 144 schools (out of 1,306 schools with EAL pupils). These schools had reported other pupil background information such as gender,

Socio-Economic Status (SES), and ethnicity, as well as pupil grades, but no proficiency in English score for their EAL pupils. Of these schools, 80 were primary schools, 61 were secondary schools, and three had both primary and secondary pupils. In total, 2,361 EAL pupils in our sample were missing a proficiency in English score because their school had not reported it. This amounts to more than half of the missing proficiency in English data.

We conclude that a large proportion of the missing proficiency ratings reflect whole school issues around implementation in January 2017. We would expect the number of missing cases in the January 2018 census to be much lower as schools adjust to the new requirements. However, we do not have the data to answer this as the DfE has chosen to exclude proficiency in English from the NPD.

Variation between Local Authorities

Table 4 summarises the proficiency in English scores across all six LAs (for data by year group within each LA – see Appendix 5).

Table 4: Distribution of proficiency in English scores across Local Authorities (LA)

LA	EAL N	Missing / NA	New to English	Early acquisition	Developing competence	Competent	Fluent
1	3,381	1.7	3.3	8.4	18.1	29.3	40.9
2	3,746	14.7	4.3	10.0	21.1	24.2	40.4
3	7,587	7.8	4.7	11.4	23.8	28.6	31.6
4	9,978	3.2	5.2	13.8	24.9	27.8	28.3
5	3,466	44.8	6.8	17.6	27.4	22.7	25.4
6	6,916	12.5	13.0	19.8	24.1	23.9	19.2

Missing data percentages are proportion of all EAL pupils with missing data, but percentages on Proficiency in English Scale levels are proportion of valid cases (excluding missing data).

The general trends described for the whole sample seem to hold across authorities, with only two exceptions:

- **LA5 had exceptionally high proportions of missing proficiency in English data for their EAL pupils. Around 40% of those missing scores were due to school-missing data, and LA5 explained these high numbers of missing data with reference to the difficulty that schools were faced with when attempting the initial assessment of all EAL pupils at the time of the census.**
- **There were differences between LAs in the proportions of Fluent pupils. For example, in the inner London authority (LA1), over two-thirds of EAL pupils are rated as Competent or Fluent, but in the northern city (LA6), less than half of EAL pupils are so rated. With a small sample of LAs we must be careful not to overgeneralise, but this may reflect wider differences between the North and London, both in pupil demographics and in historical levels of language support.**

Having described the dataset, we now address our research questions, starting by asking about differences in proficiency in English between groups of EAL pupils.

Results

Do groups of EAL pupils differ in their English proficiency?

To explore the differences in proficiency in English between groups of pupils, we compared EAL learners' PIE ratings across year groups, between boys and girls, and by eligibility for FSM.

Year groups

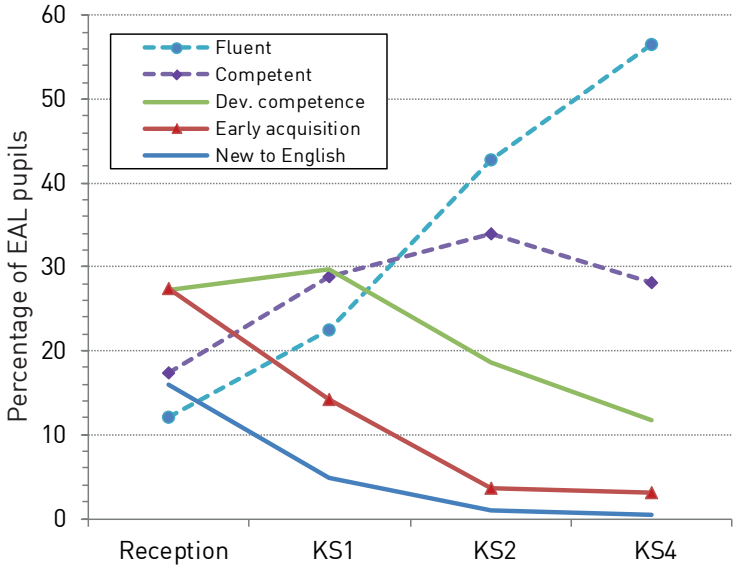
Table 5 shows pupils' proficiency in English from Reception through to KS4. The data is also presented in Figure 2.

Table 5: Proficiency in English by year group

Missing data percentages are proportion of all EAL pupils. Percentages on proficiency in English levels are proportion of pupils rated (i.e. excluding missing data).

Year	N	Missing / NA	New to English	Early acquisition	Developing competence	Competent	Fluent	Acquiring English (A-C)	Competent+ (D&E)
Reception	10,199	11.6	15.9	27.4	27.3	17.3	12.1	70.6	29.4
KS1	10,435	8.1	4.8	14.2	29.7	28.8	22.5	48.7	51.3
KS2	8,439	7.0	1.0	3.6	18.6	34.0	42.7	23.2	76.7
KS4	6,001	21.8	0.5	3.1	11.7	28.2	56.5	15.3	84.7

Figure 2: Proficiency in English by year group



At the end of Reception, more than half (55%) of EAL pupils are acquiring proficiency in English (rated as New to English, Early acquisition or Developing competence). At the end of KS1, still almost half (49%) of EAL pupils are acquiring proficiency. At the end of KS2 though, this drops to under a quarter (23%) and by KS4, to just one in six (15%). Looking at the other end of the spectrum, by KS4 the vast majority of EAL pupils (85%) are Competent or Fluent in English, compared to 30% of EAL pupils at Reception.

These figures show that in later school years, EAL pupils in English schools tend to have strong proficiency in English. At the same time, there are considerable language deficits reported across years: half of all EAL pupils are rated to be less than Competent in the first three years of primary school. Even at the end of KS4, there is still a sizeable minority of EAL pupils (15%) who are rated to be less than Competent in English. This pattern is consistent with the majority of EAL pupils acquiring proficiency as they progress through school, but also a minority with significant language learning needs even at older ages, probably as a result of international migration into the country (Strand et al., 2015).

Gender and disadvantage

Table 6 shows the proficiency in English levels by gender. Slightly more girls are Competent or above than boys (60% vs. 54%), but the difference is small.

Table 6: Proficiency in English by gender

Gender	N	Missing / NA	New to English	Early acquisition	Developing competence	Competent	Fluent
Male	18,023	11.3	7.4	14.5	24.6	26.3	27.3
Female	17,051	11.1	5.4	12.9	22.4	27.1	32.2

Missing data percentages are proportion of all EAL pupils, percentages by PIE levels are proportion of pupils rated (i.e. excluding missing data).

Table 7 and Table 8 show proficiency in English by FSM eligibility in the current year and by whether the pupil has ever been eligible in the past six years. Neither of these characteristics seem strongly associated with proficiency in English among EAL pupils.

Table 7: Proficiency in English by entitlement to Free School Meals

Entitled FSM	N	Missing / NA	New to English	Early acquisition	Developing competence	Competent	Fluent
Yes	4,953	10.6	5.8	14.8	23.8	27.0	28.6
No	30,086	11.2	6.5	13.5	23.5	26.6	29.9

Table 8: Proficiency in English by ever entitled to a FSM in the last six years (Ever6)

FSM in last 6 years	N	Missing / NA	New to English	Early acquisition	Developing competence	Competent	Fluent
Yes	8,557	9.4	4.0	11.3	21.6	29.2	33.8
No	24,633	12.5	7.4	14.9	24.5	25.7	27.5

Missing data percentages are proportion of all EAL pupils, percentages by PIE levels are proportion of valid cases (excluding missing data). 1,884 pupils were missing Ever6 and so excluded.

Overall these results indicate that an EAL pupil's age is the most useful reference point to predict which pupils are likely to need language support, with pupils in the early primary years (age 4-7) particularly likely to need support.

Is EAL pupils' proficiency in English linked to their educational attainment?

Early Years Foundation Stage Profile (EYFSP) age 5

The Early Years Foundation Stage Profile (EYFSP) is a statutory assessment completed for all pupils in England in receipt of a government-funded early education place at the end of Reception Year (aged approximately 5 years[3]). The EYFSP in 2017 asks teachers to make a best-fit assessment of whether the child is emerging, expected or exceeding against each of 17 Early Learning Goals. These are scored 1-3 so the total points score can range from 17 to 51. Children achieving a Good Level of Development (GLD) are those achieving at least the expected level within the following areas of learning: communication and language; physical development; personal, social and emotional development; literacy; and mathematics.

Table 9 and Figure 3 present a breakdown of the EYFSP data by proficiency in English. Three points are noteworthy:

- **Groups of EAL pupils with different levels of English language skills vary hugely in their achievement. For example, the range for total points score is from 27.6 for those New to English through to 37.9 for EAL pupils Fluent in English. The proportion of pupils achieving a GLD for the same groups ranges from 34% for those New to English to nearly 90% for those Fluent in English.**
- **EAL pupils' point scores increase regularly with greater English proficiency, indicating a strong link between language skills and overall achievement.**
- **Linguistically stronger EAL pupils (those rated Competent or Fluent in English) scored significantly above the national average, and indeed significantly better than monolingual English speakers.**

We know from previous research that EAL pupils on average score significantly lower than their monolingual English peers at age 5, and that, indeed, the EAL achievement gap is larger at age 5 than at any subsequent age. For example, Strand et al. report the odds of EAL pupils achieving a GLD were over 30% lower than for monolingual English speakers (OR=0.69). However, the current results show clearly the average for EAL pupils obscures huge variation, with only 34% of those New to English achieving a GLD, compared to nearly 90% among the one third of EAL pupils rated as Competent or above.

This has significant implications. For example, the national funding formula includes a fixed element for all EAL pupils in their first three years at school, but clearly some of these pupils need substantially more support than others.

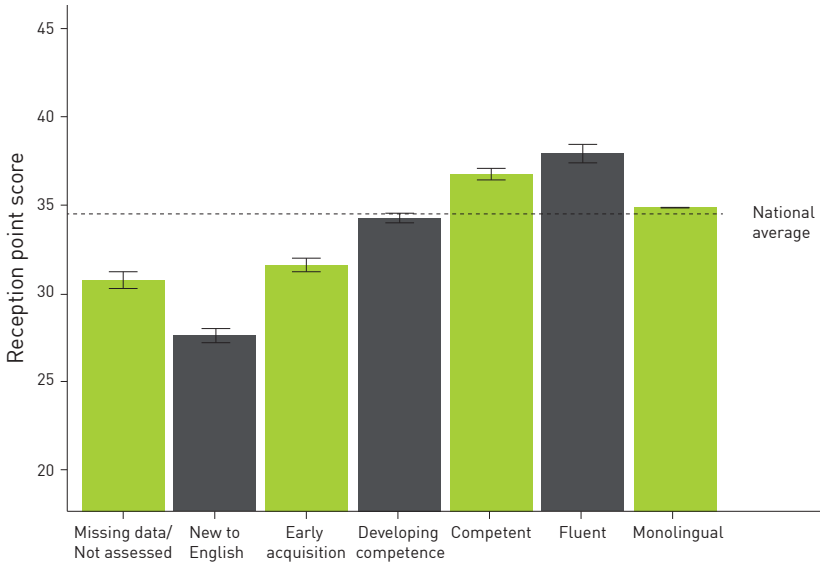
[3] End of Reception is the last term before statutory school age (which is the term after the child has their fifth birthday), so some pupils may not be present, e.g. be home educated. However, the numbers of such children are very low and the vast majority of children start Reception in the September of the academic year in which they will turn five.

Table 9: End of Reception outcomes by proficiency in English

		Total points score		%
Proficiency in English	N	Mean	SD	GLD
Missing data/ Not assessed	1,182	30.7	8.11	53.2
New to English	1,431	27.6	7.36	34.3
Early acquisition	2,472	31.5	7.13	56.5
Developing competence	2,464	34.2	6.24	74.8
Competent	1,556	36.7	6.22	87.9
Fluent	1,087	37.9	7.50	88.0
Monolingual English	28,804	35.0	7.19	72.9
Sample average	38,996	34.5	7.38	70.9

GLD= achieved a Good Level of Development. National average total points score was 34.5 (SD=7.56) and national average %GLD was 70.7%, so the sample average is identical to the national average.

Figure 3: End of Reception point scores by proficiency in English



Error bars represent 95% confidence intervals around the mean. National average from DfE (2017b).

KS1 achievement (age 7)

Table 10, Figure 4 and Figure 5 show the percentage of EAL pupils achieving the expected level or above in KS1 reading and mathematics by their proficiency in English.

Table 10: Percentage of pupils achieving or exceeding the expected standard in reading and mathematics at KS1 for EAL pupils at different levels of proficiency in English

	Reading		Maths	
Proficiency in English	N	%	N	%
Missing data/Not assessed	833	62.1	834	64.1
New to English	452	11.1	453	23.6
Early acquisition	1,360	39.6	1,360	45.8
Developing competence	2,851	70.7	2,852	73.1
Competent	2,757	86.1	2,757	86.2
Fluent	2,158	91.8	2,157	90.6
Monolingual English	27,946	78.3	27,947	76.1
Sample average	38,379	76.5	38,382	75.4

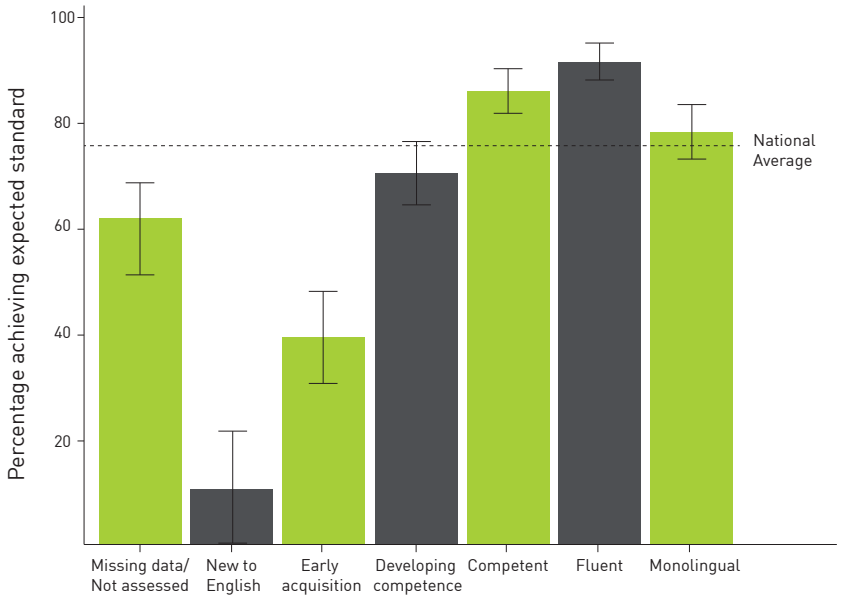
National averages are reported by DfE as whole numbers and were 76% for reading and 75% for mathematics, so the sample average was identical to the national average.

In both subjects, we see the same patterns as for Reception point scores. Like their younger peers, EAL pupils at the end of KS1 vary widely in their achievement, again with increasing English proficiency predicting higher achievement.

The association between proficiency in English and achievement was slightly stronger in reading than in mathematics. For example, the odds of achieving the expected level in mathematics for EAL pupils who were Competent or Fluent in English were nearly 5 times higher than for EAL pupils still developing their command of English (Stages A to C) (OR=4.9). For reading, the comparable odds ratio was 6 times higher (OR=6.1).

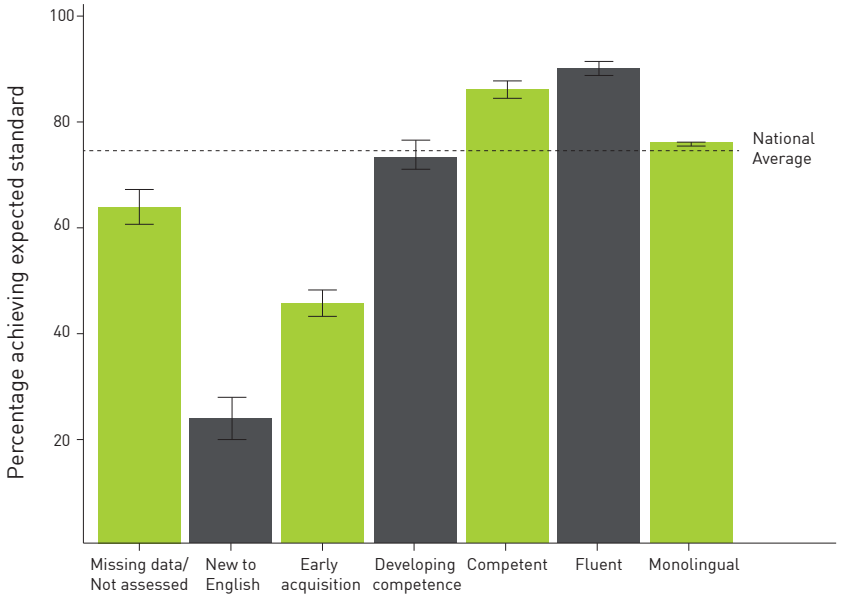
Again, it is notable that EAL pupils who were Competent or Fluent in English scored significantly higher than monolingual English speakers. Among EAL pupils who were Competent and Fluent in English, 86% and 92% respectively achieved the expected level or better in reading, compared to 78% of monolingual English pupils. For mathematics the figures were 85% and 91% of Competent and Fluent EAL pupils, compared to 76% of monolingual English speakers. Expressed as odds ratios, the odds of EAL pupils who were Competent or Fluent in English achieving the expected level or above were twice as high as the odds for monolingual English speakers (ORs= 2.1 and 2.4 for mathematics and reading respectively).

Figure 4: Percentage of pupils achieving expected standard in reading at KS1 for EAL pupils at different levels of proficiency in English and monolingual English speakers



Error bars represent 95% confidence intervals around the mean. National average from DfE (2017b).

Figure 5: Percentage of pupils achieving expected standard in maths at KS1 for EAL pupils at different levels of proficiency in English and monolingual English speakers



Error bars represent 95% confidence intervals around the mean. National average from DfE (2017b).

KS2 achievement (age 11)

Table 11 and Figure 5 show the KS2 reading and mathematics scaled scores of EAL pupils with different levels of proficiency in English. For EAL pupils at KS2, the same overall relationship holds between proficiency in English and achievement as for their younger peers[4].

The association is slightly stronger in reading than in mathematics. This is reflected both in EAL pupils' range of scores and in comparison to the national average. Only the Fluent EAL pupils scored above the national average in reading, while in maths both Competent and Fluent English speakers perform at or above the national average. The range of scores between EAL pupils who are New to English and Fluent speakers is also slightly larger in reading (86-106) than it is in maths (91-107).

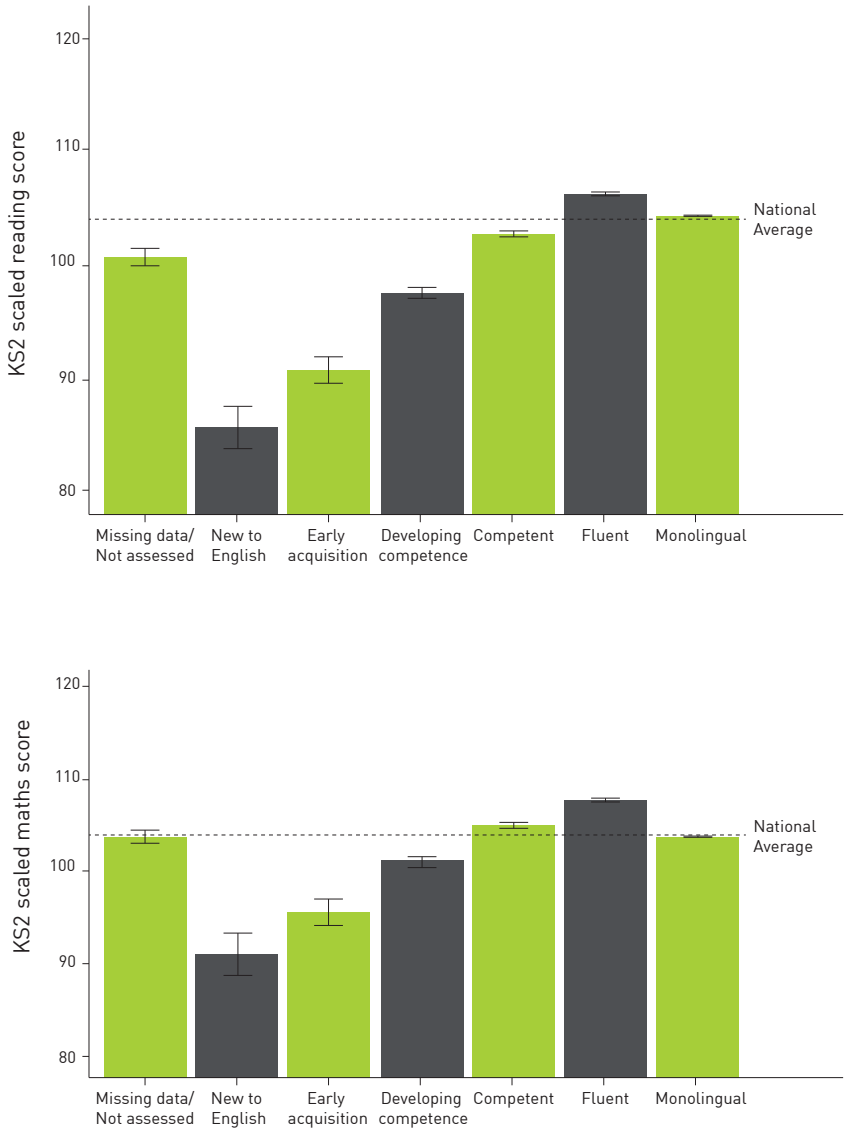
Table 11: KS2 scaled scores in reading and maths by proficiency in English

	Reading			Maths		
	N	Mean	SD	N	Mean	SD
Missing / Not assessed	579	100.7	10.0	581	103.6	9.2
New to English	66	85.7	7.7	69	91.1	9.9
Early acquisition	255	90.8	9.2	259	95.7	10.5
Developing competence	1,421	97.6	8.3	1,422	101.3	8.2
Competent	2,650	102.7	7.6	2,651	104.9	7.0
Fluent	3,334	106.2	7.6	3,333	107.8	7.1
Monolingual English	25,252	104.2	9.0	25,271	103.7	8.1
Sample average	33,572	103.8	9.0	33,601	104.0	8.2

National average scaled scores are reported as whole numbers and both are 104, identical to the sample average.

[4] As discussed earlier, EAL pupils with lower English proficiency were much more likely to have no scaled scores because they were working below the level of the test or scored N (not enough marks to be awarded a scaled score). Unless these pupils are included, e.g. by giving them a scaled score of 79 as we have done, any analysis will underestimate the strength of the association between proficiency in English and attainment.

Figure 6: Mean KS2 scaled scores in reading (top pane) and maths (bottom pane) for EAL pupils at different levels of proficiency in English and monolingual English speakers



KS2 Progress age 7-11

The number of EAL students with progress scores is much lower than the number with KS2 scaled scores. This is because the progress score requires the pupil to have an age 7 score, and a large proportion of the EAL pupils, particularly those New to English or at Early acquisition, do not have an age 7 score, presumably because they have entered the country during the Key Stage (see Strand et al., 2015).

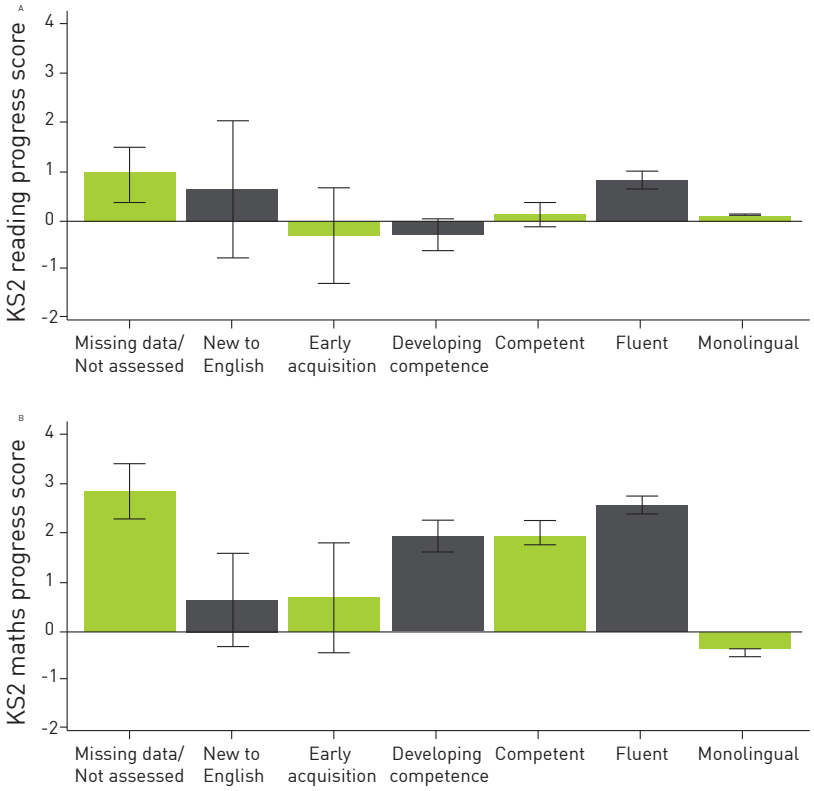
All EAL pupils make better than expected progress in mathematics, but in reading only Fluent English speakers (and those not assessed) make reliably better than expected progress.

Table 12: KS2 progress scores in reading and maths by proficiency in English

	Reading			Maths		
Proficiency in English	N	Mean	SD	N	Mean	SD
Missing / Not assessed	507	0.94	6.34	507	2.88	5.81
New to English	42	0.61	4.46	42	0.62	3.02
Early acquisition	187	-0.32	6.80	187	0.66	7.65
Developing competence	1,241	-0.30	6.05	1,238	1.96	6.08
Competent	2,498	0.11	6.00	2,493	2.00	5.42
Fluent	3,231	0.85	5.52	3,229	2.58	5.02
Monolingual English	25,316	0.07	6.08	25,312	-0.38	5.33
Sample average	33,036	0.15	6.03	33,022	0.24	5.48

National average mean progress score is 0.

Figure 7: Mean KS2 progress score in reading (top pane) and maths (bottom pane) for EAL pupils at different levels of proficiency in English and monolingual English speakers



KS4 achievement and progress (age 16)

Table 13 shows the Attainment 8 and Progress 8 scores for EAL pupils of differing proficiency in English at the end of KS4. The results are presented in Figure 8 and Figure 9 respectively.

Table 13: KS4 achievement for EAL pupils at different levels of proficiency in English compared to monolingual English speakers

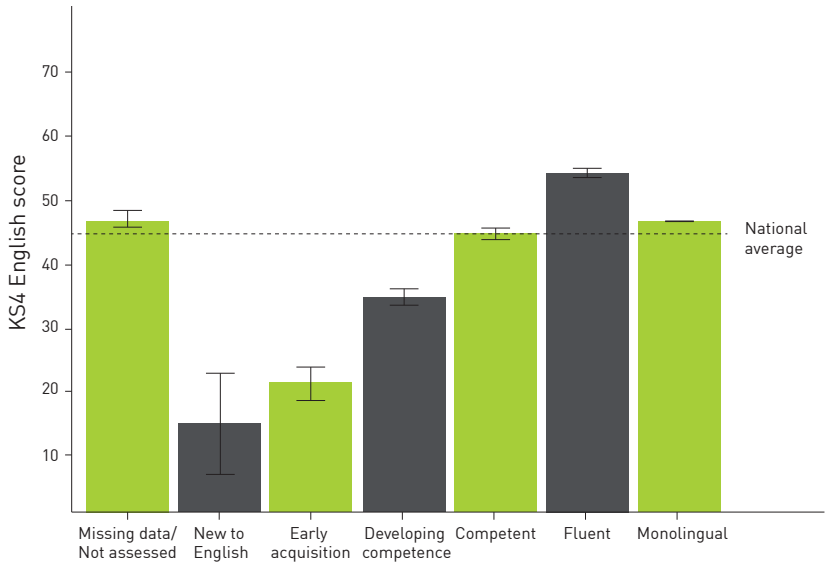
	Attainment 8			Progress 8		
Proficiency in English	N	Mean	SD	N	Mean	SD
Missing / Not assessed	1,311	46.9	20.4	1,204	0.46	1.43
New to English	22	15.0	17.7	13	-0.19	0.46
Early acquisition	146	21.6	17.3	101	-0.27	0.79
Developing competence	549	34.6	17.4	353	0.25	1.18
Competent	1,324	45.3	16.8	979	0.54	1.21
Fluent	2,659	54.5	17.4	2,050	0.74	1.30
Monolingual English	23,217	46.6	19.4	22,115	-0.05	1.64
Sample average	29,316	46.7	19.6	28,176	0.06	1.60

National average Attainment 8 score for state funded schools was 46.3 and average progress score was zero.

As was the case for their younger peers, the results reveal huge differences between EAL pupils, with higher proficiency in English being associated with greater achievement. The average Attainment 8 score for those New to English was 15.0, while the average for those EAL pupils Fluent in English was 54.5, a difference of nearly 40 points. This is the difference between passing eight subjects all at grade 5 or above, and passing eight subjects at a mix of grade 1 or grade 2. Another way of thinking of the size of this difference is that it represents two standard deviations (Cohen's D= 2.0). We also see that on average, EAL pupils who are Fluent in English achieved an Attainment 8 score 10 points higher than monolingual English speakers, or over a grade higher in each subject.

The data shows a similar pattern for Progress 8 scores, with EAL pupils rated as Developing competence, Competent or Fluent making more progress than their monolingual English peers, but those New to English or in the early stages of acquisition making less progress than their monolingual peers[5].

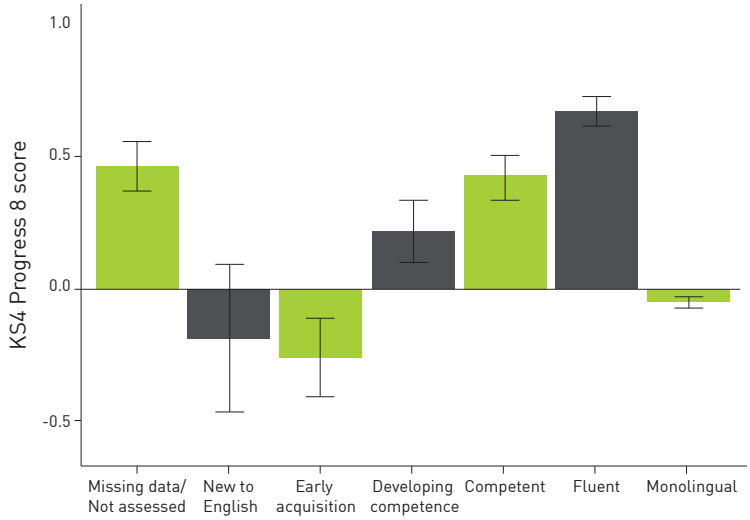
Figure 8: Mean KS4 Attainment 8 score for EAL pupils at different levels of proficiency in English and for monolingual English speakers



Error bars represent 95% confidence intervals around the mean. National average from DfE (2017).

[5] We need to be a little cautious about the progress scores for the small number of pupils rated New to English or Early acquisition. To have a Progress 8 score a pupil would need to have been in an English primary school at age 11, so would be expected to have had five years of education in England. To still be rated New to English or at the early stages of acquisition after this length of time seems unusual. It is possible that the language acquisition of those pupils was slowed down by other factors such as special educational needs or intervening mobility (moving away from and back to England). However, our analysis (see Appendix 4) suggests it is more likely that some of these pupils have been given a progress score of zero in error.

Figure 9: Mean KS4 Progress 8 scores by language proficiency in English and for monolingual English speakers



GCSE English and mathematics

In 2017 new GCSE examinations, graded from 9 to 1, were introduced for English and mathematics, so these will be looked at in detail below. In the new GCSEs, 9 represents the highest grade and 1 the lowest grade. Table 14 shows the mean GCSE grade for each group of pupils, as well as the percentage of the group who did not achieve a pass in the subject and the percentage achieving a 'strong' pass at grade 5 or above.

Table 14: GCSE English and GCSE mathematics grades by proficiency in English

		GCSE English				GCSE Maths			
Proficiency in English	N	Mean	SD	% no pass	% grade 5+	Mean	SD	% no pass	% grade 5+
Missing / Not assessed	1,311	4.8	2.2	6.6	59.6	4.5	2.3	6.3	48.4
New to English	22	1.3	1.8	50.0	9.1	1.9	2.5	54.5	18.2
Early acquisition	146	2.3	1.8	23.3	11.0	2.2	2.0	28.1	13.0
Developing competence	549	3.7	1.9	7.1	32.2	3.4	2.1	9.5	28.8
Competent	1,324	4.9	1.8	1.9	56.4	4.4	2.1	3.3	45.8
Fluent	2,659	5.8	1.9	1.2	77.7	5.3	2.1	1.8	63.1
Monolingual English	23,217	5.0	2.1	3.5	61.4	4.5	2.2	4.2	49.8
Sample average	29,316	5.0	2.1	3.9	61.6	4.6	2.2	4.5	50.0

Figure 10 presents the results for English.

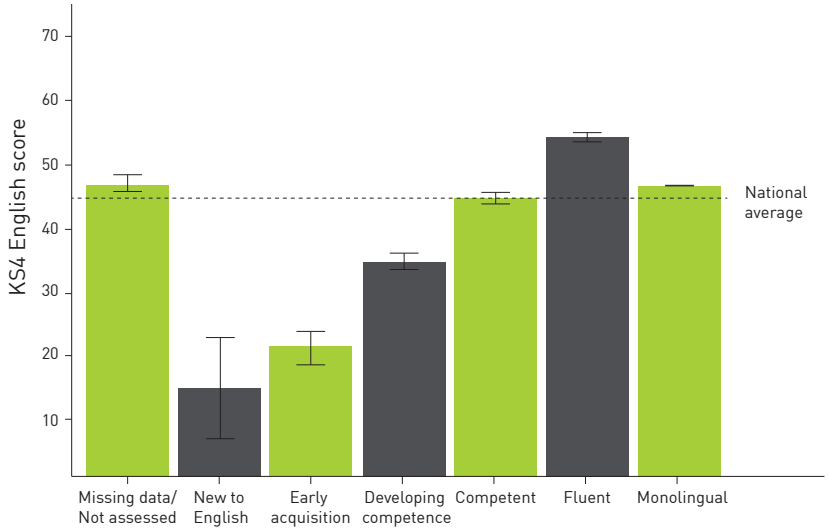
- **In terms of mean grade, the average pupil New to English narrowly scraped a pass at grade 1, while the average EAL pupil Fluent in English achieved nearly a grade 6.**
- **Considering the no-pass threshold, 50% of EAL pupils New to English and over 25% of those at the Early acquisition stage did not achieve a pass in GCSE English, compared to just 1% of Fluent EAL pupils and 4% of monolingual English speakers.**
- **Considering the strong pass threshold, only around 10% of EAL pupils at the first two stages achieved a strong pass, compared to 78% of Fluent pupils and 61% of monolingual English speakers.**

A similar pattern to that described above is also observed for GCSE mathematics. The results are presented in Figure 11.

Conclusion regarding proficiency in English and achievement

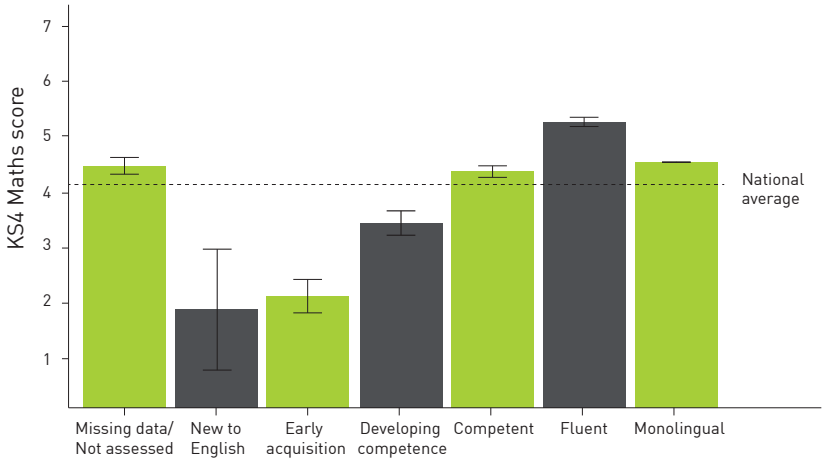
The overall trends come out strongly and consistently across year groups and across subjects. The Proficiency in English Scale reveals substantial variability between groups of EAL pupils, and stronger proficiency in English is linked to greater progress and achievement from early years to GCSEs.

Figure 10: Mean KS4 English scores for EAL pupils at different levels of proficiency in English and for monolingual English speakers



Error bars represent 95% confidence intervals around the mean. National average from DfE (2017).

Figure 11: Mean KS4 Maths scores for EAL pupils at different levels of proficiency in English and for monolingual English speakers



How much of the variation in EAL pupils' attainment can be explained by proficiency in English?

The Proficiency in English Scale reveals a systematic trend within the EAL population, a trend that shows a very strong and positive association between proficiency in English and educational attainment. This indicates that the Proficiency in English Scale is necessary in order to appropriately understand the achievement of pupils with EAL, both in national assessments and for targeted support in schools. We wanted to take this insight further by asking how much of the variation in the educational attainment of EAL pupils could be statistically explained through pupils' proficiency in English.

To answer this question, we ran hierarchical linear regression analyses using SPSS Version 23 (IBM, 2016). We completed six analyses – one for each continuous measure of attainment (Reception total point score, KS2 reading and mathematics scaled scores, GCSE English and mathematics grades and Attainment 8)[6] .

There were three analytic models within each analysis:

Model 1: We entered the Proficiency in English Scale as the only predictor. The R^2 of this model allows us to determine how much of the variance in achievement can be explained by proficiency in English alone.

Model 2: We ran a second model that entered the three other pupil characteristics available to us (gender, eligibility for FSM and ethnic group) as the only predictors. This allowed us to compare proficiency in English against other pupil characteristics as predictors of educational achievement for our EAL pupils.

Model 3: We included all pupil characteristics simultaneously. This allows us to explore if proficiency in English explained unique parts of the variation in attainment not accounted for by the other measures.

[6] We chose not to analyse progress scores given the potential inconsistencies around the coding of missing data (see Appendix 4). We further chose not to analyse the binary KS1 data since modelling them would require a logistic instead of a linear regression, and the model output we are most interested in – R^2 and pseudo R^2 – is not reliably comparable between the two. All six regression models were run on EAL pupils' data only.

Predictors were entered in the following way: proficiency in English ratings were entered as a continuous predictor. Pupil characteristics (gender, eligibility for FSM and ethnicity) were entered as dummy variables with ethnicity as six groups (White British, White Other, Mixed Heritage, Black, Chinese, and Asian) with White British as the reference category. In order to confirm that our model results were reliable, we implemented some model checks: we made sure that no predictors were correlated above r=0.8. We also visually inspected residuals to ensure they were homoscedastic and normally distributed. These checks confirmed that the regressions had no problems of collinearity, and fitted the data well.

Table 15 summarises the variance explained (or the R^2) for the regression models that predict pupil attainment with English proficiency only (Model 1), compared to a model with other pupil characteristics only (Model 2), and then with both proficiency in English and other pupil characteristics simultaneously (Model 3).

Table 15: Overview of variance explained and predictive power of proficiency in English scores compared to other pupil characteristics

Year Group	Outcome	Model 1: PIE alone	Model 2: Gender, FSM & Ethnicity	Model 3: PIE, Gender, FSM & Ethnicity together
		R^2	R^2	R^2
Reception	Total point score	18.1%	3.7%	20.0%
KS2	Reading scaled score	21.7%	2.1%	22.9%
	Maths scaled score	15.5%	3.2%	18.6%
KS4	GCSE English	20.5%	6.4%	25.1%
	GCSE Mathematics	13.2%	2.8%	15.5%
	Attainment 8	19.6%	4.5%	22.9%

The results show that English proficiency can explain up to 22% of the variation in EAL pupils' achievement (Model 1). The variance explained by the proficiency in English is much higher than the typical 3% to 4% that can be statistically explained using three other key pupil characteristics together (Model 2). This indicates that proficiency in English predicts unique variation in pupil achievement. Together, the proficiency in English and other pupil characteristics can explain up to 25% of pupils' achievement (Model 3).

In line with the data reported earlier, proficiency in English is more strongly linked to pupil achievement in English than in mathematics. This indicates a level of discriminant validity for the Proficiency in English Scale. Perhaps not surprisingly, EAL pupils with weaker proficiency in English are more hindered in language-dominant subjects (such as reading and English) than in mathematics, although a sizeable association with mathematics achievement is still observed.

These results underline how important proficiency in English is in understanding the achievement of EAL pupils, explaining between four to six times as much variation in achievement as gender, FSM and ethnicity combined.

Summary and discussion

The project collected data to explore the new scale included in the January 2017 School Census which records EAL pupils' proficiency in English. The project collected data from six LAs including an inner London borough, two outer London boroughs, a West Midlands metropolitan district, a northern city and a southern shire county. Analysis of the data showed that EAL pupils varied widely in terms of their degree of English proficiency. In the context of mainstream schooling in the English language, this is not a trivial observation. Teaching is almost entirely delivered through the medium of English language (be it texts, video or audio materials, or in classroom discussions). A group of pupils who can only access this information to a limited degree is also less likely to perform to their full potential. The first question we thus asked was the following:

Do groups of EAL pupils differ in their proficiency in English?

What mattered most for EAL pupils' degree of English proficiency was not their gender or FSM eligibility, but their age. In the first three years of primary school (Reception and KS1), over half (55%) of all EAL pupils were rated to be of low English proficiency (New to English, Early acquisition, or Developing competence). This was only the case, however, for about 23% of pupils at the end of KS2 and 15% at the end of KS4.

The low levels of fluency in English in the early years suggest that language support would be most warranted in Reception and KS1. Early support would be particularly beneficial since the earlier a pupil catches up with their language skills, the earlier they can access the curriculum. In later years, support may be needed for fewer pupils, but is still warranted, particularly for pupils who are new to the country. If the aspiration of the school system is to provide full access to the (English-language) curriculum to all pupils, language support would still be needed for one in six EAL pupils at KS4 (15% of which are rated less than Competent).

It is important to note here that the decreasing number of EAL pupils with low English proficiency mirrors the decreasing size of the EAL achievement gap at ages 5 to 16 (see Appendix 6). This leads us to our second research question where we ask about a link between the proficiency in English and EAL pupils' attainment.

Is EAL pupils' proficiency in English linked to their educational attainment?

Across all ages and subjects, three points came out very strongly:

- **EAL pupils with different levels of English proficiency vary greatly in their achievement.**
- **EAL pupils' attainment increases linearly with greater English proficiency, indicating a strong link between fluency in English and overall educational achievement.**
- **EAL pupils with strong proficiency in English typically score well above the national average for monolingual English speakers, but those with lower proficiency tended to score below.**

When comparing achievement in different subjects, the link between proficiency in English and achievement was stronger in reading than in mathematics. This was true at all ages and both for achievement and for progress.

It makes sense that in an English-medium education system, a pupil's likelihood to succeed will be strongly influenced by their mastery of the language of instruction. Our results chime with previous research demonstrating a link between English proficiency and EAL pupils' achievement (Demie & Strand, 2006; Strand & Demie, 2005; Whiteside, Gooch, & Norbury, 2016; Demie, 2018). The overlap with previous research indicates that the Proficiency in English Scale is a valuable indicator to understand EAL language proficiency and to predict attainment. To quantify how much value the proficiency in English variable can add to the EAL flag, we raised our third research question:

How much of EAL pupils' attainment can proficiency in English explain?

The results show that pupils' proficiency in English can statistically explain up to 22% of the variability in EAL pupils' achievement, compared to a typical 3%-4% explained by the joint combination of ethnicity, gender and entitlement to FSM. As expected, the relationship between English proficiency and achievement was particularly strong in language-dominant subjects (such as reading and English), although a sizeable effect was also noted in mathematics.

Conclusions

EAL itself is a poor indicator of pupils' likely level of educational achievement – proficiency in English is central to understanding achievement and levels of need among pupils with EAL

EAL researchers and practitioners have for a long time discussed the imprecision of the binary EAL measure in the School Census that masks huge differences in English language skills (Strand & Demie, 2005; Demie & Strand, 2006; Strand et al., 2015; Hutchinson, 2018). The EAL definition groups together a diverse and heterogeneous group of pupils (e.g. those who are recent arrivals to the country with little or no English, and those who have an additional language as part of their cultural heritage but are also fully Fluent in English) all in a single group, irrespective of their actual language skills. In an English-medium education system, a pupil's likelihood to succeed will be strongly influenced by their mastery of the language of instruction. Our results demonstrate conclusively that EAL is a poor indicator of pupils' likely level of educational achievement. The results confirm that the Proficiency in English Scale is a vital indicator of EAL pupil's language proficiency and the best predictor of their educational attainment.

English language support is most needed in the early years and KS1, but there is a need for support at all ages

The low levels of fluency in English in the early years suggest that language support is most warranted in Reception and KS1. Early support would be particularly beneficial since the earlier the pupil gains fluency in the language of instruction, the earlier they can access the curriculum. In later years, support may be needed for fewer pupils, but is still warranted, particularly for pupils who are new to the country. If the aspiration of the school system is to provide full access to the (English language) curriculum to all pupils, language support would still be needed for one in six EAL pupils at KS4, where 15% were judged less than Competent in regard to their proficiency.

Bilingualism can have positive associations with achievement

It is important to recognise that being bilingual is not a barrier to learning. It is possible to succeed in the English school system while reaping the benefits of growing up with more than one language. Indeed, we see that pupils with EAL who are rated as Competent or Fluent in English typically have significantly higher educational achievement than their monolingual peers. What can be a barrier to learning is low proficiency in the language of instruction. Pupils need to be supported adequately so that all children can acquire the proficiency in English they need to develop to their full potential.

The Proficiency in English Scale should be retained in the School Census and the data should be available in the NPD

It was very welcome that following the publication of the report by Strand et al. (2015), the Government recognised the need for the assessment of learners with EAL and responded by introducing the Proficiency in English Scale in 2016. This brought England into line with best practice in Wales and Scotland both of which have been collecting data on pupil's proficiency

in English for many years. However, the DfE has recently announced it will no longer require schools to complete the Proficiency in English Scale from January 2019. This is a retrograde step and potentially a damaging one. We strongly urge the DfE to consult with schools and reconsider this decision. The data that has been collected should also be released in the National Pupil Database (NPD), so that further research can be conducted.

The DfE should provide schools with guidance on best practice

The DfE should provide guidance on best practice in EAL assessment to schools, to LAs, and to Multi-Academy Trusts which draws on what has been learnt from the introduction of the scale. It would be valuable if this included reference to the EAL Assessment Framework developed by The Bell Foundation (2017) and considered issues around expertise, training and moderation. We urge schools to continue to record the proficiency in English of their EAL pupils and to use the data to identify need and target support.

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Appendix 1: DfE Proficiency in English Scale

Proficiency in English

Where 'Proficiency in English' is required, schools will assess the position of their EAL pupils against a five-point scale of reading, writing and spoken language proficiency (see below) and make a 'best fit' judgement as to the proficiency stage that a pupil corresponds most closely to:

- **New to English [Code 'A']:** May use first language for learning and other purposes. May remain completely silent in the classroom. May be copying / repeating some words or phrases. May understand some everyday expressions in English but may have minimal or no literacy in English. Needs a considerable amount of EAL support.

- **Early acquisition [Code 'B']:** May follow day-to-day social communication in English and participate in learning activities with support. Beginning to use spoken English for social purposes. May understand simple instructions and can follow narrative / accounts with visual support. May have developed some skills in reading and writing. May have become familiar with some subject specific vocabulary. Still needs a significant amount of EAL support to access the curriculum.

- **Developing competence [Code 'C']:** May participate in learning activities with increasing independence. Able to express self orally in English, but structural inaccuracies are still apparent. Literacy will require ongoing support, particularly for understanding text and writing. May be able to follow abstract concepts and more complex written English. Requires ongoing EAL support to access the curriculum fully.

- **Competent [Code 'D']:** Oral English will be developing well, enabling successful engagement in activities across the curriculum. Can read and understand a wide variety of texts. Written English may lack complexity and contain occasional evidence of errors in structure. Needs some support to access subtle nuances of meaning, to refine English usage, and to develop abstract vocabulary. Needs some/occasional EAL support to access complex curriculum material and tasks.

- **Fluent [Code 'E']:** Can operate across the curriculum to a level of competence equivalent to that of a pupil who uses English as his/her first language. Operates without EAL support across the curriculum.

Alongside the scale outlined above, **Not Yet Assessed [Code 'N']** is available for use where the school has not yet had time to assess proficiency.

Please see section 5.3.3 of the School Census guide for further information.

Appendix 2: Proficiency in English LA Data Project – Information Pack

Introduction

A recent analysis of the association between English as an Additional Language (EAL) and educational achievement concluded that the EAL measure in the National Pupil Database (NPD) was inadequate as it did not assess the key factor that influenced pupils' educational achievement, namely their proficiency in the English language (Strand et al., 2015). As a result of the research the Department for Education (DfE) announced that all schools in England would be required to assess any pupils in Y1 or above recorded as EAL for their proficiency in English. Following an initial collection during the autumn 2016 School Census, information on the proficiency in English of pupils with EAL moved to an annual collection from the spring 2017 School Census onwards.

However, despite introducing the Proficiency in English Scale, the DfE has decided not to include the data in the NPD. There is therefore no access to the national data for research purposes. Furthermore, apart from a single table of the total number of pupils aged 5-16 at each stage (DfE, 2017, p7) the DfE has provided no analysis of the data.

The proposed research project

Because of the above decision, we are not able to use the NPD to answer some important questions about the Proficiency in English Scale, questions such as:

- **What is the relationship between proficiency in English and pupil characteristics such as their age, ethnic group, first language, gender, entitlement to Free School Meals (FSM)?**
- **What is the relationship between proficiency in English and educational achievement? How does it vary at age 5, 7, 11 and 16? How do patterns vary in relation to English and mathematics achievement?**

Some Local Authorities (LA) have completed analyses of their own data, for example, Lambeth (Demie, 2018). However, there would be value in having an analysis based on a larger and more representative sample of LAs, including inner London, outer London, and other parts of the country. I am therefore seeking a number of LAs who would be willing to share their proficiency in English and linked achievement data.

What are we asking from participating LAs?

We are seeking pupil level data matching the January 2017 School Census record to the pupil's summer 2017 national assessment results. Specifically, we are seeking the data for four cohorts of pupils, those who in the 2016/17 academic year were in:

- **Reception – Early Years Foundation Stage Profile**
- **Y2 – End of Key Stage 1 assessments**
- **Y6 – End of Key Stage 2 tests**
- **Y11 – GCSE public examinations.**

We are seeking data for all pupils, not just those who are EAL, so we can compare Competent and Fluent EAL pupils with their monolingual English peers. The exact data we are requesting is shown in Appendix 1.

I have secured the resource to employ a Research Assistant for three months April-June to help in collating and analysing the data, so this should not take an excessive amount of your time.

Confidentiality and Data Security

We will need to name the LAs that contribute data to the project so that readers of the report can gauge how representative the sample is. However, no LA will be named in analyses which will all be anonymous. Also no schools or pupils will be named in any analyses. Pupil names or UPNs will not be collected from participating LAs. We will share the report with all LAs involved in the project before it is released.

All data analysis will be compliant with the Oxford University Information Security Policy. Our IT Systems are secure and the security policy is aligned with ISO 27002. All data are hosted on a secure server requiring two levels of password authentication. The department has a SonicWall NSA 220 firewall, maintained by our IT Department. The data will only be accessed by myself and the Research Assistant, and we both have current DBS clearance.

The attached Information Sharing Agreement outlines how we meet the conditions of the Data Protection Act and how we will process the data you supply. If you wish to join the project, please sign and return the agreement.

Conclusion

I very much hope you will be able to contribute to this project. If you have any questions at all, please do not hesitate to contact me using the contact details below. I very much look forward to hearing from you.

Professor Steve Strand
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University of Oxford
Department of Education
15 Norham Gardens, Oxford OX2 6PY
Tel: (01865) 611071
Email: steve.strand@education.ox.ac.uk
Webpage: www.education.ox.ac.uk/about-us/directory/professor-steve-strand/

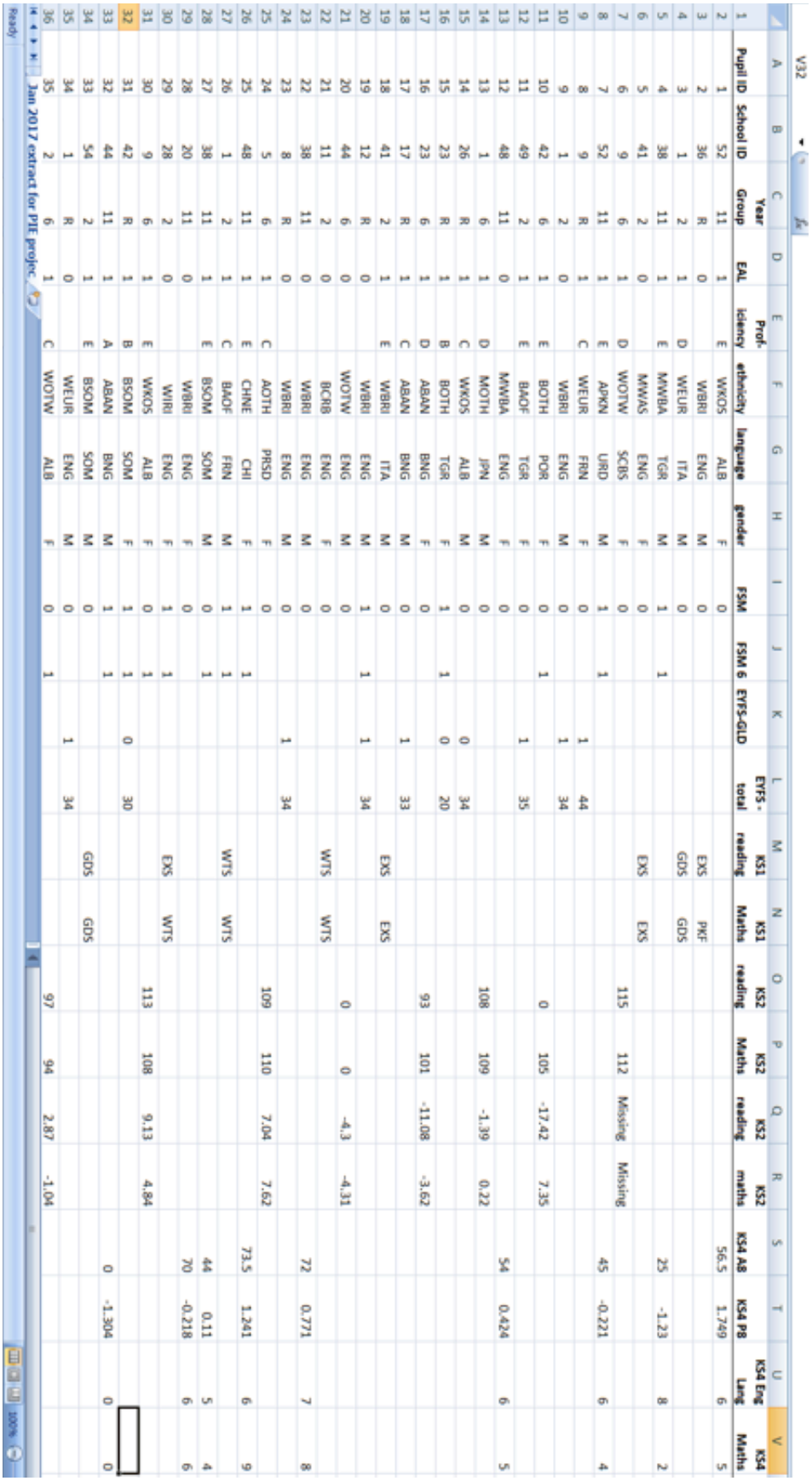
NB Even if you are not able to participate in the project, if you have completed any analysis of your proficiency in English data, I would be very grateful if you could email or post me a copy to the address above.

Data Specification – Pupil Level Data

Core fields School Census January 2017	
Pupil ID	Any number from 1 to x
School ID	LAESTAB (7 digit) or URN (6 digit) or any number you want as long as unique for each school in LA
EAL	0= ENG/ENB=English or believed to be; 1= OTH/OTB= other than English or believed to be.
Proficiency in English	A-E; N=Not assessed; 0=English
Ethnic group	DfE 18 categories
First Language	DfE three letter codes
Gender	M=Male; F=Female
Entitled to a Free School Meal	0=No; 1=Yes
Ever entitled FSM last 6 years	0=No; 1=Yes
Reception Summer 2017	
Good Level of Development	0=No; 1=Yes
EYFSP Total Points Score	17-51
Key Stage 1 Summer 2017	
KS1 reading TA	0= Below, Pre Key Stage or Working towards expectation; 1= Expected Standard; 2= Working Beyond. A=Absent; D=Disapplied.
KS1 mathematics TA	0= Below, Pre Key Stage or Working towards expectation; 1= Expected Standard; 2= Working Beyond. A=Absent, D=Disapplied.
Key Stage 2 Summer 2017	
KS2 scaled score for reading	80-120 (N= Not enough marks or below the level of the test; A=Absent)
KS2 scaled score for mathematics	80-120 (N= Not enough marks or below the level of the test; A=Absent)
KS2 reading progress score KS2 mathematics progress score	Centred around 0 which indicates progress in line with national expectations, based on prior KS1
Key Stage 4 Summer 2017	
KS4 Attainment 8	0-90 (mean = 46.3)
KS4 Progress 8	Mean = 0 (for state funded schools only)
KS4 English Language GCSE grade	1-9
KS4 English Literature GCSE grade	1-9
KS4 Maths GCSE grade	1-9

NB please supply results for all pupils, not just those who are EAL, so we can compare 'Competent' and 'Fluent' EAL pupils with their monolingual English peers.

Example of an EXCEL spreadsheet with the required data



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1	Pupil ID	School ID	Year Group	EAL	Prof-iciency	ethnicity	language	gender	FSM	FSM 6	EYFS-GLD	EYFS - total	KS1 reading	KS1 Maths	KS2 reading	KS2 Maths	KS2 reading	KS2 maths	KS4 A8	KS4 PB	KS4 Eng Lang	KS4 Maths
2	1	52	11	1	E	WKOS	ALB	F	0										56.5	1.749	6	5
3	2	36	R	0		WBRI	ENG	M	0				EXS	PKF								
4	3	1	2	1	D	WEUR	ITA	M	0				GDS	GDS								
5	4	38	11	1	E	MWBA	TGR	M	1	1									25	-1.23	8	2
6	5	41	2	0		MWAS	ENG	F	0				EXS	EXS								
7	6	9	6	1	D	WOTW	SCBS	F	0						115	112	Missing	Missing				
8	7	52	11	1	E	APKN	URD	M	1	1									45	-0.221	6	4
9	8	9	R	1	C	WEUR	FRN	F	0		1	44										
10	9	1	2	0		WBRI	ENG	M	0		1	34										
11	10	42	6	1	E	BOTH	POR	F	0	1					0	105	-17.42	7.35				
12	11	49	2	1	E	BAOF	TGR	F	0		1	35							54	0.424	6	5
13	12	48	11	0		MWBA	ENG	F	0						108	109	-1.39	0.22				
14	13	1	6	1	D	MOTH	JPN	M	0													
15	14	26	R	1	C	WKOS	ALB	M	0		0	34										
16	15	23	R	1	B	BOTH	TGR	F	1	1	0	20			93	101	-11.08	-3.62				
17	16	23	6	1	D	ABAN	BNG	F	0													
18	17	17	R	1	C	ABAN	BNG	M	0		1	33										
19	18	41	2	1	E	WBRI	ITA	M	0				EXS	EXS								
20	19	12	R	0		WBRI	ENG	M	1	1	1	34										
21	20	44	6	0		WOTW	ENG	M	0						0	0	-4.3	-4.31				
22	21	11	2	0		BCRB	ENG	F	0				WTS	WTS								
23	22	38	11	0		WBRI	ENG	M	0										72	0.771	7	8
24	23	8	R	0		WBRI	ENG	M	0		1	34										
25	24	5	6	1	C	AOTH	PRSD	F	0						109	110	7.04	7.62				
26	25	48	11	1	E	CHNE	CHI	F	1	1									73.5	1.241	6	9
27	26	1	2	1	C	BAOF	FRN	M	1	1			WTS	WTS								
28	27	38	11	1	E	BSOM	SOM	M	0	1									44	0.11	5	4
29	28	20	11	0		WBRI	ENG	F	0										70	-0.218	6	6
30	29	28	2	0		WIRI	ENG	F	1	1			EXS	WTS								
31	30	9	6	1	E	WKOS	ALB	F	0	1					113	108	9.13	4.84				
32	31	42	R	1	B	BSOM	SOM	F	1	1	0	30										
33	32	44	11	1	A	ABAN	BNG	M	1	1									0	-1.304	0	0
34	33	54	2	1	E	BSOM	SOM	M	0				GDS	GDS								
35	34	1	R	0		WEUR	ENG	M	0		1	34										
36	35	2	6	1	C	WOTW	ALB	F	0	1					97	94	2.87	-1.04				

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Appendix 3: Variable description

LA
Local Authority that the data was received from numeric value (1-6).

School
Unique number for each school in dataset. Missing values coded as missing (-99).

Ethnic18 / Ethnic4
Coded as nominal categories for the DfE minor ethnicity codes (18 categories) or major ethnicity codes (4 main categories), with one category summarising unclassified cases.

Gender
Coded as binary nominal, 1= female, 2= male. Missing values coded (-99).

Year
Pupil's year group. Reception, KS1, KS2, and KS4 coded as numeric values (1-4) with value labels. Missing values coded as (-99).

Language_cats
Pupil's first language. Coded as categorical variable with 254 languages from NPD codes (including "No information", "Other Language or Classification Pending", and "Other than English (or believed to be)").

FSM/ EVER6
Pupil's entitlement to Free School Meals (FSM) current and whether ever entitled over last six years. Nominal variable (1= No and 2= Yes). Missing values coded (-99).

Proficiency in English (PIE)
EAL pupil's proficiency in English as rated by teachers on scale of A to E (continuous). For all monolingual pupils, and when a proficiency in English score for an EAL pupil was missing, coded as (-99) = Missing data/ not assessed.

Rec_Point
Pupil's total points score at the end of Reception. Continuous scale from 17-51, absences coded as missing with value label (-99).

Rec_GLD
If a pupil reached a good level of development at the end of Reception. Coded as categorical numerical variable with value labels (1= Pass, 0= Fail). Missing values coded as (-99).

KS1_Read_Point & KS1_Math_Point
Pupil's teacher assessed level in reading and maths at the end of KS1. Coded as numerical ordinal, with the following codes: 0= Below, Pre Key Stage or Working towards expectation; 1= Expected standard; 2= Working at greater depths. Both absent and disapplied treated as missing data, but with separate value label (-555 'Absent' -444 'Disapplied'). Missing values coded as missing (-99).

KS2_Read_Point & KS2_Math_Point
Pupil's scaled scores in reading and maths at the end of KS2.
Coded as continuous scale score from 79-120:

80-120 are the original values.
79 for those cases coded as N/B = "Not enough marks or below the level of the test".
Absent coded as "A= Absent" (-555).
Missing values coded as missing (-99).

KS2_Read_Progress & KS2_Math_Progress
The pupil's KS2 scaled score expressed in relation to the average scaled score achieved by pupils with the same KS1 average points score. Centred on 0 which indicates the average/typical progress.
Coded as continuous scale score. Missing values for cases coded as missing (-99).

KS4_Att8
Pupil's score across eight qualifications[7] at the end of KS4. Continuous scale from 0 to 90. Scores <0 or >90: coded as missing values with value label "Invalid cases" (-222).
Missing values coded as missing values (-99).

KS4_Prog8
Pupil's progress from KS2 to KS4 as calculated by DfE (value-added scores centred on 0 which indicates expected progress). Missing values coded as missing (-99).

KS4_EngLang, KS4_EngLit, KS4_Math
Pupil's grades in GCSE English Language, GCSE English Literature and GCSE Mathematics at the end of Year 11. Continuous scale range 1-9. 0= Ungraded or did not sit the exam. Missing values coded as 0.

KS4_Eng
Highest score out of KS4_EngLang and KS4_EngLit.

[7] These eight qualifications including mathematics (double weighted) and English (double weighted), three further qualifications that count in the English Baccalaureate (EBacc) and three further qualifications that can be GCSE qualifications (including EBacc subjects) or technical awards from the DfE approved list.

Appendix 4: Missing data treatment

KS2 scaled scores

We checked for a systematic relationship between pupils' EAL status and English proficiency and their likelihood of having a valid KS2 test score. For this analysis, missing test scores include pupils coded as absent, performing below the level of the test, or simply missing a test score. We found that EAL pupils were slightly overrepresented among those with missing KS2 test scores, particularly for reading (accounting for 25% of the pupils in the sample but 31% of those with missing KS2 scores, see table below). Furthermore, within those EAL pupils, pupils with lower English proficiency were strongly overrepresented, constituting <5% of the pupil sample but around one third of those with missing KS2 scores. Thus, there is a raised incidence of having a missing KS2 test score among those with low English proficiency. This means that when thinking about the relationship between English proficiency and pupil attainment, part of the story is hidden in the missing scores. For this reason, it is important to recode N (not enough marks to be awarded a scale score) to a value in the valid range, here 79.

Table A4.1: Investigation of invalid KS2 test scores by EAL status and English proficiency

	N	% EAL	% of EAL with low English Proficiency[a]
Missing KS2 reading score	1,110	31.4	35.7
Missing KS2 maths score	1,002	28.0	32.4
All KS2 pupils	33,984	24.8	4.6

(a) Pupils rated as 'New to English' and 'Early in Acquisition' as a proportion of all EAL pupils with missing scores.

Progress 8

The breakdown by LAs showed that for the Progress 8 scores, LA5 and LA6 had no missing values for Progress 8, and LA1 had only one missing value. It is probable that these authorities allocated something other than a missing value to pupils without prior achievement data. It seems likely that in these three LAs, all recent arrivals were allocated the value zero. This is supported by the fact that all Progress 8 scores with the exact value of 0 come from LA 1, 5, or 6, and that EAL pupils are over-represented in the zero values of Progress 8 scores (74.2% pupils with a zero value for Progress 8 are EAL pupils, although EAL pupils represent only 20.5% of pupils in the KS4 sample). This suggests that Progress 8 scores need to be discussed with caution, particularly for EAL pupils.

Appendix 5: Proficiency in English distribution by Local Authority and year group

Table A5.1: Distribution of Proficiency in English (PIE) across years for LA1

Year	N	Missing / NA	New to English	Early acquisition	Developing competence	Competent	Fluent
Reception	10,199	3.2	15.9	27.4	27.3	17.3	12.1
KS1	10,435	0.7	4.8	14.2	29.7	28.8	22.5
KS2	8,439	2.6	1.0	3.6	18.6	34.0	42.7
KS4	6,001	0.1	0.5	3.1	11.7	28.2	56.5

Missing data are percentages of all EAL pupils, PIE levels are percentages of valid cases.

Table A5.2: Distribution of Proficiency in English (PIE) across years for LA2

Year	N	Missing / NA	New to English	Early acquisition	Developing competence	Competent	Fluent
Reception	1,180	9.3	9.2	22.6	30.5	16.7	21.0
KS1	1,118	6	2.5	5.3	21.7	30.7	39.8
KS2	816	7	1.6	1.7	11.3	26.0	59.4
KS4	632	50.2	0.3	3.2	10.8	23.5	62.2

Missing data are percentages of all EAL pupils, PIE levels are percentages of valid cases.

Table A5.3: Distribution of Proficiency in English (PIE) across years for LA3

Year	N	Missing / NA	New to English	Early acquisition	Developing competence	Competent	Fluent
Reception	2,241	5.2	11.2	21.6	29.9	22.4	15.0
KS1	2,210	4.2	4.0	13.6	32.2	31.3	19.0
KS2	1,784	3.9	0.2	2.0	17.1	40.1	40.6
KS4	1,352	23.2	0.2	1.7	5.2	16.6	76.3

Missing data are percentages of all EAL pupils, PIE levels are percentages of valid cases.

Table A5.4: Distribution of Proficiency in English (PIE) across years for LA4

Year	N	Missing / NA	New to English	Early acquisition	Developing competence	Competent	Fluent
Reception	2,824	5.9	14.1	33.1	28.7	14.6	9.5
KS1	3,022	2.8	3.8	11.0	31.7	31.3	22.1
KS2	2,488	0.6	0.3	3.5	18.2	32.4	45.5
KS4	1,644	3.0	0.5	2.9	16.2	35.9	44.5

Missing data are percentages of all EAL pupils, PIE levels are percentages of valid cases.

Table A5.5: Distribution of Proficiency in English (PIE) across years for LA5

Year	N	Missing / NA	New to English	Early acquisition	Developing competence	Competent	Fluent
Reception	979	41.9	12.5	29.2	32.7	15.6	10.0
KS1	979	43.1	4.8	17.8	27.6	24.2	25.5
KS2	899	33.4	4.7	7.3	20.7	24.9	42.4
KS4	609	69.0	2.6	14.3	32.3	32.8	18.0

Missing data are percentages of all EAL pupils, PIE levels are percentages of valid cases.

Table A5.6: Distribution of Proficiency in English (PIE) across years for LA6

Year	N	Missing / NA	New to English	Early acquisition	Developing competence	Competent	Fluent
Reception	2,138	16.7	31.9	30.5	18.5	12.4	6.7
KS1	2,152	8.0	9.2	26.2	31.4	21.1	12.2
KS2	1,540	8.1	2.0	6.7	27.8	37.0	26.5
KS4	1,086	19.2	0.7	4.7	13.1	32.5	49.0

Missing data are percentages of all EAL pupils, PIE levels are percentages of valid cases.

Appendix 6: EAL gaps based on the full national dataset: revisiting Strand et al. (2015) using 2017 data

A previous analysis of the 2013 School Census established that EAL pupils overall achieve lower than their monolingual peers, particularly in English and in the early years, but also that different groups of EAL pupils vary widely in their achievement (Strand et al., 2015). Since then, new tests have been introduced at KS2 and new grading systems at KS4. The following analyses explore whether the differences between EAL and monolingual pupils reported for the 2013 data hold true when looking at the new national achievement measures in 2017.

Table A6.1 compares the attainment of EAL and monolingual English pupils in national assessments at the end of Reception, KS1, KS2 and KS4 based on threshold measures of success, such as achieving a Good Level of Development (GLD) at age 5 or achieving the EBacc at age 16. The percentage of monolingual and EAL pupils achieving the relevant threshold are given, then the two are compared using the Odds Ratio. This lets us compare the differences in a standard format at different ages and across different measures.

Table A6.2 reports comparisons for continuous measures where they are available, such as EYFSP total points score at age 5 or Attainment 8 score at age 16. The table reports the means score for monolingual and for EAL pupils, and then compares the two using Cohen's D. Cohen's D divides the difference in mean scores between the two groups by the pooled SD. Again, as with the OR, this lets us compare the differences in a standard format at different ages and across different measures.

Table A6.1: Proportion of EAL and monolingual pupils achieving key thresholds by age and assessment domain in 2013 and 2017

Age	Stage	Census year	Domain	Measure	% Monolingual	% EAL	Odds ratio
5	Reception [a]	2017	Literacy	At least expected	77	70	0.68
			Numeracy	At least expected	83	74	0.60
			Overall	GLD	73	65	0.69
		2013	Literacy	At least expected	73	63	0.63
			Numeracy	At least expected	71	62	0.67
			Overall	GLD	54	44	0.67
7	KS1[b]	2017	Reading	Expected	77	72	0.77
			Maths	Expected	76	74	0.90
			Science	Expected	84	78	0.68
			Phonics	Expected	82	81	0.94
		2013	Reading	2A+	57	48	0.70
			Maths	2A+	53	46	0.76
			Overall	Average Re+ Ma	81.5	70	0.53
11	KS2[c]	2017	Reading	Expected	73	65	0.69
			Writing	Expected	77	75	0.90
			Maths	Expected	75	76	1.06
			SPAG	Expected	77	78	1.06
			Overall	Expected	62	58	0.85
		2013	Reading	4B+	76	68	0.67
			Maths	4B+	74	72	0.90
			Overall	4B+ in RWM	64	59	0.81
16	KS4[d]	2017	English	GCSE 9-4 pass	68	66	0.89
				GCSE 9-5 pass	52	49	0.89
			Maths	GCSE 9-4 pass	69	68	0.95
				GCSE 9-5 pass	48	49	1.04
			EBacc	GCSE 9-4 passes	23	28	1.30
				9-5 in En & Ma, 9-4 other subjects	21	24	1.19
		2013	English	GCSE Grade C+	68.8	64.6	0.83
			Maths	GCSE Grade C+	71.2	71.8	1.03
			EBacc	Achieved	22.5	24.4	1.11

a Source: SFR60-2017 Additional Tables (Table 3) & SFR60-2017 (Table 1). Literacy computed as mean scores in Reading and Writing and Numeracy as mean of Shapes and Numbers.
b Source: SFR49-2017 (KS1 National Tables, Table 15).
c Source: SFR69-2017 (National Table, Table 8a).
d Source: SFR01-2018 (National Characteristics Table, Table CH1).

Table A6.2: Performance of EAL and monolingual English pupils on continuous achievement measures across year groups and subjects in 2017

		Monolingual			EAL			Cohen's D
Year	Measure	M	SD	N	M	SD	N	
R	Overall point score	34.9	7.4	523,368	32.8	7.8	132,003	-0.29
KS2	Reading scaled score	104.5	8.3	463,603	102.7	8.5	112,437	-0.22
	Maths scaled score	104.0	7.4	464,699	104.9	7.6	113,622	0.12
KS4	English grade	4.8	1.8	428,475	4.6	1.8	79,850	-0.07
	Maths grade	4.7	2.0	427,047	4.8	2.1	82,563	0.05
	Attainment 8 score	45.7	19.8	449,091	46.5	20.4	84,312	0.04

a Source: 2017 census in National Pupil Database.

In general, the 2017 data shows the same differences between EAL and monolingual English pupils as in 2013. However the EAL gaps for mathematics have decreased substantially and are no longer seen at KS1 or KS2.

We would like to discuss three noteworthy points: attainment differences across years, the special role of English and reading, and finally, a comparison of KS2 and KS4 scores in the 2017 and the 2013 data.

Attainment differences are larger in earlier than in later school years

In line with results from analyses of EAL pupils' attainment in 2013 (Strand et al., 2015), the attainment gap is larger in earlier than in later years of schooling.

- **At Reception, only 65% of all EAL pupils achieved a GLD compared to 73% of monolingual English pupils. Expressed as an Odds Ratio, the odds of achieving a GLD are 0.69 (or 31%) lower for EAL compared to monolingual pupils. This means that after one year of full-time education at an English school, pupils who speak another language at home achieve lower than their monolingual peers.**
- **At the end of KS1, a gap is still noticeable in reading and science (OR= 0.77 and 0.68 respectively). However for writing, mathematics and phonics, EAL pupils do not differ from monolingual pupils in their odds of reaching the expected standard. Compared to the Reception stage, the differences between EAL and monolingual pupils are less wide, and more restricted to specific subjects.**
- **At the end of KS2, the gap is specific to reading (OR= 0.69, Cohen's D= -0.22). The writing gap is negligible and EAL pupils on average are outperforming monolingual English pupils in mathematics and the grammar & punctuation test (both OR=1.06).**
- **At the end of KS4, even for English the gap is now extremely small at just 2% points in terms of a GCSE grade 5-9 pass (OR= 0.90), EAL pupils perform either equal to or higher than their monolingual peers. EAL pupils have a 1.30 higher odds than monolinguals to pass the EBacc in the 4-9 range. The gap is less prominent (1.19) with a cut-off at 9-5, but with either cut-off, EAL pupils are more likely to pass than monolinguals. The advantage of EAL pupils on the EBacc is, however, not mirrored in the Attainment 8 score, where both groups have essentially equal average scores.**

In summary, EAL pupils perform noticeably lower than their monolingual peers at the end of the first year at school. Also at age 7 and 11, there is still a gap in reading particularly. At age 16, however, EAL pupils are on par with monolinguals, and even outperformed them on the EBacc. The fact that the 2017 data replicates this finding from 2013 supports the robustness of the earlier findings and suggests that they are largely applicable to current pupil achievement.

The special role of English / reading

Reading takes a special role in EAL learners' attainment. At the Reception year, EAL learners perform lower both on literacy and numeracy, but from KS2 onwards, the difference remains only for English or reading, and not for mathematics. This finding is in line with an array of national and international research that documents lower reading skills for minority language learners (see, for example, Marx & Stanat, 2011; Strand et al., 2015). Reading comprehension is a complex process and generally where gaps between the language skills of monolingual and EAL learners show most acutely (Spencer & Wagner, 2016). It is plausible that those gaps would also show up in a national assessment of reading.

This is not to say, however, that weaker language skills will only affect subjects that directly deal with language skills. For example, there is a considerable gap between EAL and monolingual pupils in science at KS1 which indicates attainment differences beyond reading. It is also highlighted in this report that averages for all EAL pupils cannot be generalised, as we know that pupils at the first three stages of proficiency in English do have significantly lower achievement in mathematics at KS2 and KS4 compared to the national average.

New compared to old measures in KS2 and KS4

Between the 2013 and the 2017 census, the grading systems for KS2 and KS4 scores changed. However, as the results show, the same trends persist with the new measures: while there is still a noticeable gap between monolinguals and EAL pupils at the end of KS2 (particularly in reading), the gap largely closes at KS4. EAL pupils are even slightly more likely to achieve an EBacc which is likely to be due to EAL pupils' strong performance in Modern Foreign Languages (Strand et al., 2015).

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