

Executive Summary

Aims and Background

The Education Endowment Foundation (EEF), Unbound Philanthropy and The Bell Foundation commissioned this research to address two main questions:

- Who are the most at-risk groups of learners with English as an Additional Language (EAL) and what are the predictors of low attainment for these learners?
- What are the most promising programmes and interventions to address EAL achievement gaps on the basis of causal evidence?

These questions were addressed by researchers from the Oxford University Department of Education in two detailed reports. The first report presents an in-depth statistical analysis of the most recent England National Pupil Database (NPD) from 2013, focussing in particular on analysis of KS2 and KS4 results. The second report undertakes a systematic review of effective interventions to raise the attainment of pupils with EAL.

This summary focusses on the key findings from the research. It does not include all of the detail on methodology and statistical analysis for which readers are referred to the underlying reports which can be accessed from www.educationendowmentfoundation.org.uk. A full reference is included at the end of this document. The overall purpose of the project is to help schools and policy-makers to target policy, interventions and funding effectively to address achievement gaps.

Key findings

1. In the 2013 school census just over 1 million pupils in England are classified as having English as an Additional Language (EAL). The percentage of pupils who were recorded as EAL has more than doubled from 7.6% in 1997 to 16.2% in 2013.
2. Pupils recorded with EAL are very unevenly distributed across the country and across schools. At one extreme, almost one-quarter (22%) of schools have less than 1% EAL pupils and over half (54%) have less than 5% EAL pupils; while at the other extreme in 1,681 (8.4%) of schools, pupils with EAL represent a majority (>50%) of the school population. While London has the highest proportion of EAL students (56%), almost half of the schools with a majority of EAL pupils are located outside of London. In identifying and targeting EAL support it is therefore important to consider the data at school level not just Local Authority or regional level.
3. At the end of Reception Year (age 5) only 44% of pupils recorded as having EAL achieve a good level of development (GLD), compared to 54% of pupils recorded as First Language English (FLE)¹. Thus the odds of achieving a GLD are 0.67 (or 33%) lower for EAL children compared to FLE pupils. Perhaps not surprisingly, at the end of their first year of full-time education children from homes where they may have had less exposure to English achieve, on average, lower results.
4. The association between EAL and achievement decreases markedly in magnitude at later ages. Considering the summary measures of achievement at each age, the Odds Ratio (OR) at age 5 as described above is 0.67, at age 7 it is 0.73, at age 11 it is 0.81 and by age 16 while there is still a small gap (58.3% of EAL students achieving 5+A*-C EM compared to 60.9% of FLE students) the OR is just 0.90. There is no EAL gap at all on the broader measure of Best 8 points score and

¹ The terms First Language English (FLE) and non-EAL are used synonymously throughout these reports to refer to pupils whose first language is recorded in the National Pupil Database as English.

students recorded as EAL are more likely to achieve the EBacc (OR=1.11) and to achieve a GCSE A*-C in a Modern Foreign Language (OR=1.90) than FLE pupils.

5. The achievement of pupils with EAL varies widely. Many of the factors associated with risk of low achievement are the same for EAL as for FLE pupils, e.g. having an identified Special Educational Need (SEN) and the intensity of the SEN, being entitled to a Free School Meal (FSM), living in an economically deprived neighbourhood, being young for the year group and being male. However other factors represent particularly large risks among the EAL group including: Entry to England from abroad during the key stage (as proxied by the absence of a prior attainment score), changing school in the last two years of a key stage, Black African or White Other ethnicity, and some specific first languages within these two ethnic groups (e.g. among White Other Groups particularly low scores were noted for students with Romanian, Lithuanian, Turkish, Portuguese and Polish recorded as their home language). These differences by first language remain after taking account of socio-economic variables.
6. The percentage of EAL pupils in a school has no substantial association with pupil attainment or progress when pupil background and school composition are taken into account. There is no evidence that a high proportion of EAL students impacts negatively on the attainment and progress of FLE pupils. Some schools do appear to have a larger EAL gap than others, but we cannot exclude the possibility that this reflects differences in factors such fluency/proficiency in English language among different groups of EAL students.
7. The definition of EAL used in the NPD reflects exposure to a language other than English at home or in the community, *it gives no indication of a pupils' proficiency in the English language*. On the one hand, those recorded as EAL include second or third generation ethnic minority pupils who may be exposed to a language other than English as part of their cultural heritage, but may use English as their everyday language and be quite fluent in it. At the other extreme it includes new migrants arriving in England who may speak little or no English at all, and may have varying levels of literacy in their previous country of origin.
8. A systematic review of effective interventions for EAL pupils identified 29 studies that demonstrated an impact. 27 of the studies were conducted in the United States; only one was conducted in the UK. This highlights the need to increase the evidence base of effective interventions for EAL pupils in the UK at risk of low attainment.

Introduction

Definition of EAL and trends over time

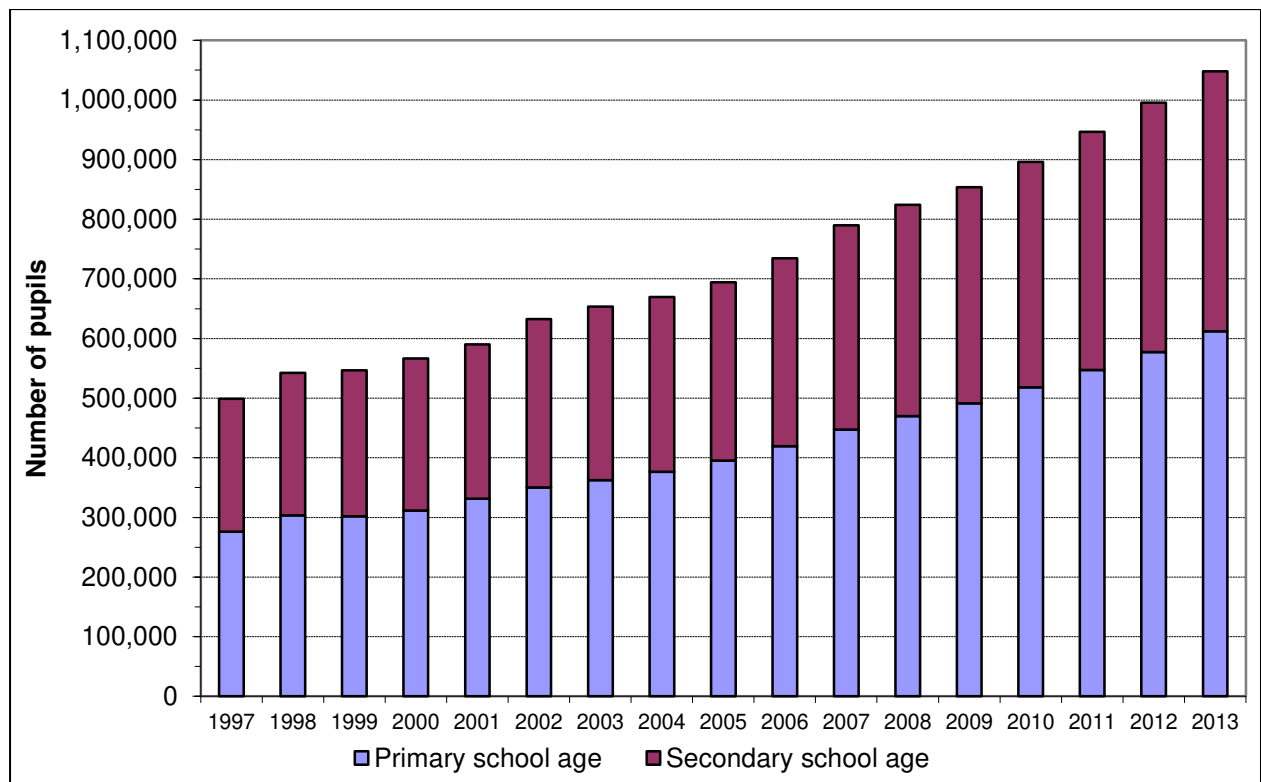
The School Census asks schools to record a pupil's 'first language' as follows:

“A first language other than English should be recorded where a child was exposed to the language during early development and continues to be exposed to this language in the home or in the community. If a child was exposed to more than one language (which may include English) during early development the language other than English should be recorded, irrespective of the child's proficiency in English.”

This data is coded to identify students whose First Language is English (FLE) and those who have English as an Additional Language (EAL). This variable needs to be interpreted with some caution as it is not a measure of the pupil's fluency in English: pupils recorded as EAL may speak no English at all or they may be fully fluent in English.

This data has been collected for many years. Figure 1 presents the number and proportion of pupils recorded with a first language other than English (EAL) for primary schools, secondary schools and all pupils age 5–16 over the last 17 years. There has been considerable increase both in the numbers and in the proportion of young people recorded as EAL. The proportion has increased from 7.6% of all pupils in 1997 to 16.2% in 2013. In total over a million pupils are now recorded in the National Pupil Database as EAL.

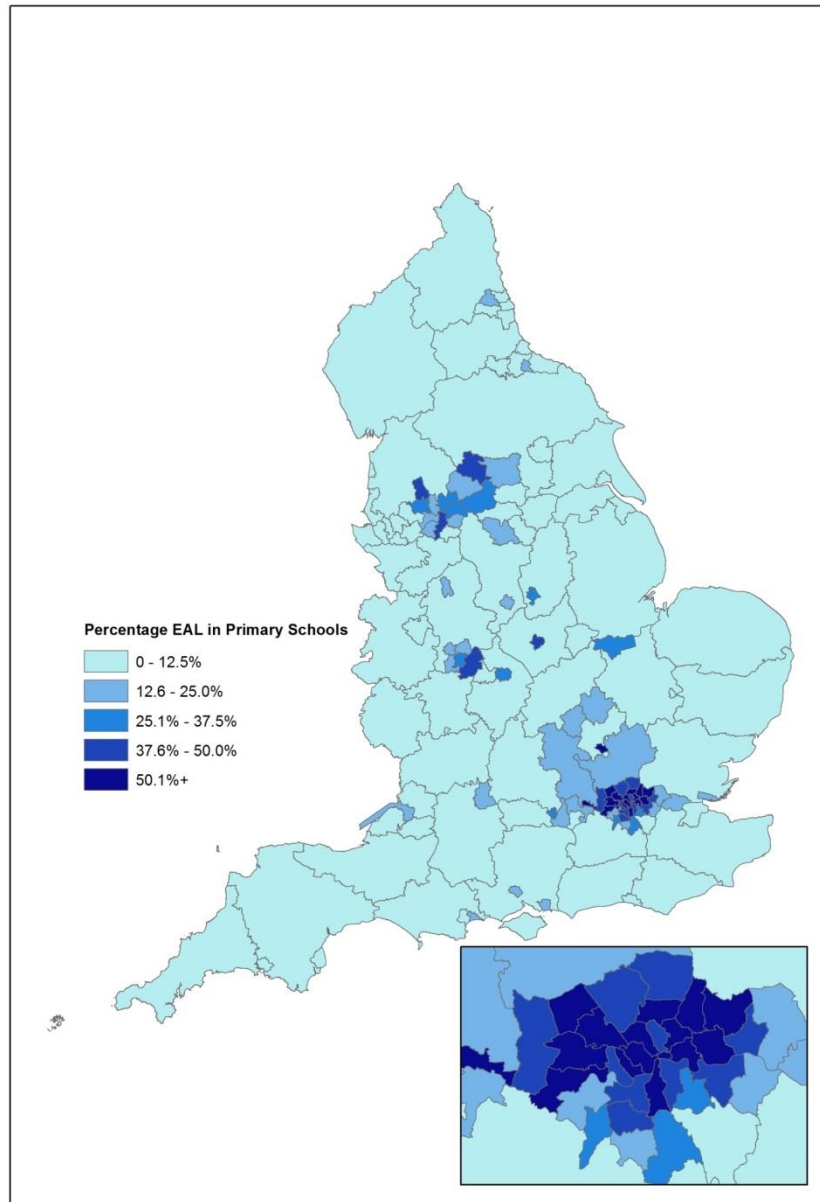
Figure 1: Number of pupils learning EAL by phase: England 1997-2013



Regional and school level distribution of EAL pupils

The proportion of pupils recorded as EAL varies widely across the English regions, ranging from around 6% in the South West to 56% in Inner London. Figure 2 shows the proportion of primary school pupils recorded as EAL for each Local Authority (LA) in England. The pattern for secondary schools is similar.

Figure 2: Percentage of EAL students in primary schools by English



The concentration of EAL pupils within the 20,033 maintained, mainstream schools in England is strongly skewed. Almost one-quarter (22%) of schools have less than 1% EAL pupils, and over half (54%) have less than 5% EAL pupils. However at the other extreme 1,681 schools (8.4%) have a majority of pupils with EAL. While 919 of the 1,681 schools with more than 50% of pupils recorded as EAL are located in London, a large number are located in the West Midlands, North West and Yorkshire & the Humber. Thus the schools with the highest concentrations of EAL pupils are not necessarily located in the capital, despite the impression that might be gained from the regional and LA data. This indicates that concentrations of EAL can be very specific to small local areas and

schools, even if the total numbers are low in broader geographic area. In identifying and targeting EAL support it is therefore important to consider the school level.

The attainment of pupils recorded as EAL

Table 1 presents an analysis of national assessment results from 2013 from the Early Years Foundation Stage Profile (EYFSP) at age 5, end of Key Stage 1 (KS1) teacher assessment at age 7, end of Key Stage 2 (KS2) tests at age 11 and GCSE and other public examinations at age 16.

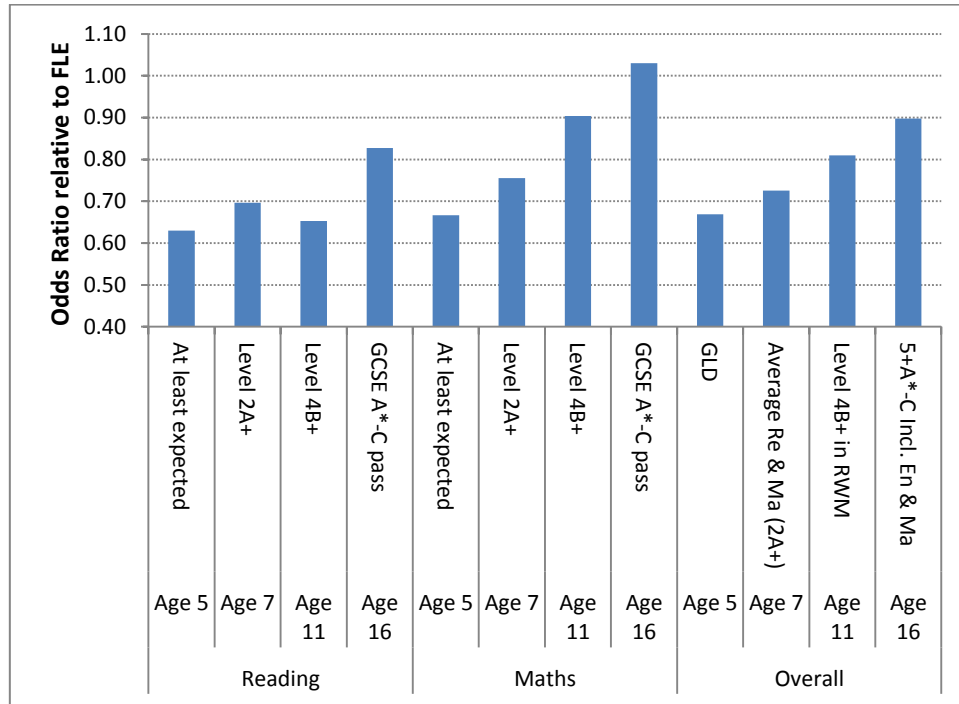
Table 1: English as an additional Language (EAL) versus English as First Language (FLE) and achievement at age 5, 7, 11 and 16: England 2013

Age	Stage	Domain	Measure	Source	EF %	EAL %
5	EYFSP	Reading	At least expected level	SFR 2013-47	73	63
		Maths	At least expected level		71	62
		Overall	Good level of Development (GLD)		54	44
7	KS1	Reading	Level 2A+	SFR 2013-37 (Table 14)	57	48
		Maths	Level 2A+		53	46
		Overall	Average Re + Ma (2A+)		55	47
11	KS2	Reading	Level 4B+	SFR 2013-51 (Table 8b)	77	69
		Maths	Level 4B+		74	72
		Overall	Level 4B+ in RWM		64	59
16	KS4	English	GCSE A*-C pass	SFR 2014-05	68.8	64.6
		Maths	GCSE A*-C pass		71.2	71.8
		MFL	GCSE A*-C pass		32.3	47.5
		Overall	5+A*-C Incl. En & Ma		60.9	58.3
		Overall	EBacc achieved		22.5	24.4

Notes

Source= DFE Statistical First Release (SFR) from which the data is drawn. RWM= Reading, writing and mathematics. MFL= Modern foreign Language.

Figure 3: Odds Ratio for EAL versus FLE students and key stage benchmarks measures of achievement for reading, mathematics and overall performance at age 5, 7, 11 and 16: England 2013



- At the end of Reception only 44% of pupils recorded as having EAL achieve a good level of development (GLD), compared to 54% of pupils recorded as FLE. Expressed as an Odds Ratio, the odds of achieving a GLD are 0.67 (or 33%) lower for EAL pupils compared to FLE pupils. Put another way, for every three FLE children who achieve a GLD only two EAL children do so. Unsurprisingly, at the end of their first year of full-time education children from homes where they may have had less exposure to English on average achieve lower results than those with FLE.
- The association between EAL and achievement decreases markedly in magnitude at later ages. Considering the summary measures of achievement at each age, the OR at age 5 is 0.67, at age 7 it is 0.73, at age 11 it is 0.81 and by age 16 it is only 0.90. Thus by age 16 there is only a small gap on the headline measure (58.3% of EAL pupils achieving 5+A*-C EM compared to 60.9% of FLE pupils) and no gap at all for the broader measure of Best 8 points score.
- Another notable feature of the data is the strong difference in results for reading and mathematics. EAL pupils' scores in maths assessments are higher than their scores in reading assessments at every age. With respect to maths, the gap is large at age 5 (OR= 0.67) and age 7 (OR= 0.76) but decreases substantially by age 11 (OR=0.90) and disappears completely by age 16 (OR=1.03).
- There are measures where EAL pupils achieve higher results than FLE pupils. For example, EAL pupils are slightly more likely than FLE to achieve an A*-C pass in mathematics at age 16 (OR=1.03), are slightly more likely to achieve the EBacc (OR=1.11), and 1.90 times more likely that FLE pupils to achieve an GCSE A*-C in a Modern Foreign Language.

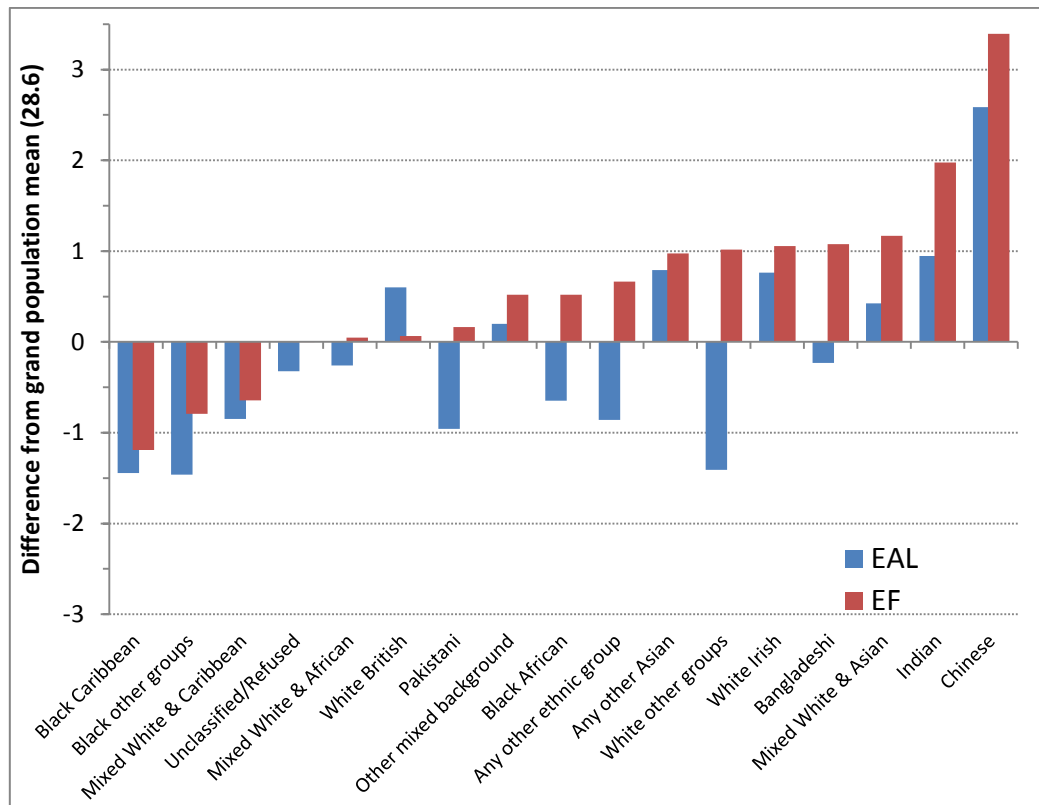
- In terms of making two or more NC levels of progress, EAL pupils make more progress than those with FLE, both between age 7–11 and age 11–16. However, we should be cautious because this necessarily excludes a significant proportion of EAL pupils. Averaging across KS2 and KS4, around 17% of pupils recorded as EAL have no prior attainment score, compared to just 2% of FLE pupils, and, as highlighted later, these pupils have particularly low attainment.
- Multi-level multiple regression analyses indicate that EAL continued to explain a small but unique proportion of the variation in pupil attainment at KS2 even when all available pupil background variables (age, gender, ethnicity, FSM, IDACI, SEN, mobility and region) were simultaneously taken into account. EAL was associated with a KS2 average points score about 0.70 points (2.5 NC months) below pupils recorded as FLE. However at KS4, the association between EAL and achievement was negligible.

Ethnicity and EAL

Ethnicity and EAL are very closely related in England. Of the 142,705 minority ethnic pupils at KS2 nearly two-thirds (63%) are included within the EAL group. At KS2, 96% of Bangladeshi pupils, 88% of Pakistani, 88% of Chinese, 86% of any other group, 79% of Indian, 74% of White Other and 71% of Black African pupils are recorded as EAL while at the extreme only 4% of Black Caribbean, 2% of Mixed White and Caribbean and less than 1% of White British pupils are recorded as EAL. At KS4 the proportion of pupils recorded as EAL is smaller but the pattern is essentially the same. The measure of EAL is in some ways a proxy or shorthand for minority ethnicity status, with the notable exception of Black Caribbean and Mixed White & Caribbean groups. If we know students' ethnicity, does knowing their EAL status add anything further to our understanding of variations in attainment?

Figure 4 shows the pattern of KS2 achievement by ethnicity and EAL. The mean score for each ethnic and EAL combination is shown (deviated from the population mean KS2 average points score of 28.5).

Figure 4: KS2 APS by ethnic group and EAL 2013



The pattern of difference across ethnic groups is broadly similar, regardless of whether we look at FLE or EAL pupils. Black Caribbean, Mixed White & Black Caribbean and Black Other groups tend on average to have the lowest achievement and Chinese, Indian, Mixed White & Asian, Bangladeshi and White Irish groups are, on average, higher achieving. This points to the greater importance of ethnicity over EAL. However, EAL does add something extra to the explanation of achievement. It is apparent that, within every ethnic group except White British, the achievement of pupils recorded as EAL is lower than the achievement of their same ethnic peers recorded as FLE. Thus within each ethnic group there appears to be a consistent negative association of EAL with achievement. Essentially EAL explains little of the difference *between* ethnic groups, but helps explain some variability *within* ethnic groups. Therefore both ethnicity and EAL are significantly associated with KS2 score, although the effect size for ethnicity is over six times larger than the effect size for EAL.

Risk and resilience factors in the attainment of EAL students

When we look at the variability in achievement within students recorded as EAL the range of achievement is just as wide as it is for FLE students. The heterogeneity within the EAL group is so large that the average EAL–FLE gap is fairly meaningless in comparison. It is the individual variability within the EAL group that is important in identifying need, and this requires EAL to be considered alongside a wide range of other student background variables. We completed detailed analyses of the 2013 KS2 and KS4 results in order to identify background variables associated with increased risk of low attainment among EAL students. We also compare these to analyses of risk within the FLE population in order to determine whether any variables were particularly important risk factors for EAL learners. At KS2, the main risk factors for EAL students were, roughly in order of impact:

- **Identified SEN:** Students stage of Special Educational Needs (SEN) was the most substantial risk factor. Compared to students with no recorded SEN, EAL students at School Action, School Action Plus and with statements were 4.4, 6.3 and 10.6 points behind respectively. The impact was broadly the same for EAL and FLE students.
- **International arrival during the key stage:** Arriving in the English education system during KS2 (as proxied by the absence of a KS1 test score) was much more common for EAL students (15%) than FLE students (2%). It also had a very large association with achievement for EAL students but no association for FLE students. The average EAL student with no prior attainment score achieved a KS2 score 12 NC months lower than an EAL student with a prior attainment score, while among FLE students there was a negligible difference.
- **Pupil mobility:** EAL students joining their primary school in Y5/6 had lower achievement than those joining in Y3/4 or those who remained in the same school throughout the four years of KS2, though again with strikingly more negative associations for EAL than for FLE students (for example compared to students who had been in the school for the entire four years EAL students joining in Y6 scored 12 NC months lower, while FLE students scored 4 NC months lower).
- **Ethnic group:** Students recorded as EAL within the following ethnic groups on average had substantially lower attainment than their peers from the same ethnic group but with FLE: White other groups (10 NC months), Black African (4 NC months) and Pakistani (4 NC months).
- **Entitlement to Free School Meal (FSM):** Students entitled to FSM on average scored about 3 NC months lower than those not entitled to FSM. The gap was slightly smaller than among FLE students (5 NC months).
- **Neighbourhood deprivation:** EAL students from a neighbourhood 1 SD above the average deprivation scored around 4 NC months lower than a student from a neighbourhood 1 SD below the average deprivation. The risk was about the same magnitude for FLE students.
- **Region:** EAL students in London tended to achieve higher scores than EAL students in other regions. On average, after adjusting for all other factors, EAL students outside London scored around 4 NC months below their peers in London, although in Yorkshire & the Humber the EAL gap was particularly large and EAL students scored 8 NC months below their London peers.
- **Age:** Younger students tended to achieve lower scores than older students with a difference of 2 NC months across a six month age range.
- **Gender:** EAL boys on average achieved 1 NC month lower than EAL girls; a small difference.

The pattern of risk/resilience factors in the analysis of KS4 Best 8 points score was broadly similar.

White Other and Black African achievement by first language

Black African and White other ethnic groups warrant further investigation because:

- While on average EAL pupils are behind FLE pupils at KS2 by around 0.60 points, this gap is particularly large for White Other (-2.43) and Black African (1.17) pupils.
- They are the ethnic groups with the largest increase in numbers between 2003 and 2013; more than doubling in size (White Other background from 2.1% to 4.3% and Black African from 1.7% to 3.3% of the age 5-16 school population).
- Over 70% of pupils in these two ethnic groups are recorded as EAL and over 40% are recent arrivals in the UK having arrived in the UK between ages 5-14, compared to the England average of 3%.²

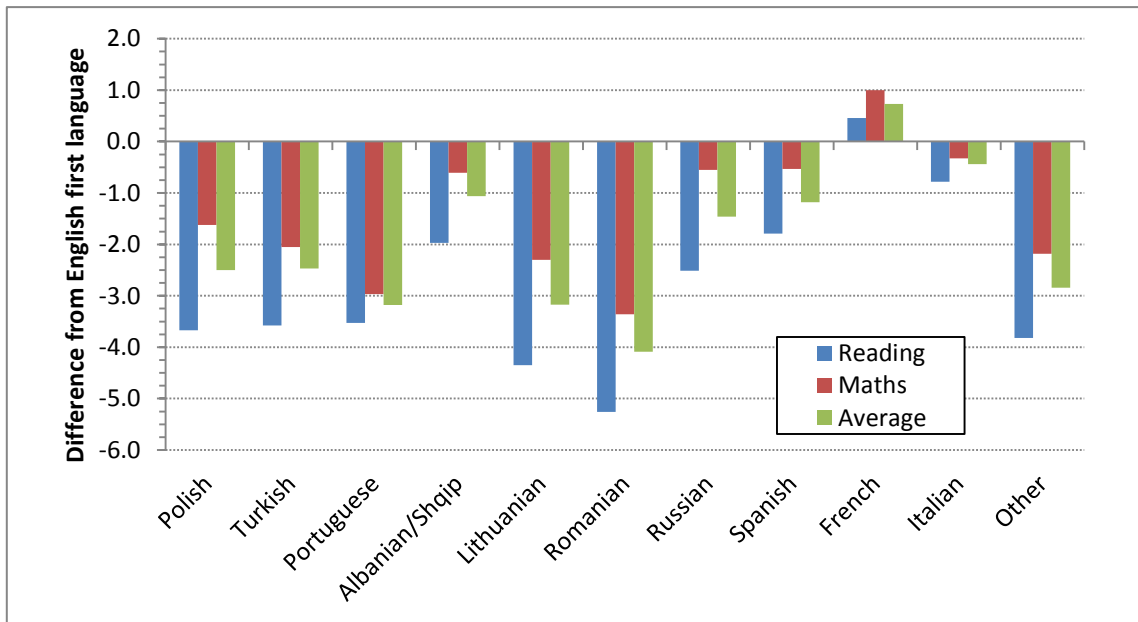
Within each ethnic group, we identified the top 10 languages spoken other than English and compared their attainment with English speakers for both KS2 average point scores and KS4 Best 8 points score. We also adjusted results for socio-economic deprivation and other student background variables. Using the actual first language recorded for pupils within these ethnic groups reveals substantial variation in achievement related to language group.

The attainment of *White Other* pupils by first language

Around one-quarter (26.3%) of the White Other group have English as their first language and just over three-quarters are recorded as EAL. Figure 5 plots the ten most frequently spoken languages in the White Other Group and the difference between EAL-FLE students for KS2 reading and mathematics test score. It is clear that there is considerable diversity in the average KS2 scores within the White Other EAL group. For most pupils, having a non-English first language is associated with lower KS2 attainment. For Romanian, Lithuanian and Portuguese speakers the difference from English first language is over 3 points or more than 12 NC months, and Polish and Turkish speakers are also well behind by 2.5 points or 10 NC months. Only French and Italian speakers run counter to the trend. The differences between language groups are smaller for mathematics than for reading, but the pattern of performance by first language remains the same.

². Data is sourced from the Longitudinal Study of Young People in England (LSYPE) see full report for details.

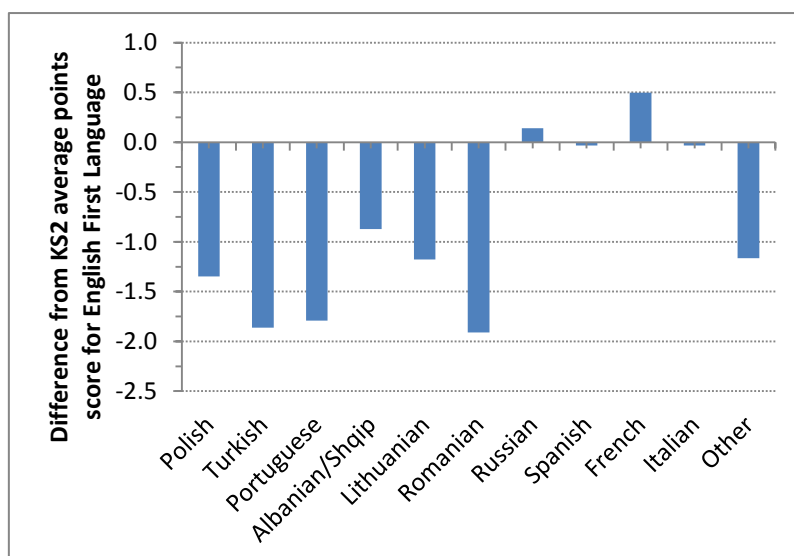
Figure 5: Difference between the mean score for FLE and each of the other first languages within the 'White Other' ethnic group



Many of the lower achieving language groups have high levels of socio-economic deprivation, particularly Turkish and Albanian speakers. Portuguese, Lithuanian, Romanian and Polish all have a mean IDACI score of at least 0.50 (i.e. the average pupils lives in a neighbourhood 0.50 SD above mean deprivation). It is also notable that more than a quarter of Portuguese, Polish, Spanish and Russian speakers have no KS1 test scores, rising to over half of the Romanian and Lithuanian speakers.

Figure 6 shows the results of the mean KS2 points score by first language after adjusting for pupil background variables. The gap between English and the other languages groups are all smaller after controlling for pupil background, and show minimal differences in achievement between English, Russian, Spanish, French and Italian speakers. However Romanian, Turkish and Portuguese speakers are all around 1.75 points (7 NC months) behind English speakers, and Lithuanian, Polish and Albanian speakers around 1 point (4 NC months) behind English speakers.

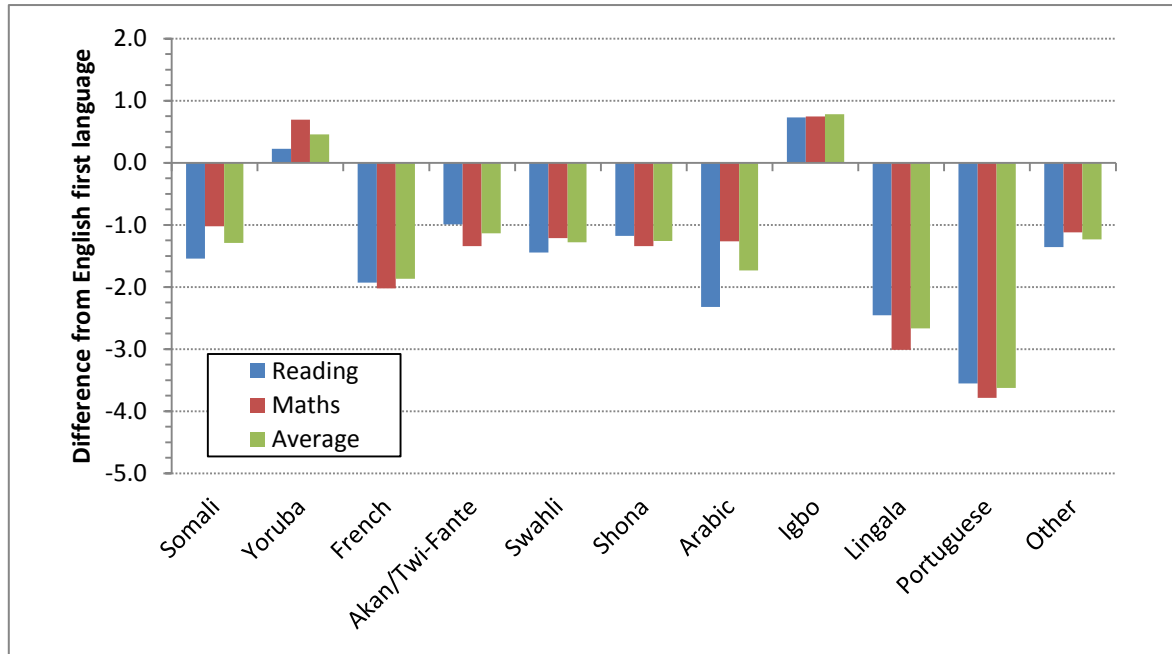
Figure 6: Mean KS2 points score by first language after adjusting for pupil background



The attainment of *Black African* pupils by first language

Over third (38%) of the Black African group are recorded as FLE and just over 62% are recorded as EAL. Figure 7 plots the difference between the KS2 reading and mathematics test score for FLE speakers and the ten other most frequently spoken language in the Black African group.

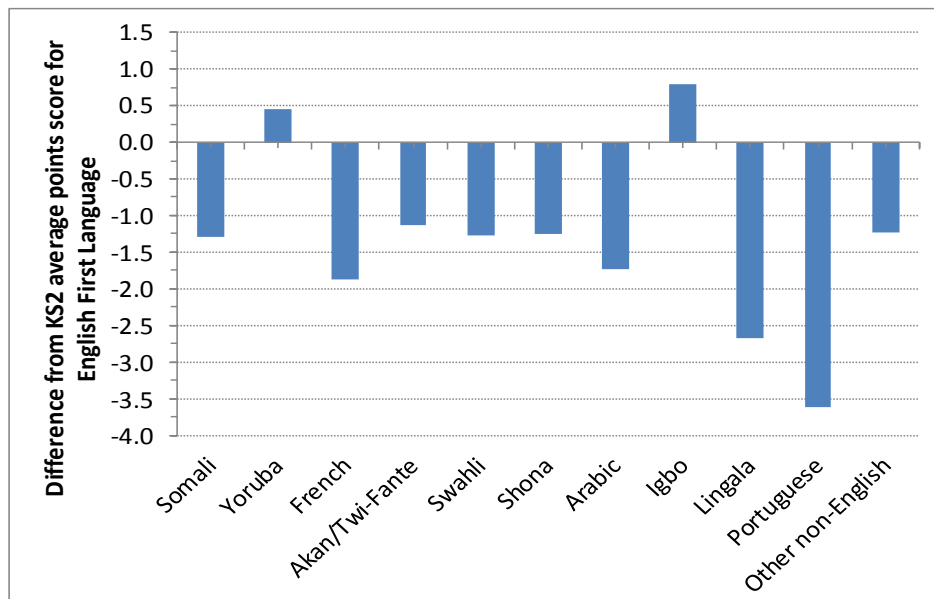
Figure 7. Difference between the mean score for FLE and each of the other first languages within the Black African group



KS2 scores for Yoruba and Igbo speakers were higher than for English speakers. However for most children, having a non-English first language was associated with lower educational attainment, particularly for Portuguese and Lingala speakers, who were around 12 NC months behind their FLE peers. The patterns by language group were consistent across reading, maths and KS2 average score.

Figure 8 shows the results of the mean KS2 points score by first language after adjusting for pupil background variables. The gaps relative to FLE reduce somewhat for all language groups, and roughly to the same extent. Thus, in contrast to the results for White Other, adjustment for pupil background makes little difference to the relative language group gaps. Yoruba and Igbo speakers still achieve slightly higher scores than English first language, and all other language groups score below the English speakers average, most notably Portuguese (-2.2 points or 9 NC months) and Lingala (-1.6 points or 6 NC months) speakers.

Figure 8: Mean KS2 points score by first language after adjusting for pupil background variables



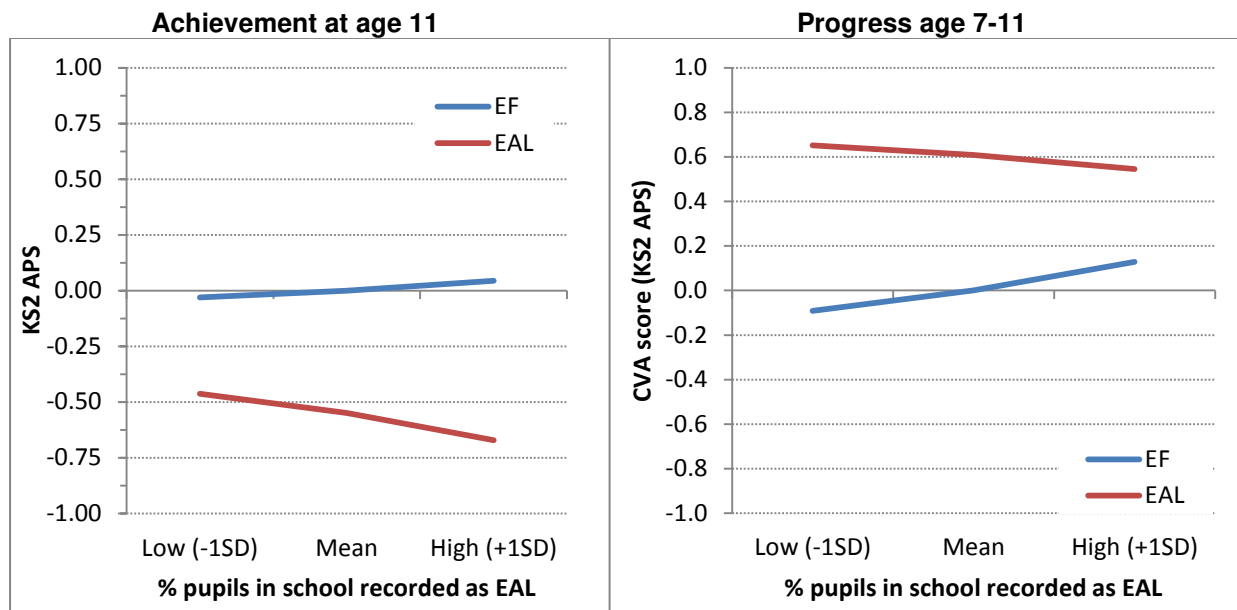
Note: Coefficients are contrasts with First language English. Model 2 adjusts for pupil background variables of: age, gender, SEN stage, pupil mobility, FSM, Neighbourhood deprivation (IDACI), whether pupil has prior attainment score (proxy for international migration) and England region. Adjusted differences greater than 1 point indicated in bold.

School factors

Some media coverage has suggested the possibility that high concentrations of EAL learners needing extra help in primary schools might have negative consequences for first language English speakers in those schools (e.g. Green, 2010). However in the current study we found that the percentage of EAL students in the school had minimal association with student attainment or progress when controls for student background were included. The finding was consistent at both KS2 and KS4. Thus this analysis gives no evidence that FLE students suffer from attending a school with a high % EAL students.

In Figure 9 below, the left panel plots the performance at age 11 of EAL and FLE pupils separately in schools where the proportion of EAL pupils is low, average and high. We see there is negligible difference in achievement among FLE pupils in low vs. high % EAL schools (0.05 points). The right panel of Figure 9 shows a similar analysis but for pupil progress age 7-11. The EAL gap in progress is slightly smaller in schools with a high % EAL pupils, largely because FLE pupils in these schools make slightly (0.20 points) more progress than FLE pupils in low % EAL schools. However these differences are extremely small in absolute terms, less than 1 NC month.

Figure 9: Achievement at age 11 and progress age 7-11 by pupil EAL and the percentage of EAL pupils in the school



Notes: Low, mean and high represent -1SD, mean and +1SD in the school distribution of %EAL, specifically 0%, 15% and 33% respectively. Similar patterns found for attainment at age 16 and progress age 11-16, see main report.

EAL pupils generally make more progress than comparable FLE pupils and this is true in the vast majority of schools. Nevertheless the EAL-FLE gap is bigger in some schools than in other schools. For example, in terms of progress age 11-16 EAL students typically make 16 points more progress than FLE pupils but the EAL advantage within schools ranged from 5 points (or just under 1 GCSE grade) up to 26 'Best 8' points (or over 4 GCSE grades). While our analysis controls for ethnicity, international arrival (as proxied by absence of prior attainment score) and mobility, as well as a wide range of other pupil background controls, variation in the size of the EAL gap might reflect the differing compositions of the EAL group in different schools, particularly around factors such as fluency in English. For example in some schools the EAL group may consist largely of recent entrants from eastern Europe, while in other schools the EAL group may contain a high proportion of high achieving second or third generation Bangladeshi pupils. This may have important implications for unmeasured aspects of the EAL population such as fluency in English, parental engagement and support.

Implications for policy and practice

- The definition of EAL used in the NPD reflects exposure to a language other than English at home or in the community, *it gives no indication of a students' proficiency in the English language*. It is important that this is recognised. On the one hand, the EAL group includes second or third generation ethnic minority students who may be exposed to a language other than English as part of their cultural heritage, but may use English as their everyday language and be quite fluent in it. At the other extreme it includes new migrants arriving in England who speak no English at all, and may have varying levels of literacy in their previous country of origin.
- It is proficiency/fluency in the English language that is the major factor associated with variation in the attainment of students recorded as EAL (Strand & Demie, 2005; Demie & Strand, 2006). Fluency in English is also the biggest factor influencing the degree of support an individual student will require, and schools need to be able to assess this need accurately

using their own procedures and expertise. However, we have been able to point to various risk factors for low attainment among EAL students. In most cases these are the same risk factors as apply for FLE students, but it is notable that recent international arrival, school mobility and particular first languages groups within the White Other and Black African ethnic groups are associated with much higher risks of low attainment for EAL students.

- In relation to school funding, the EAL flag may be a poor basis for targeting funding. Funding can be focussed on the risk factors and some of these, such as FSM, will be picked up by the Pupil Premium Grant. However, other high risk factors, such as new international arrivals, should also be funded. We note there is a proposal in the March 2014 DFE consultation on 'Fairer Schools Funding' to allocate £505 for any primary student and £1,216 for any secondary student who enters the English state school system from overseas in the preceding three years (DFE, 2014). The current results strongly support this proposal. We have noted that concentrations of EAL can be very specific to small local areas and schools, even if the total numbers are low in broader geographic area, suggesting that funding should be targeted at the schools, either directly or through redistribution by LAs.
- It is reassuring that where EAL students have attended English schools for the whole of a key stage they make greater progress than FLE students, and indeed that by age 16 they have caught up with their FLE peers. However such progress reflects a long history of considerable additional funding being directed to address language learning needs, first in the form of Section 11 of the 1966 Local Government Act and then from 1999 through the Ethnic Minority Achievement Grant (EMAG). Until 2011/12 EMAG funding was ring-fenced so it could not be spent on other activities, but these protections have now been removed. A recent NASUWT Survey (2012) saw over one-third of 147 school leaders confirm that resources for EMA and EAL provision across their LAs was decreasing. Policy makers need to guard against the danger of assuming the strong progress of EAL students is inevitable; even if the level of need were not rising as rapidly as it is, there is no guarantee that EAL students will continue to make such good progress unless schools continue to receive, and to use appropriately, funding to address EAL learning needs.

Part 2 - Systematic review of the research literature on EAL interventions

This section of the Research Brief explains the results from a systematic review of the research literature on interventions to improve the English language and/or literacy skills of children with EAL. The overarching aim of this review is to identify which interventions have been evaluated through rigorous research designs and to examine the quality of evidence presented in these studies. Furthermore, this review aims to identify which interventions might be most appropriate to implement in the UK context to support developing language, literacy and in turn, academic performance of children with EAL.

The overarching objectives of the systematic review are to:

- identify and review controlled intervention studies (i.e. experimental and quasi-experimental designs) which have focused on and/or included EAL pupils' English language and/or literacy development
- identify the quality of these studies with respect to their contribution to improved understanding of teaching and learning for EAL students
- identify intervention programmes which are most suited to adapting or extending in the UK context to address attainment gaps in pupils with EAL in England.

- identify and review where further research should be carried out should gaps be identified in the literature, both within the UK and internationally.

Methods used in the systematic review³

A number of databases were scanned with key search terms to identify which studies should be reviewed. The search yielded 975 distinct reports whose abstracts were cross-referenced against inclusion and exclusion criteria to assess their relevance for the specific aims of this review. After studies were eliminated because they failed to meet some of the inclusion criteria⁴ 44 studies remained. A further 15 studies were excluded after having applied the in-depth review criterion that only studies carried out in mainstream education (i.e., not bilingual programmes/education) would be included. This process yielded a total of 29 studies to be included in the in-depth review.

Key findings

1. Of the 29 in-depth review studies, only two were carried out in contexts outside of the US (one in the UK and one in Canada). Due to the considerable differences in the demographic, social, and educational infrastructure between the UK and US, it is unwise to assume effective interventions in the US would be equally effective in the UK. This lack of studies across different English-speaking nations speaks to the urgent need for carefully conducted intervention studies which examine best practice aimed to improve EAL students' English language and/or literacy within the UK context.
2. Most of the studies in the in-depth review were aimed at primary school pupils, with many fewer directed towards early secondary and only one specifically targeted for late secondary pupils.
3. Academic vocabulary and word analysis strategies figured prominently in a number of language and literacy interventions. The explicit teaching of vocabulary was developed through text-based activities and word analysis strategies aimed to enhance pupils' understanding of the relationships between word roots and derived forms.
4. While none of the interventions received uniformly high ratings in the security of evidence, there are a number of interventions aimed at enhancing vocabulary knowledge in children with EAL that could be appropriate for implementation in the UK.

³ For more details on the methods used in the review, see the main report: A systematic review of intervention research examining English language and literacy development in children with English as an Additional Language (EAL)

⁴Inclusion criteria: i) Research that has been published in English since 2000; ii) Research that examines some aspect of EAL provision iii) Interventions focused on influencing EAL pupils' English language and/or literacy outcomes targeting individuals, small-groups, classroom-based practice, school-wide practice, or parents iv) Interventions which include an appropriate control or comparison group, v) Research which describes peer-reviewed empirical reports in peer-reviewed journal articles; vi) Interventions on primary and secondary level pupils; vii) Interventions on typically developing children

Studies were excluded if they: i) did not adhere to either an experimental or quasi-experimental design; ii) did not include a control or comparison group, iii) did not include outcome measures which addressed EAL children's English language or literacy; iv) focussed on children with language and/or learning disabilities; v) published before 2000; vi) focused on students in post-secondary education or pre-school (under 4 years)

Detailed findings by intervention focus

The 29 studies in the in-depth review represent a range of different approaches to improve English language or literacy development in children with EAL. They also vary in terms of population, age and language focus.

Of the 29 studies in the in-depth review, 16 studies examined EAL and FLE children in the same study while 5 were targeted on teachers (i.e., through professional development activities) and 2 on family literacy practices.

The studies in the in-depth review reflect research on different age groups (and consequently levels of education). Table 2 illustrates that the majority of studies (n=14) were carried out on children in the early school years – defined as aged 4 to 6 years old which in the UK context would correspond to Early Years/Reception classes. Some studies, however, focused on more than one age band.

Table 2: Breakdown by age group (N=29, not mutually exclusive)

Age band	Number
Early school years (age 4-6)	14
Mid to late primary (aged 7-11)	8
Early secondary (aged 12-14)	8
Mid to late secondary (aged 15-18)	1

As indicated above, our additional in-depth review inclusion criteria excluded studies carried out within the context of bilingual education programmes. However, six studies were carried out within the context of specialist support for English language learners aimed to support rapid English language development in children with EAL where the majority of the school day is spent in English language activities and where children are exited from the programme when they have reached a specific level of fluency in English.

Table 3 illustrates that the majority of the interventions were primarily focussed on enhancing some aspect of the children's English language skill and nearly as many targeted some aspect of comprehension and/or literacy development. However, many of these studies focussed on both, where word-level skills were developed through text-based activities. Indeed, the division between 'language' and 'literacy' interventions is somewhat arbitrary in the sense that many interventions included a strong focus on vocabulary owing to the importance of having good vocabulary knowledge for reading comprehension skills. This distinction between 'language' and 'literacy' should not be considered as rigid, but rather perhaps more as ends on a continuum.

Table 3: Focus of Intervention (N=29)

Primary Focus of Intervention	Number
Language	12
Literacy	10
Continuing Professional Development	5
Family literacy practice	2

A range of different language-oriented features were highlighted in the predominantly language interventions, but most focused on some aspect of vocabulary with two exceptions: the one paper on verbal interaction (Greenfader & Brouillette, 2011) and the research that evaluated an intervention primarily targeted on auditory-perceptual and spoken skills (Troia, 2004). The majority of the remaining interventions mainly targeted some aspect of vocabulary and six of these focussed on academic vocabulary in particular.

Language oriented interventions

The majority of the language oriented interventions were focused on developing vocabulary knowledge. Within these interventions, the target was either on academic vocabulary, phonological⁵ and/or morphological⁶ awareness, or general vocabulary knowledge. The general strategy across these interventions was to teach specific vocabulary through text-based activities such as shared book reading and reading tasks. Those language interventions which were not focused primarily on vocabulary aimed to enhance verbal interaction in classrooms and/or auditory-perceptual and spoken language skills.

Literacy oriented interventions

The interventions primarily focused on literacy either were comprehension oriented and aimed to enhance listening comprehension and/or comprehension of specific vocabulary, or aimed to develop lower-level reading skills such as single word reading, decoding, fluency, and phonological awareness.

Continuing Professional Development interventions

There were five interventions with a primary focus on continuing professional development (CPD) activities. Two of these aimed to support teachers to improve literacy outcomes through teaching academic content (e.g., science). One was specifically targeted at helping teachers improve reading comprehension and reading achievement in urban areas where there was high teacher turnover and one based in the UK was specifically oriented towards helping teachers promote better verbal interaction in classrooms. These CPD interventions tended to receive lower ratings than the language and/or literacy oriented interventions in terms of the strength of evidence.

Family literacy practice interventions

Only two interventions were identified that aimed to enhance literacy practice in the home. One of these implemented a structured set of parent-child activities to help support parents in enhancing their child's literacy development outside of school. This intervention was effective for the children with

⁵ Phonological awareness refers to an individual's knowledge and recognition of the speech sounds in a given word.

⁶ 'Morphological awareness' refers to an individual's ability to recognize, understand and use different word parts that bear some kind of meaning. For example, understanding that by adding the suffix [-er] on to the verb 'teach' the resultant word 'teacher' refers to the person who carries out the verb (to teach).

EAL but not the NS children in the study. The other family-oriented intervention aimed to promote literacy across the summer break between school years to mitigate against observed dips in children's reading performance across this time. The intervention was not effective, however.

Security of Evidence

Each of the 29 studies was reviewed against the EEF's criteria for assessing the security of evidence. The overall ratings for these interventions were mixed, but many of them had appropriately high ratings on strength of evidence criteria to suggest there may be some merit in examining the effectiveness of these interventions in UK classroom.

Implications of the systematic review

The majority of the studies in the review focused on either some aspect of vocabulary or word-level skills such as phonological awareness, decoding, alphabetic knowledge and morphological awareness. Within those studies that focused on vocabulary, a large number targeted academic vocabulary, a focus which may possibly be due in part to the considerable number of research studies that have clearly identified strong predictive relationships between vocabulary knowledge and reading comprehension (e.g., Nation & Snowling, 1998; 2004). Furthermore, a number of studies have identified that children with EAL tend to have less vocabulary knowledge than FLE peers (e.g., Bialystok, Luck, Peets & Yang, 2010; Cameron, 2002). More research aimed at enhancing vocabulary knowledge needs to be carried out in the UK context.

There were five examples of Continuing Professional Development (CPD) programmes in this review. This small number is somewhat surprising in that clearly pedagogical approaches are the most obvious starting point for considering improving EAL students' academic achievement. However, a number of the interventions included some form of CPD even if it was not the main focus. Such CPD interventions are clearly needed since one of the main themes that emerged from a review of research on EAL provision commissioned by the then *Training and Development Agency (TDA)* indicated that there was a lack of specialised staff, that management of EAL provision was ill-defined, that there was too much crossover with Special Educational Needs (SEN) provision, and that there was a need for more EAL-focused training for teachers due to a striking absence of EAL pedagogy (Andrews, 2009). Andrews's review, however, was carried out in the UK context and of the 5 CPD studies that were included in this review, four of these were carried out in the context of the US. Therefore, there is a considerable need for further UK-based research that examines more precisely what constitutes effective practice for teachers of children with EAL through carefully controlled intervention studies.

There were also rather mixed findings in terms of the strength of evidence of the in-depth review studies. There were no examples of pure RCT studies with random sampling from the population or where the effectiveness of the intervention was evaluated by an independent review team. However, many studies did include a number of careful methodological practices to ensure fidelity to treatment and to establish appropriate matching (e.g., random assignment to groups). Nonetheless, there were some studies that had rather low ratings across a range of criteria suggesting an undesirable level of variability in the overall methodological rigour of these studies which also suggests a need for further, more rigorous, research.

The complete research reports

This summary has focussed on the key findings and conclusions and not included the detail around methodology and analysis. Complete details of the analyses underlying this summary can be found in the full reports, available from the EEF website at:

- Strand, S., Malmberg, L. & Hall, J. (2015). *English as an Additional Language (EAL) and educational achievement in England: An analysis of the National Pupil Database*. London: Educational Endowment Fund.
- Murphy, V. & Unthiah, A. (2015). *A systematic review of intervention research examining English language and literacy development in children with English as an Additional Language (EAL)*. London: Educational Endowment Fund.

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Strand, S. (2014a). Ethnicity, gender, social class and achievement gaps at age 16: Intersectionality and 'Getting it' for the white working class. *Research Papers in Education*, 29, (2), 131-171.

<http://dx.doi.org/10.1080/02671522.2013.767370>

Strand, S., & Demie, F. (2005). English language acquisition and educational attainment at the end of primary school. *Educational Studies*, 31, (3), 275-291. <http://dx.doi.org/10.1080/03055690500236613>

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