



# English as an Additional Language (EAL) and educational achievement in England: An analysis of the National Pupil Database

**Professor Steve Strand**

**Dr Lars Malmberg**

**Dr James Hall**

University of Oxford  
Department of Education  
January 2015

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# Part 1: Executive Summary

## Background to the report

The project was commissioned by three charitable groups - The Education Endowment Foundation (EEF), Unbound Philanthropy and The Bell Foundation - to analyse the evidence from national data in England on the achievement of students with English as an Additional Language (EAL) and to review the literature on effective interventions to raise the attainment of pupils with EAL. The key questions addressed by the project were:

- Who are the most at-risk groups of EAL learners and what are the predictors of low attainment for these learners? and;
- What are the most promising programmes and interventions to address EAL achievement gaps on the basis of causal evidence?

This report presents an analysis of the most recent England National Pupil Database (NPD) from 2013 with respect to the first question above. A sister report focuses on the second question concerning effective interventions and is published in parallel with this report. The overall purpose of the project is to help schools and policy-makers to effectively target policy, interventions and funding to address achievement gaps.

## Demographics and distributions

The percentage of pupils in English primary and secondary schools aged 5-16 who are recorded as EAL has more than doubled from 7.6% in 1997 to 16.2% in 2013. In the 2013 school census just over a million pupils in England are classified as speaking English as an Additional Language. The proportion of students recorded as EAL varies widely across the English regions, ranging from around 6% in the South West and North East to 43% in Outer London and 56% in Inner London. Variation across Local Authorities (LA) is wide, so although 17 of the 20 LAs with the highest %EAL are in London the top 20 also includes Slough (58%), Luton (51%) and Leicester (49%). Full data and maps are included in Part 2 of the report.

The concentration of EAL students within the 20,033 maintained, mainstream schools in England is strongly skewed. While the proportion of EAL students in a school averages 13.6%, almost one-quarter (22%) of schools have less than 1% EAL students, and over half (54%) have less than 5% EAL students. However at the other extreme 1,681 schools (8.4%) have a majority of students with EAL. This does not support headlines such as that in the Daily Telegraph (31/01/14) that "English is no longer the first language for the majority of pupils at one in nine schools", the actual figure is one in 12 schools. Nevertheless this is still a substantial number of schools.

While 919 of the 1,681 schools with more than 50% of students recorded as EAL are located in London (54.7%), a large number are located in the West Midlands (n=201), North West (n=179) and Yorkshire & the Humber (n=157). Thus the schools with the highest concentrations of EAL students 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 ethnic minority population in England aged 5-16 has increased over the last 10 years from 16.8% in 2003 to over one-quarter (26.6%) in 2013. The two largest absolute increases are for White Other Background from 2.1% to 4.3%, and Black African from 1.7% to 3.3%. The doubling of the proportion of students from these two ethnic groups has particular implications for EAL provision since, as we shall see later, over 70% of students in these ethnic groups are recorded as EAL and because EAL is associated with a particularly large attainment gap within these two ethnic groups.

## Overview of EAL and achievement age 5-16

We analysis the headline figures from the 2013 national assessment results 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 public examinations at age 16. At each age we report where possible separately on results for reading and mathematics as well as the summary measure of overall attainment, and report the Odds Ratio (OR) to allow us to evaluate the size of the EAL/FLE (First Language English) gap at different ages in a consistent form. Key conclusions are:

- 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. Thus the odds of achieving a GLD are 0.67 (or 33%) lower for EAL children compared to FLE children. We conclude that, 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 on average achieve lower results.
- However 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 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. Indeed there is no EAL gap at all on the broader measure of Best 8 points score (see Part 3).
- EAL students' scores in maths assessments are always higher than in reading assessments at every age; for maths the EAL gap is almost eliminated by age 11 (OR=0.90) and by age 16 EAL students are slightly more likely than FLE students to achieve an A\*-C pass in mathematics (OR=1.03). EAL students are also more likely than FLE students to achieve the EBacc (OR=1.11), and to achieve a GCSE A\*-C in a Modern Foreign Language (OR=1.90).
- In terms of making two or more levels of progress, EAL students make more progress than those with FLE, both between age 7-11 and age 11-16. We conclude that where English may not be the main language of the home this may be associated with lower

achievement on starting school, but that this effect reduces markedly with age and is largely eliminated by age 16.

## 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.

### Ethnicity and EAL

Ethnic group and EAL are very closely related. At KS2, 96% of Bangladeshi students, 88% of Pakistani, 88% of Chinese, 86% of any other group, 79% of Indian, 74% of White Other and 71% of Black African students are recorded as EAL. At the other extreme only 4% of Black Caribbean, 2% of Mixed White and Caribbean and less than 1% of White British students are recorded as EAL. In some ways then EAL acts simply as a proxy for minority ethnicity status, albeit with the notable exception of the Black Caribbean and Mixed White and Black Caribbean groups. Of the 142,705 minority ethnic students at KS2 nearly two-thirds (63%) are included within the EAL group. The proportion of students recorded as EAL are somewhat smaller at KS4 but the pattern is essentially the same.

In an analysis of KS2 average points score, EAL explains just 0.2% of the variation while ethnic group explains 1.8% of the variation, over ten times greater. This is perhaps not surprising when it is considered the binary EAL indicator obscures the considerable differences in achievement between ethnic groups. However EAL does add something extra to the explanation of achievement since when ethnicity and EAL are entered together they jointly can account for 2.2% of the variation in KS2 score. Within every ethnic group except White British, the achievement of students recorded as EAL is lower than the achievement of their same ethnic peers recorded as FLE. Thus EAL explains little of the difference between ethnic groups, but helps explain some of the variability *within* ethnic groups.

While EAL students were on average just 0.60 points (or two NC months) behind their FLE peers from the same ethnic group at KS2, this gap was substantially larger among White Other (2.43 points), Any Other ethnic group (1.43 points), Black African (1.17 points) and Pakistani (1.12 points) students. At KS4 while there was no overall EAL gap in Best 8 score, there was a large EAL gap within the White Other ethnic group (26 points for Best 8 score, 49% vs. 70% 5+A\*-C) and the Black African ethnic group (17 points for Best 8 score, 58% vs. 69% 5+A\*-C).

## All risk factors

We complete separate regression analyses of student background with attainment within EAL and FLE groups to identify the biggest risk/resilience factors for EAL students and to be able to compare the size of the risk between EAL and FLE students. 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 16, 24 and 40 NC months 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%). Also it 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 below an EAL student with a prior attainment score, while among FLE students the impact on KS2 score was negligible.
- **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 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 score 4 NC months lower).
- **Ethnic group:** EAL students from the White Other (10 NC months), Black African (4 NC months) and Pakistani (4 NC months) ethnic groups were substantially more at risk than their peers from the same ethnic group but recorded as FLE.
- **Entitlement to FSM:** Students entitled to FSM on average scored about 0.90 points (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 1SD 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 2 NC months difference in achievement across a 6 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.

## Contextual and contextual value-added models

We next completed full contextual and contextual value added (CVA) models with the particular aim of determining: (i) whether EAL adds any explanatory power to models including the full range of available student background variables; (ii) whether a school's composition, particularly the percentage of students in the school recorded as EAL or entitled to FSM, has an impact on students' attainment and progress over and above student level measures of EAL and FSM, and; (iii) the extent to which the EAL gap varies across schools and how this compares to school variation in FSM or gender gaps.

### EAL in full contextual and CVA models

EAL continued to explain a small but unique proportion of the variation in student attainment at KS2 even when all available student 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 students recorded as FLE. However at KS4 the association between EAL and achievement was negligible.

In terms of progress, where students recorded as EAL have a valid prior achievement score they make significantly better progress than FLE students, both at KS2 and KS4. However we should be cautious because this necessarily excludes a significant proportion of EAL students. Averaging across KS2 and KS4, around 17% of students recorded as EAL have no prior attainment score, compared to just 2% of FLE students, and as highlighted in the risk factors, these students have particularly low attainment.

### School composition 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 English first language speakers in those schools (Green, 2010). There is very little research on the associations between the concentration of EAL students in a school and student achievement in those schools, although a recent US study by Cho (2012) using a nationally representative dataset reports that the presence of EAL students in a class had a negative impact on the reading progress between kindergarten and first grade of students in those classes whose first language was English, net of a wide range of control variables. 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. If anything, FLE students had marginally higher attainment and made marginally more progress in high %EAL schools than in low %EAL schools, net of all other factors. Thus

this analysis gives no evidence that FLE students suffer from attending a school with a high % EAL students.

## Range of variation in equity gaps across schools

The size of the EAL advantage in progress did vary across schools, although in the vast majority of schools EAL students made more progress than FLE students. At KS2 the EAL advantage ranged from 0.0 up to 1.2 NC points across schools, at KS4 it ranged from 5.3 up to 26.1 Best 8 points<sup>1</sup>. At KS2 there was more variation in the size of the EAL gap across schools than in the FSM or gender gaps, although at KS4 the variation was roughly equivalent across all three dimensions. Given our models controls for prior attainment, age, ethnicity, gender, pupil mobility, SEN and socio-economic disadvantage, this should take account of the fact that in some schools the EAL group may be composed largely of more recent entrants from Eastern Europe, while in other schools the EAL group may be composed largely of high achieving second or third generation Bangladeshi students. **This would seem to suggest that some schools are better at facilitating the progress of EAL learners than others.** However we cannot rule out that this variation reflects other unmeasured aspects of the EAL population in different schools, e.g. parental engagement and support.

## Age of arrival in UK

We have identified international arrival as a key factor in relation to EAL achievement but we have only been able to proxy this in the NPD through the absence of a prior attainment score. However another data source, the Longitudinal Study of Young People in England (LSYPE) includes a direct measure of student's place of birth, or if not in the UK their date of arrival in the UK. The LSYPE also distinguishes between students who speak multiple languages but where English is the main language (EAL-English-Main) or multiple languages but a language other than English is the main language (EAL-Other-Main). The main findings are:

- EAL students with English as their main language who were born in the UK or arrived before age 5 do not differ significantly in achievement at age 14 from English only speakers. However those who have more recently entered the UK (age 5-14) have significantly lower scores than English only speakers.
- In contrast, EAL-Other-main students achieve significantly lower scores at age 14 than both English only and EAL-English-Main groups, regardless of when they arrived in the UK. The gap is large (around 0.50 SD) for UK born and those who entered UK age 0-10, but even larger (-1.0 SD) for those who have very recently entered the UK age 11-14.
- The associations weaken somewhat by age 16, reflecting greater than average progress by EAL students, particular those reporting English as their main language.

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<sup>1</sup>. This is the range of +/- 1 SD around the average within-school gap, or the difference between schools at the 16th centile and schools at the 84th centile in terms of the size of the EAL progress gap.

However EAL-Other-Main still lagged well behind English only and EAL-English-Main speakers, particularly where they had entered age 11-14.

## Variation by first language among White Other and Black African groups

Black African and White Other ethnic groups had particularly high proportions of students who arrived in the UK between ages 5-14, each over 40% compared to the LSYPE sample average of 3%. Further empirical work on the NPD utilised the actual first language recorded for students within these ethnic groups to reveal substantial variation in achievement related to language group. 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.

- Within the White Other ethnic group, there were minimal differences between English, Russian, Spanish, French and Italian speakers, but Lithuanian, Polish and Albanian speakers were about 4 NC months behind, and Romanian, Turkish and Portuguese speakers about 7 NC months behind, the White Other English speakers. At KS4, Spanish, Russian and Italian speakers did better than English speakers, while Slovak, Lithuanian, Romanian and Latvian speakers did significantly less well than White Other English speakers.
- Within the Black African ethnic group, at KS2 Igbo and Yoruba speakers achieve as well as English speakers, but French and Arabic speakers are 4 NC months behind, Lingala speakers 6 NC months behind and Portuguese speakers 8 NC months behind the Black African English speakers, with the later two groups actually lower than Black Caribbean students. At KS4, again Igbo and Yoruba speakers are doing as well or better than English speakers, but Somali and Lingala speakers are 16 Best 8 points behind and Portuguese speakers 24 points behind the Black African English speakers, and again lower than Black Caribbean students.
- These differences were robust with respect to control for socio-economic deprivation and other student background variables. The results suggest first language can be an important additional piece of information when used in conjunction with ethnicity to identifying groups at risk of low attainment and poor progress.

## 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 in the English language that is the major factor influencing the degree of support an individual student will require, and schools will 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. 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 the 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.

## **Structure of the report**

The report is presented in seven parts:

Part 1 of the report is this executive summary of the main findings and recommendations for policy and practice.

Part 2 gives the background to the research and outlines the research questions addressed in the report. It outlines the data that is recorded in the NPD on EAL, ethnicity and first

language, describes the demography and distribution of students recorded as EAL and how this is changing over time. It also gives an overview of the data on EAL and achievement gaps using summary data from national assessments in England completed at age 5, 7, 11 and 16.

Part 3 describes the metric and methods employed and some of the data in more detail. It describes the associations between EAL and achievement in the specific measures we are exploring in detail at KS2 (age 11) and at KS4 (age 16).

Part 4 explores the association between student background variables and the achievement of EAL students, exploring risks and resilience factors in relation to their achievement. These factors are also compared to determine the extent to which risks are common for FLE and EAL students or whether some factors are a greater/lesser risk of low attainment for EAL compared to FLE learners.

Part 5 extends the analysis by calculating full contextualised models that control for a range of student and school composition variables and contextual value added (CVA) models to explore variations in student progress, both at KS2 and KS4. A key factor here is consideration of the associations there may be with school factors and the extent of school variability in outcomes.

Part 6 presents an analysis of another dataset, the LSYPE, to explore the association of place of birth and date of arrival in the UK with attainment. Congruent with earlier analyses this indicates that the White Other and Black African ethnic groups show particularly large variation between the achievement of EAL and FLE students. Analyses are therefore reported that compared the performance of students with different first languages within these two ethnic groups. Within each ethnic groups we identify the top 10 non-English first languages and compare the attainment of these students with English speakers at both KS2 (average point scores) and KS4 (Best 8 points score). We also adjusted results for socio-economic deprivation and other student background variables.

Part 7 reviews the results and highlights some implications for policy and practice in England with regard to EAL learners.

## Part 2: Introduction

### Research on EAL and student achievement in England

Children who speak English as an Additional Language (EAL) come from home environments where the dominant language is not English but who are nonetheless educated in English, the majority language. The percentage of pupils in English schools aged 5-16 who are recorded as EAL has more than doubled from 7.6% in 1997 to 16.2% in 2013. Just over a million pupils in England are classified as speaking English as an additional language (NALDIC, 2013). The EAL variable in the National Pupil Database (NPD) is helpful in monitoring these trends, but its value in relation to identifying variation in educational achievement is perhaps less clear.

The academic achievement of children with EAL varies widely by age, ethnic group, academic subject or domain and other factors such as recency of entry to the country. In particular there is considerable research evidence from England showing that a student's fluency in English is a key predictor of their achievement in national tests at age 11 (e.g. Strand & Demie, 2005) and in public examinations at age 16 (e.g. Demie & Strand, 2006). However EAL as recorded in the NPD does not indicate a student's fluency in the English language. In many ways, the EAL measure acts more as a proxy for minority ethnic groups where the heritage language is other than English. There is a need to map how the data in the NPD on ethnicity and EAL overlap and how they can be better utilized to identify under-achieving groups at risk of poor performance in national tests and in the longer term fewer career opportunities on leaving school. Appropriately targeted support for these students, families and schools could help to mitigate the risks. The current research will undertake such an exercise.

In addition since 2008 schools have been asked to record in detail the first language spoken by students recorded as EAL. This offers the opportunity to further refine identification particularly within the Black African and White Other ethnic groups who are extremely heterogeneous with regard to EAL. While many languages "attach" to particular ethnic groups, knowing about a person's language does not tell us about their country of origin or ethnic heritage. Having a first language recorded as French may therefore be associated with a very different profile of attainment for White other as opposed to Black African students. However analysis within London has suggested that using the first language as a further differentiator *within* ethnic groups can help in identifying ethnic-linguistic groups with particularly low levels of achievement (Von Ahn, et al, 2010; Demie, 2013). For example, Demie (2013) indicates that the overall 5+A\*-C success rate of 58% for Black African students in 2012, obscured particularly high levels of success by those whose first language was recorded as Yoruba (70%) and English (65%) in contrast to those recorded as Somali (47%) or French (46%). Similarly among White other students there was substantial variation in 5+A\*-C success rates between students with first language of French (80%) or English (64%), compared to Turkish (47%), Portuguese (40%) or Polish (39%). However Demie (2013) did not control for other factors strongly related to attainment, such as age, socio-economic circumstances, gender, SEN and so on which might account for the results. We

will undertake an analysis of the association between first language and achievement within White Other and Black African groups and will evaluate the extent to which these differences remain after we have control for socio-economic status (SES) and other student background variables.

A factor related to but distinct from fluency in English is recency of arrival in the UK. A recent publication (OECD, 2013) based on PISA data reports that late arriving students from less-developed countries where the mother tongue differs from the language of instruction suffer the greatest disadvantage in reading performance.<sup>2</sup> The NPD is limited in a number of ways, one of which is that it does not include data on student's age of arrival in the UK. However the Longitudinal Study of Young People in England (LSYPE) does include data on the young person's place of birth and, if not the UK, their date of arrival in the UK. We will analyse the LSYPE, to address recency of entry to the UK, along with ethnicity and EAL, in relation to educational achievement in England.

Recently there has been media speculation about possible detrimental effects of large numbers of EAL students requiring extra help on the achievement of native English speakers in primary schools and classes (Green, 2010). However there is relatively little research on the associations between the concentration of EAL students in a class and student achievement in those classes. Cho (2012) analysed the US nationally representative Early Childhood Longitudinal Study Kindergarten Cohort (ECLS-K) to examine reading and maths test score gains between kindergarten and first grade, and reports that the presence of EAL students in a class has a negative association of the reading (but not maths) progress of students whose first language is English, net of a wide range of SES and other control variables. In contrast Geay, McNally & Telhaj (2012) conclude from an analysis of NPD KS2 data that the association between %EAL and achievement is close to zero after controls for student background and school type are included. We shall undertake analysis of the influence of school composition as well as student variables on student attainment and progress.

## Research questions

Some key questions to be asked on the NPD data therefore are:

- What is the size of the EAL attainment gap at different ages? Does the gap vary depending on the particular achievement domain (e.g. reading vs. maths?) Does the gap reduce in size for older age groups?
- Who are the most 'at-risk' groups of EAL learners and what are the predictors of low attainment for these students? Are the risk factors the same as they are for FLE students? Are there particular regions where the gaps are wider than others?
- What is the association between ethnic group and EAL? How should the two measures be treated when considered jointly in the analysis of student achievement?

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<sup>2</sup> [http://www.oecd.org/pisa/pisainfocus/pisa%20in%20focus%20n29%20\(eng\)--Final.pdf](http://www.oecd.org/pisa/pisainfocus/pisa%20in%20focus%20n29%20(eng)--Final.pdf)

- Are any school level variables associated with achievement gaps? In particular is there any association between the proportion of EAL students in a school and student attainment or progress? Is there any interaction between %EAL and individual students EAL /FLE status, for example is there any negative association between a high % EAL in a school and the achievement of FLE students?
- For some large but heterogeneous ethnic groups, particularly Black African and White Other, can the specific first language spoken by students help in identifying ethno-linguistic groups with particularly low levels of achievement at age 11/16? Can any gaps identified be accounted for by socio-economic factors such as FSM and IDACI?

In addition we will analyse the LSYPE to address the following questions:

- What is the profile of age of arrival to the UK for different ethnic and language groups?
- Is there an association between age of arrival in the UK and educational achievement at age 14/16? Is there an association with educational progress age 11-16?
- Are there implications from the LSYPE for further analyses of the NPD?

## How is EAL measured in the NPD?

### First Language

The School Census asks schools to record the pupil's 'first language' defined 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.”* DCSF (2006). Pupil Language Data: Guidance for local authorities on schools' collection and recording of data on pupils languages.

These data are coded by the DFE to identify students recorded by their schools as having English First Language (FLE) and those where the first language is other than English, i.e. have English as an Additional Language (EAL). A small number of students are recorded as first language 'Believed to be English' or 'Believed to be other than English' and these students are recorded within the FLE / EAL groups.

The NPD EAL variable clearly needs to be interpreted with some caution. It is explicitly 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. Indeed there is huge heterogeneity within the group coded as EAL. On the one hand, this might include second or third generation ethnic minority students who may be exposed to a language other than English as part of their cultural heritage but use it rarely if at all, using English as their everyday language and being quite fluent in it. At the other extreme it might include new migrants arriving in England that speak no English at all, and may have varying levels of literacy in their previous country of origin.



## **Ethnic group**

Data on young people's ethnic group is also collected in the NPD using the same 18 categories that are employed in the national population census. The current categories have been in use since 2003. Monitoring and analysis of achievement in relation to ethnicity is a key part of equalities duties in England. Ethnicity and EAL are very closely related, and we will consider how best to utilise and combine these two variables.

## **Specific first language**

Since 2008, where the students first language is not English, schools are asked to record the actual language (from a list of 322 language categories) that is their first language. It is not compulsory for schools to provide this data and where there are few EAL Students in a school they may just record 'Other', but missing data are rare. We shall draw on this data in the later stages of analysis in this report.

## **Growth in EAL since the 1990's**

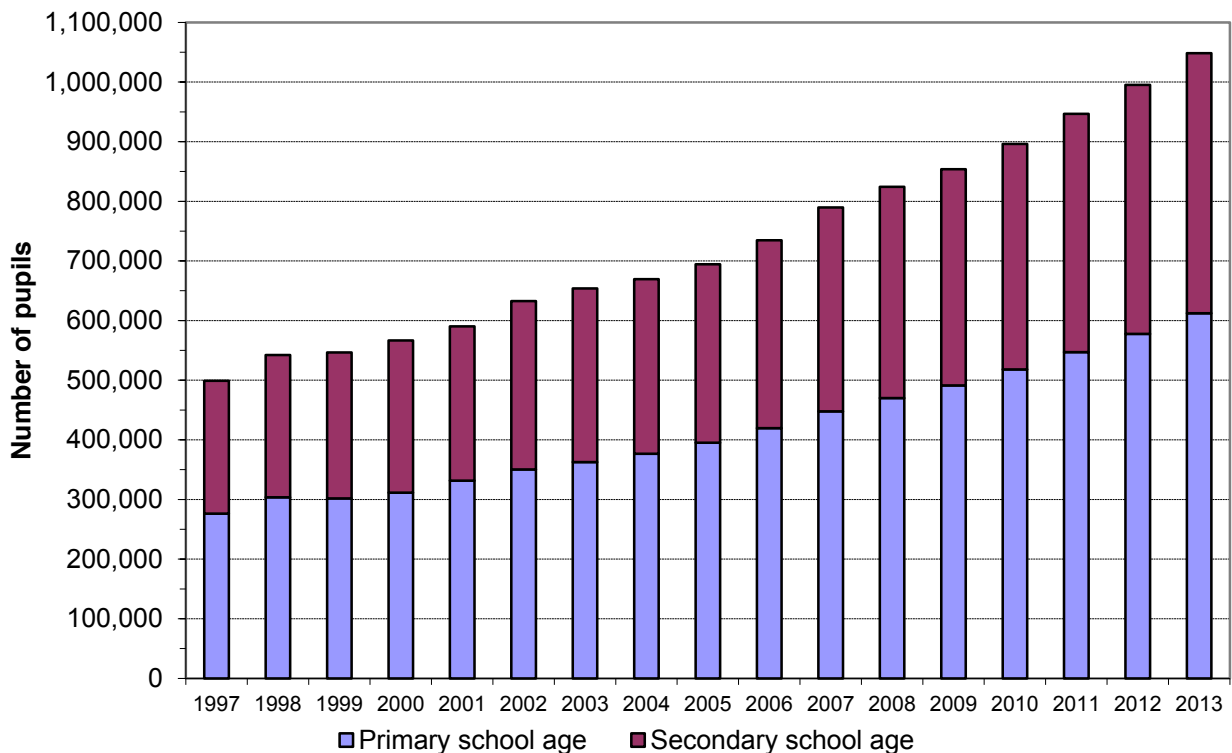
Table 2.1 below presents the number and proportion of students recorded with a first language other than English (EAL) for primary schools, secondary schools and all students age 5-16 over the last 17 years. There has been considerable increase both in the numbers and in the proportion of young people recorded as EAL. The proportion has increase from 7.6% of all students in 1997 to 16.2% in 2013. In total over a million students are now recorded in the NPD as EAL. Figure 2.1 presents the data in graph format.

**Table 2.1: Number and percentage of students with First Language Other than English (EAL) by year: England 1997-2013**

Year	Primary		Secondary		All Students		
	Number first language other than English	Percentage first language other than English	Number first language other than English	Percentage first language other than English	Total first language other than English	Percentage first language other than English	Percentage first language other than English
1997	276,200	7.8	222,800	7.3	499,000	7.6	
1998	303,635	8.5	238,532	7.8	542,167	8.2	
1999	301,800	8.4	244,684	7.8	546,484	8.1	
2000	311,512	8.7	255,256	8.0	566,768	8.4	
2001	331,512	9.3	258,893	8.0	590,405	8.7	
2002	350,483	10.0	282,235	8.6	632,718	9.4	
2003	362,690	10.4	291,110	8.8	653,800	9.7	
2004	376,600	11.0	292,890	8.8	669,490	10.0	
2005	395,270	11.6	299,200	9.0	694,470	10.5	
2006	419,600	12.5	314,950	9.5	734,550	11.2	
2007	447,650	13.5	342,140	10.5	789,790	12.2	
2008	470,080	14.4	354,300	10.8	824,380	12.9	
2009	491,340	15.2	362,600	11.1	853,940	13.5	
2010	518,020	16.0	378,210	11.6	896,230	14.1	
2011	547,030	16.8	399,550	12.3	946,580	14.9	
2012	577,555	17.5	417,765	12.9	995,320	15.6	
2013	612,160	18.1	436,150	13.6	1,048,310	16.2	

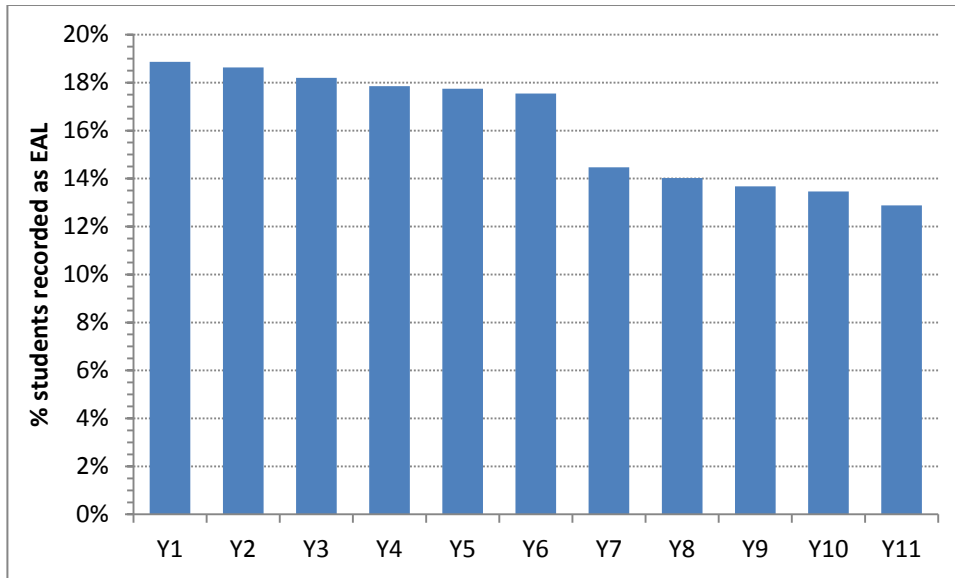
*Note: Percentages for 'all students' are a weighted average of the primary and secondary figures (authors calculation). Data originates from DFE SFRs but sourced from NALDIC website.*

**Figure 2.1: Number of students recorded as EAL by phase: England 1997-2013**



Looking across the two set figures, it can also be seen that higher percentages of EAL children is recorded in primary schools than in secondary schools. Figure 2.2 breaks down the most recent 2013 data by year group for Y1-Y11. Reception year is excluded because a relatively high proportion (11.3%) of children had no data recorded, whereas missing data amounted to no more than 60 children in any other year group, and Y12/Y13 are excluded because these are beyond statutory school age and the size of the cohort attending schools drops by more than half.

**Figure 2.2: Proportion of students recorded as EAL by year group: England 2013**



The gradual gradient *within* primary schools in %EAL across Y1-Y6, and the gradual gradient *within* secondary schools across Y7-Y11 is consistent with a birth trend, reflecting higher birth rates among ethnic minority groups. However the substantial discontinuity at secondary transfer where the proportion EAL drops from 17.5% in Y6 to 14.5% in Y7, suggests issues with recording as well, with secondary schools maybe reappraising and updating historical records from primary school. In these circumstances the overall figure for primary and secondary schools together may be the most reliable indicator of the incidence of EAL.

### **Ethnic minority growth**

While EAL is often taken as an indicator of ethnic minority students, the actual proportion is larger than indicated by the %EAL. Thus in 2013 while 16.2% of students aged 5-16 are recorded as EAL over one-quarter (26.6%) of all students are from ethnic minority groups. Table 2.2 presents the proportion of ethnic minority students and contrasts the 2003 and 2013 data. The base year is 2003 because it marked the introduction of a new set of ethnic codes inconsistent with previous years. The overall proportion of White British students has decreased from 83.2% to 73.4% of the school population, or conversely the ethnic minority population has increased from 16.8% in 2003 to 26.6% in 2013.

**Table 2.2: Proportion of ethnic minority students: England 2003 and 2013**

<b>Ethnic group</b>	<b>2003</b>	<b>2013</b>	<b>Change</b>
<b>White British</b>	<b>83.2%</b>	<b>73.4%</b>	<b>-9.9%</b>
<b>White Other</b>	<b>2.6%</b>	<b>5.0%</b>	<b>2.3%</b>
Irish	0.4%	0.3%	-0.1%
Traveller of Irish heritage	0.1%	0.1%	0.0%
Gypsy/ Roma	0.1%	0.3%	0.2%
Any other White background	2.1%	4.3%	2.3%
<b>Mixed</b>	<b>2.6%</b>	<b>4.6%</b>	<b>2.0%</b>
White & Black Caribbean	0.9%	1.4%	0.5%
White & Black African	0.2%	0.6%	0.3%
White & Asian	0.5%	1.0%	0.5%
Any other Mixed background	0.9%	1.6%	0.7%
<b>Asian</b>	<b>6.8%</b>	<b>10.2%</b>	<b>3.4%</b>
Indian	2.4%	2.6%	0.3%
Pakistani	2.7%	3.9%	1.3%
Bangladeshi	1.1%	1.6%	0.5%
Chinese	0.4%	0.4%	0.0%
Any other Asian background	0.6%	1.6%	1.0%
<b>Black</b>	<b>3.6%</b>	<b>5.3%</b>	<b>1.7%</b>
Black Caribbean	1.5%	1.4%	-0.1%
Black African	1.7%	3.3%	1.7%
Any other Black background	0.4%	0.6%	0.2%
<b>Any other ethnic group</b>	<b>0.8%</b>	<b>1.5%</b>	<b>0.7%</b>
<b>Total students aged 5-16</b>	<b>6,782,400</b>	<b>6,712,645</b>	<b>-1.0%</b>

*Note: Based on students of compulsory school age (5-16 years). Proportions exclude unclassified (4% of all students in 2003 and 1% in 2013). Data drawn from DFE SFR 09/2003 and DFE SFR 21/2013.*

The two groups with the largest absolute increases are Any Other White Background (from 2.1% to 4.3%) and Black African (from 1.7% to 3.3%). As we shall see later, nearly 70% of students within these two ethnic groups are recorded as EAL and the EAL achievement gap is particularly large for these two groups.

## **Concentration of EAL by Region, Local Authority and School**

### **Region**

There is substantial variation across the English regions in the proportion of students recorded as EAL. The lowest proportion is in the South West (5.9%) whereas the highest is in Inner London (55.9%).

**Table 2.3: Number and percentage of Primary school students recorded as EAL: Primary schools January 2013**

Region	English Additional Language (EAL)		Total roll
	N	%	
South West	18,545	5.9	312,370
North East	9,445	6.1	154,795
South East	62,565	11.6	540,275
East Midland	34,445	12.0	288,220
East of England	44,870	12.2	367,690
North West	61,850	13.2	466,865
Yorkshire and the Humber	55,540	15.8	350,585
West Midlands	74,445	19.9	374,400
London (Greater)	250,455	47.5	527,700
Outer London	146,525	42.9	341,700
Inner London	103,930	55.9	186,005
<b>England</b>	<b>612,160</b>	<b>18.1</b>	<b>3,382,900</b>

## Local Authority

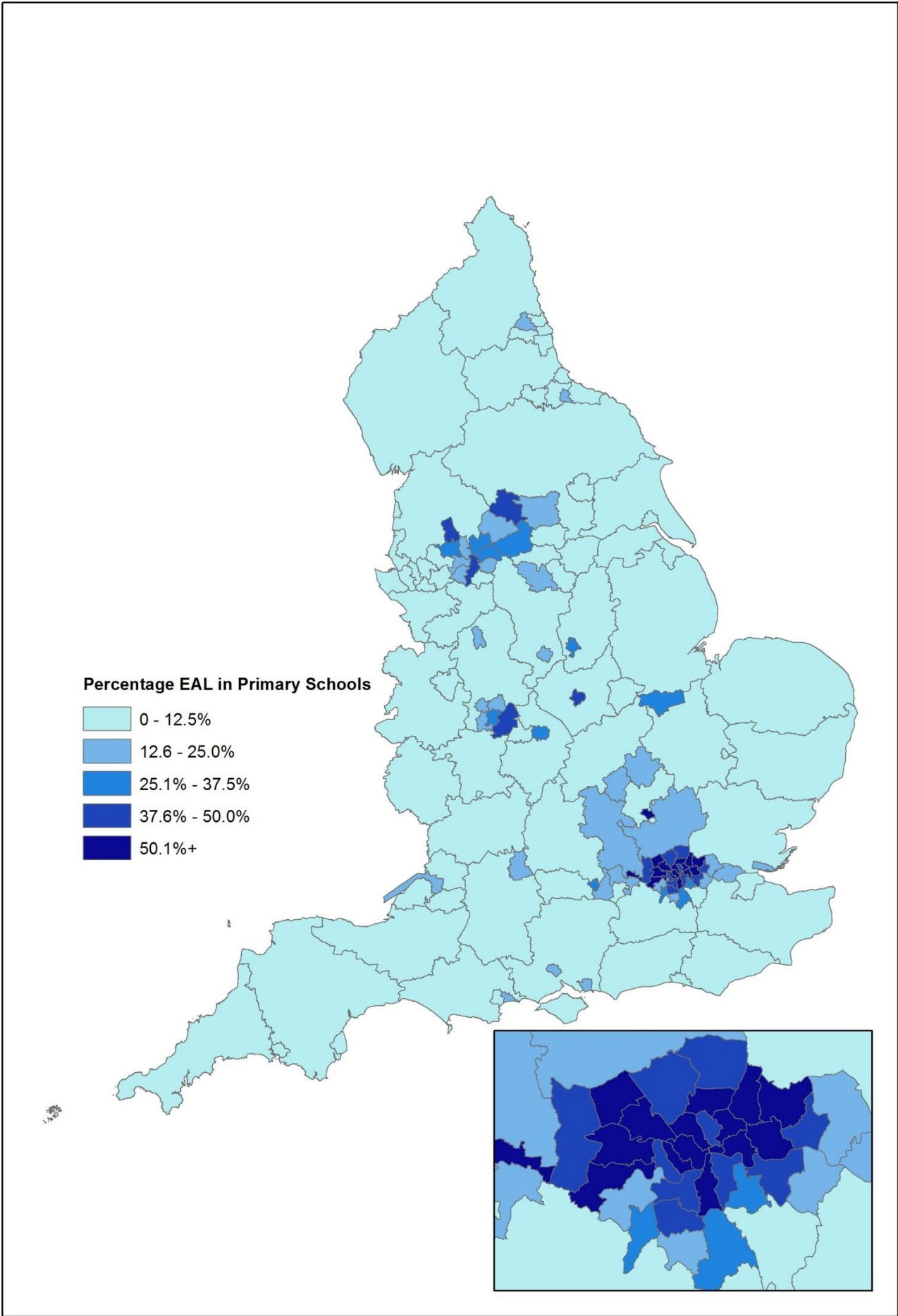
The two figures below present the 2013 percentages of EAL students for the 152 Local Authorities in England. Figure 2.3 presents the percentages for primary students while Figure 2.4 present the percentages for secondary students. The data has been banded into five groups ranging from those LAs with 0-12.5% EAL up to those with 50% or more of the population recorded as EAL. As might be expected, higher percentages of EAL students can be found in more urban areas – with concentrations in London<sup>3</sup>, the West Midlands, the North West and Nottingham.

To give a further idea of the variation across LAs Table 2.4 presents the 20 LAs with the highest, and the 20 LAs with the lowest, proportion of EAL students, based on the 2013 primary school census. Of the top 20 LAs all but three (Leicester, Luton and Slough) are located in London. Complete LA level data can be accessed from the Tables 10a and 10b in the EXCEL file<sup>4</sup> associated with DFE SFR 21/2013.

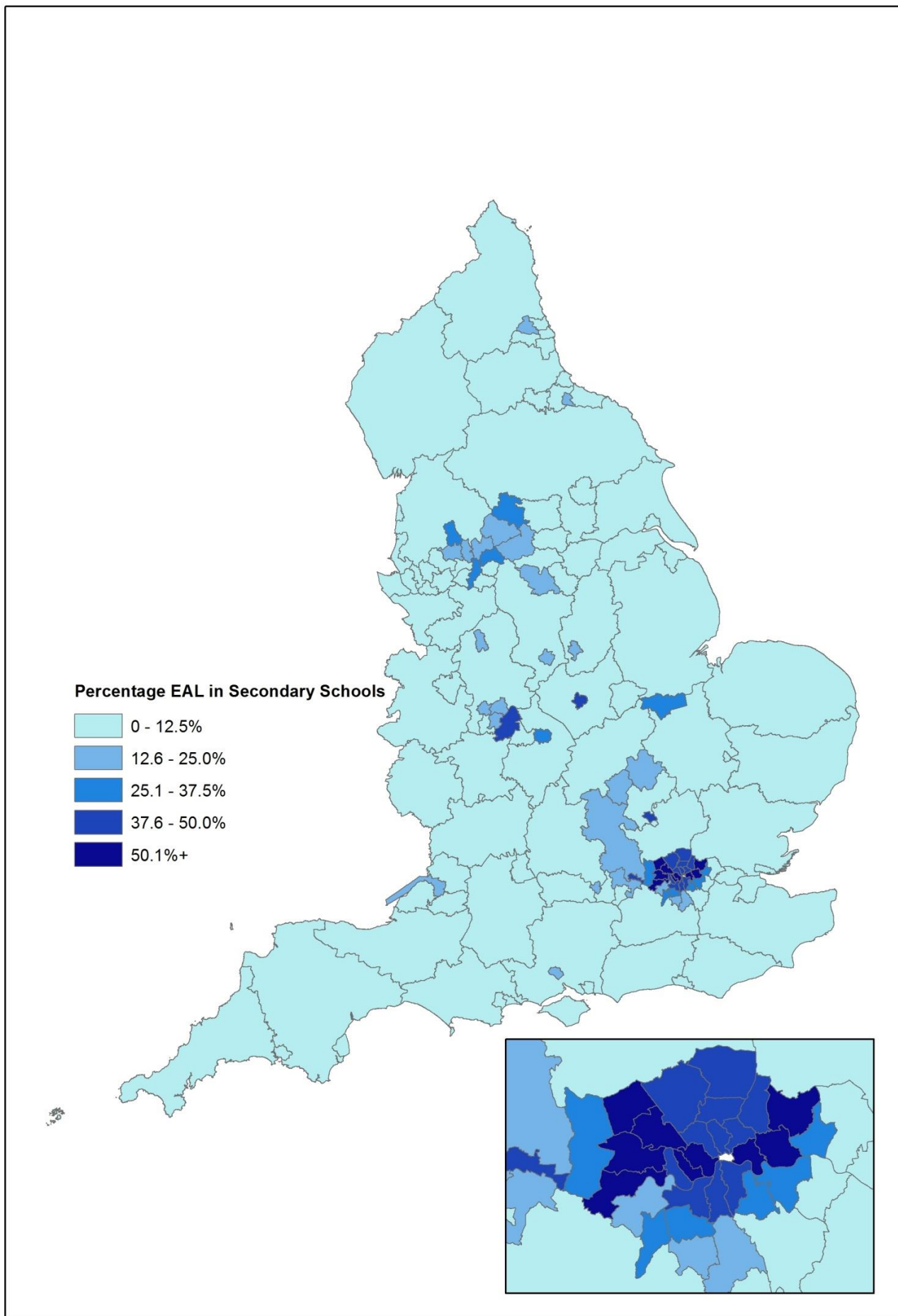
<sup>3</sup> The City of London has no state maintained secondary schools and so is blank in Figure 2.4.

<sup>4</sup> <https://www.gov.uk/government/publications/schools-pupils-and-their-characteristics-january-2013>

Figure 2.3. Percentage of English Primary School EAL students by Local Authorities: 2013



**Figure 2.4.** Percentage of English Secondary School EAL students by Local Authorities: 2013



**Table 2.4: Number and percentage of EAL students: Primary school January 2013**

Rank	Region	English Additional Language (EAL)		Total roll
		N	%	
1	Redcar and Cleveland	81	0.9	8,930
2	Halton	88	1.1	8,110
3	Derbyshire	772	1.6	47,230
4	Northumberland	227	1.7	13,275
5	St. Helens	204	1.8	11,585
6	Durham	590	1.9	31,065
7	Cornwall	594	1.9	31,840
8	Cumbria	596	2.0	29,510
9	Knowsley	211	2.1	10,275
10	Rutland	51	2.3	2,180
11	Dorset	472	2.3	20,195
12	East Riding of Yorkshire	500	2.5	20,290
13	Shropshire	436	2.6	16,855
14	Isle of Wight	198	2.6	7,600
15	Devon	1,235	2.9	43,075
16	Sefton	513	3.0	16,980
17	North East Lincolnshire	318	3.0	10,630
18	North Yorkshire	1,062	3.0	35,085
19	Wirral	639	3.1	20,675
20	Cheshire West and Chester	688	3.3	20,945
132	Barking and Dagenham	8,538	48.2	17,705
133	Leicester	11,176	48.5	23,045
134	Hammersmith and Fulham	3,815	49.2	7,755
135	Lambeth	8,514	49.9	17,070
136	Luton	8,862	50.9	17,395
137	Haringey	9,511	54.2	17,550
138	Waltham Forest	10,098	55.3	18,270
139	Kensington and Chelsea	3,149	55.7	5,650
140	Hackney	8,149	56.0	14,550
141	Slough	6,541	57.5	11,375
142	Harrow	9,261	59.4	15,600
143	Hounslow	9,956	61.0	16,310
144	Camden	5,549	61.9	8,965
145	Redbridge	13,419	61.9	21,665
146	Ealing	14,431	63.7	22,660
147	Brent	13,537	66.7	20,285
148	City of London	128	72.3	175
149	Westminster	6,307	72.3	8,725
150	Newham	19,438	74.8	25,985
151	Tower Hamlets	14,194	76.1	18,645

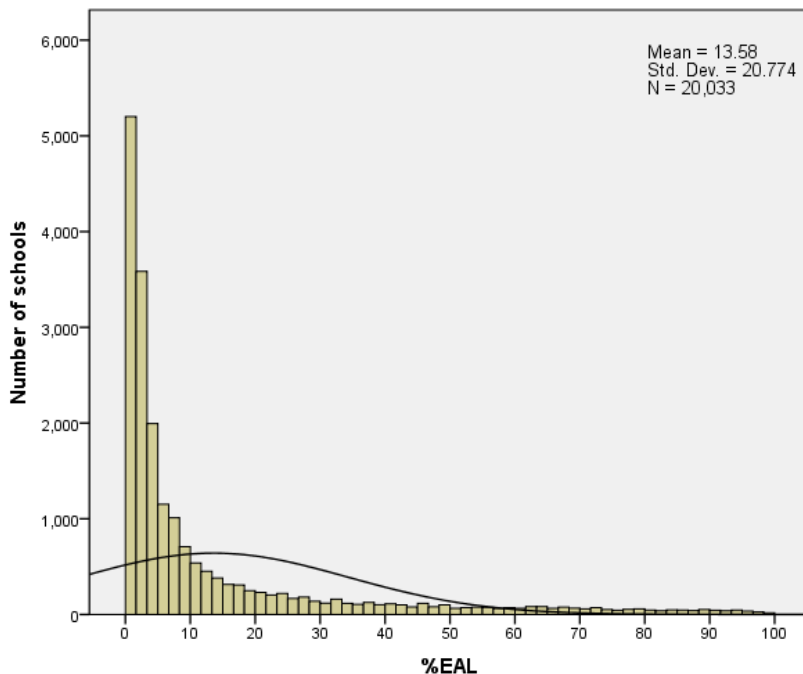


## Concentration of EAL within schools

We used the School Level Database (SLD) from the ASC January 2013 to examine the variation in the proportion of EAL students at the school level. We selected all maintained, mainstream schools in England. Additionally we eliminated 32 very small maintained schools (10 or fewer students on roll). The resulting population contained 20,033 schools.

The mean proportion of EAL students in a school was 13.6% (SD 20.8%), but the distribution was extremely skewed. Figure 2.5 presents a histogram of %EAL and Table 2.5 places the data into bands.

**Figure 2.5: Percentage of EAL students in maintained, mainstream schools in England.**



**Table 2.5: Percentage of schools with different concentrations of EAL students 2013.**

% EAL students	Frequency	Percent	Cumulative %
0.0 - 1	4435	22.1	22.1
1.1 - 5	6346	31.7	53.8
5.1 - 10	2870	14.3	68.1
10.1 - 20	2240	11.2	79.3
20.1 - 30	1142	5.7	85.0
30.1 - 40	730	3.6	88.7
40.1 - 50	589	2.9	91.6
50.1+	1681	8.4	100.0
Total	20033	100.0	

Almost a quarter of all schools (22.1%) have less than 1% EAL, and over half (54%) have less than 5% of student with EAL. However at the other extreme 1,681 schools (8.4%) have a majority of students with EAL. This does not support headlines such as that in the Daily Telegraph (31/01/14) that "English is no longer the first language for the majority of pupils at

one in nine schools", the actual figure is 1 in 12 schools<sup>5</sup>. Nevertheless this is still a substantial number of schools.

While 919 of the 1,681 schools (54% of the primary schools and 61% of the secondary schools) are located in London, a large number are located in the West Midlands (n=201), North West (179) and Yorkshire & the Humber (157). Thus the schools with the highest concentrations of EAL students are not necessarily located in the capital, despite the impression that might be gained from the regional and even 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.

**Table 2.6: Number and location of schools with a majority (>50%) of students recorded as EAL**

Region		Phase		Total
		Primary	Secondary	
1 North East	N	12	0	12
	%	.8%	0.0%	.7%
2 North West	N	160	19	179
	%	11.1%	8.0%	10.6%
3 Yorkshire and The Humber	N	138	19	157
	%	9.6%	8.0%	9.3%
4 East Midlands	N	71	11	82
	%	4.9%	4.6%	4.9%
5 West Midlands	N	171	30	201
	%	11.9%	12.6%	12.0%
6 East of England	N	43	8	51
	%	3.0%	3.4%	3.0%
7 London	N	774	145	919
	%	53.6%	60.9%	54.7%
8 South East	N	63	5	68
	%	4.4%	2.1%	4.0%
9 South West	N	11	1	12
	%	.8%	.4%	.7%
Total	N	1443	238	1681
	%	100.0%	100.0%	100.0%

<sup>5</sup> . The Daily Telegraph article was based on 15,288 schools rather than the full 20,033 analysed here. We suspect they omitted a large number of schools who do not have a numeric score on the First Language variables but the symbol ('x' or '>') indicating 'only one or two pupils' and '>99%' respectively. Omitting these schools bias the calculations. The number of schools in our analysis tallies with the number of schools presented in Table 7a of DFE SFR 21/2013].

## EAL and achievement gaps

### EAL gap at different stages (FSP, KS1, KS2, KS4)

Table 2.7 below presents an analysis of national assessment results from 2013 from the Early Years Foundation Stage Profile (EYFSP) at age 5, end of KS1 teacher assessment at age 7, end of KS2 tests at age 11 and GCSE and other public examinations at age 16. At each age we report where possible separately on results for reading and mathematics as well as the overall measure of achievement. For each outcome we report the percentage of EAL students and the percentage of FLE students achieving the outcome. We also report the Odds Ratio (OR). The advantage of using the OR is it lets us evaluate how large the EAL/FLE gap is at different ages in a consistent form. While the specific assessment may vary at age 5, 7, 11 and 16, the OR gives us a consistent measure of the EAL gap.

**Table 2.7: 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 %	Odds Ratio
5	EYFSP	Reading	At least expected level	SFR 2013-47	73	63	0.63
		Maths	At least expected level		71	62	0.67
		Overall	Good level of Development (GLD)		54	44	0.67
7	KS1	Reading	Level 2A+	SFR 2013-37 (Table 14)	57	48	0.70
		Maths	Level 2A+		53	46	0.76
		Overall	Average Re + Ma (2A+)		55	47	0.73
11	KS2	Reading	Level 4B+	SFR 2013-51 (Table 8b)	77	69	0.65
		Maths	Level 4B+		74	72	0.90
		Overall	Level 4B+ in RWM		64	59	0.81
16	KS4	English	GCSE A*-C pass	SFR 2014-05	68.8	64.6	0.83
		Maths	GCSE A*-C pass		71.2	71.8	1.03
		MFL	GCSE A*-C pass		32.3	47.5	1.90
		Overall	5+A*-C Incl. En & Ma		60.9	58.3	0.90
		Overall	EBacc achieved		22.5	24.4	1.11

#### Notes

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

A number of features of the results are worthy of comment.

- We can see that 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 students compared to FLE students. Put another way for every three FLE children who achieve a GLD only two EAL children do so. We conclude that, 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 on average achieve lower results than those with FLE.

- However we note that 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 students achieving 5+A\*-C EM compared to 60.9% of FLE students) and no gap at all for the broader measure of Best 8 points score (see Chapter 4).
- Another notable feature of the data is the strong difference in results for reading and mathematics. EAL students scores in maths assessments are always 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).
- A fourth point is that there are measures where EAL students achieve higher results than FLE students. For example EAL students 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 students to achieve an GCSE A\*-C in a Modern Foreign Language.

While this data is cross-sectional rather than longitudinal, the conclusion that EAL gaps decreases with age is supported by the longitudinal data that tracks individual student's progress over time. In terms of making two or more NC levels of progress, EAL students make more progress than those with FLE, both between age 7-11 and age 11-16 (The relevant data are presented in part 3). **We conclude that where English may not be the main language of the home this may be associated with lower achievement on starting school, but that this effect reduces markedly with age and is essentially eliminated by age 16.**

When we look at the variability in achievement within students recorded as EAL, the range of achievement is as wide as for FLE students. In short, the heterogeneity within the EAL group is so large that the average EAL gap is fairly meaningless, it is the individual variability within EAL group that is important in identifying need, and this is not picked up within the NPD. Factors such as recency of arrival in the UK and stage of fluency in English are key factors, and schools need their own systems to identify need and record the progress of these students.

## Part 3: Measures used and EAL gaps at age 11 and at age 16

This first part of the chapters describes some of the data from the National Pupil Database (NPD) used in the analysis and the general analytic approach taken.

The second half of the chapter presents the associations between EAL and attainment in a range of national tests and examinations at age 11 and age 16. The key results are:

- At age 11 EAL students achieve a KS2 average points score approximately 0.60 points (just over 2 NC months) below FLE students. Only for reading is there any sizeable gap (1.3 points or 5 NC months) with no gap in the mathematics or the grammar, punctuation & spelling tests.
- By age 16 EAL students are at par with FLE students with regard to their best eight points scores and achievement in maths. While they lag slightly behind FLE students in English this is by less than one-quarter of a GCSE grade, while they strongly outperform FLE students in foreign languages by more than a full GCSE grade.
- Where EAL students have a prior attainment score at age 7, and presumably therefore have been resident in England for the whole of KS2, they make greater progress than their FLE peers closing the gap between age 7 and age 11. The same is true during secondary school. Thus although EAL students lag slightly behind their FLE peers at age 11 they make greater progress age 11-16 and have caught up with their FLE peers by age 16.

### Analytic approach

The general approach of the report is to build from simple descriptive statistics, through to bivariate analyses and on to contextual models that explore the associations between EAL as recorded in the NPD and student attainment, while controlling for a wide range of other student and school level variables. Both Contextualised and Contextual Value Added (CVA) models will be computed using both student level and school composition measures. Separate analyses are completed for KS2 and KS4 outcomes.

The next part of this section briefly summarises some of the key data derived from the NPD and then finishes by describing the extent of the EAL gap in a range of national attainment measures completed by students at the end of KS2 and the end of KS4.

# Description of Measures

## KS2 attainment

### Points scores

The best measures for analysing differences in educational attainment are the more differentiated, continuous measures of attainment expressed as points scores. We use the fine-grade versions<sup>6</sup> where available to undertake analysis of the following:

- Average Points Score (APS) - average of the reading test, writing teacher assessment (TA) and mathematics test results<sup>7</sup>.
- Reading test (fine-grade)
- Grammar, punctuation and spelling test (GPS)
- Writing Teacher Assessment (TA)
- Mathematics test (fine-grade)

### NC Months

The original conception of National Curriculum (NC) levels as set out in the Task Group on Assessment and Testing (TGAT) report, 1988, was that each level equated to approximately two years of progress. Thus the typical pupil would achieve level 2 at age 7 and level 4 at age 11, i.e. a level every two years. Since two years represents six terms, test outcomes are often expressed as points scores with each point representing one term (or 4 NC months) of typical progress. As a rough rule of thumb, we consider 0.50 points, or 2 NC months, as a threshold for a notable effect.

### Threshold measures

We also report the proportion of students achieving Level 4B or above in (i) reading, writing and maths (RWM) as this is the headline threshold measure, and (ii) in the reading, GPS and mathematics tests separately. Threshold measures are generally less sound than the continuous measures for modelling because they are sensitive to small changes in performance at the threshold. Nevertheless they can provide useful summary indicators, particularly if any decisions of consequence follow from achieving or not achieving a threshold. For example students not achieving Level 4 or above by the end of KS2 are eligible for funding for catch up classes in Y7, so the threshold has some consequence. We also report the government's "Progress measures" for reading, writing and maths, specifically the percentage of students making two or more levels progress between KS1 and KS2.

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<sup>6</sup>. See Appendices to part 3 for description of how fine grades are calculated.

<sup>7</sup>. DFE specifically calculate this as  $[(\text{reading fine-grade} + \text{writing TA}) / 2] + \text{Maths fine-grade} / 2$ .

## KS4 Attainment

### Points scores

As above, the best measures for analysing differences in educational attainment are the more differentiated, continuous measures of attainment expressed as points scores. GCSE grades are expressed as point scores on the following scale: U/X= 0, G= 16, F= 22, E= 28, D= 34, C= 40, B= 46, A= 52, A\*= 58. In the analysis we use the following outcomes:

- Best 8 points score (as an overall summary)
- GCSE English, Mathematics and Modern Foreign Language (MFL) scores.

The Best 8 points score is an overall summary of achievement, indicating the sum of the eight best results of all KS4 exams taken by a student<sup>8</sup>. As an example of this metric the national average score (347.0) represents roughly 4Cs and 4Bs ( $4 \times 40 + 4 \times 46 = 344$ ), while 8 C's ( $8 \times 40$ ) would equate to 320 points and eight Bs ( $8 \times 46$ ) to 368 points. As a rough rule of thumb, we would consider a gap of 16 points (one-third of grade in all eight subjects) as a reasonable threshold for note.

### Threshold measures

Though the modelling is done with Best 8 score we also report the percentage of students achieving 5 or more GCSE A\*-C grades or equivalent including English and Maths as the current summary measures of success at age 16, as well as the percentage achieving the EBacc and the percentage achieving A\*-C grades in GCSEs in English, maths and foreign languages.

## Student Background Measures

The following variables were drawn from the NPD.

- Age: completed months within year group (mean=0, range -5 through to 6). For summary purposes expressed in some tables as the birth season (autumn, spring or summer born).
- Gender: (Boy/Girl).
- Ethnicity: The 18 major ethnic groups used in all government surveys.
- EAL: a simple binary indicator (0/1) using the definition as described in Part 1.
- Pupil Mobility: Flags for changing schools at a non-standard times.
- Special Educational Needs (SEN): Indicators for being at one of four stages of need: (i) no indicated SEN; (ii) School Action, (iii) School Action Plus and (iv) a formal statement of SEN.
- The student's first language: The full list identifies 322 languages, but many are sub-categories or variants e.g. Bengali (main category), Bengali (Sylheti), Bengali

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<sup>8</sup> . Including GCSE equivalent qualifications such as BTECs. Where a student has less than eight GCSEs zeros are recorded.

(Cittagong/Noakhali) or Bengali (any other). Combining these gives a list of 254 main languages which we employ.

- New Arrival in England: this was proxied by the absence of a prior attainment score at the previous key stage.
- Socio-economic Disadvantage (SED)
  - Student level: Entitlement to a Free School Meal (FSM)
  - Neighbourhood level: The Income Disadvantage Affecting Children Index (IDACI). this is normal score transformed so the mean=0 and the SD=1. Higher scores indicate greater disadvantage.
- Geographical Region: the nine geographical regions of England.
- Prior attainment
  - KS1 average points score (reading, writing and maths)
  - KS2 average points score (reading, writing and maths)

## School composition measures

We used the School Level Database (SLD) 2013 to create school level variables. We selected only maintained, mainstream primary and secondary schools. This included all types of maintained primary and secondary schools, including LA maintained, foundation, academies, CTCs, Free Schools, Studio Schools and UTCs. It excluded nursery schools, Special schools, Pupil Referral Units and independent schools (the later do not complete the school Census anyway). The reason for excluding special schools and PRUs was both their atypical populations and the fact that they tend to be small establishments, generating unstable estimates of composition. We also excluded 32 schools with 10 or fewer students on roll, again because their averages will be very volatile. This gave a total of 20,033 schools (16,720 primary or middle deemed primary and 3,313 secondary or middle deemed secondary). The specific variables and their summary statistics are given in Table 3.1.

For primary schools the number of children in an individual Year 6 cohort is typically small (mean= 35.6, SD=20) percentage estimates based on just the Y6 cohort are likely to have a high level of variability. Therefore in the KS2 analysis we used the whole school figures from Table 3.1 as the measures of school composition.

In contrast, secondary schools are typically much larger and composition variables can be calculated directly for the cohort with greater stability. Therefore in the KS4 analysis rather than the above whole-school measures separate variables were calculated for the Y11 cohort. In the table below we show the figures for the Year 11 students included in the analyses of this report, in total 567,044 students in 3,023 maintained mainstream schools with Y11 students (NB 20 schools with <10 Y11 students were excluded). The descriptives (means and SDs) were very similar to those of all secondary school students above. Indeed the %FSM correlated 0.97 and %EAL 0.98. However using Y11 data allowed 23 secondary schools who did not appear in the SLD to be included.



**Table 3.1: Descriptive statistics for whole-school composition measures by school phase**

School phase and variable	N	Min.	Max.	Mean	SD
<b>Primary schools</b>					
School size (age 5-16 roll)	16720	15	840	201.5	114.1
% Entitled FSM	16720	0	75	16.7	13.2
Mean IDACI decile	16720	1	10	5.6	2.8
% English Additional Language (EAL)	16720	0	99	13.6	21.1
% White British	16720	0	99	76.7	26.7
1 Maintained/VA/Foundation	15728	0	1	94.1	-
2 Academy-Converter	772	0	1	4.6	-
3 Academy-Sponsored	194	0	1	1.2	-
4 Other (Free school, CTC, UTC, Studio)	26	0	1	.2	-
<b>Secondary schools</b>					
School size (age 5-16 roll)	3313	15	2525	971.2	394.9
% Entitled FSM	3313	0	88	16.1	12.1
Mean IDACI decile	3313	1	10	5.6	2.8
% English Additional Language (EAL)	3313	0	99	13.3	19.1
% White British	3313	0	99	75.2	27.1
1 Maintained/VA/Foundation	1672	0	1	50.5	-
2 Academy-Converter	1187	0	1	35.8	-
3 Academy-Sponsored	401	0	1	12.1	-
4 Other (Free school, CTC, UTC, Studio)	53	0	1	1.6	-

*Note: Data for primary schools includes both infant and Junior schools. The number of Junior or JMI schools serving Y6 students is smaller at approximately 14,710 schools.*

**Table 3.2: school aggregated measures for secondary schools derived from Y11 cohort**

Variable	N	Min.	Max.	Mean / %	SD
Year group size (Year 11)	3023	13	593	185.3	62.4
% Girls	3023	0	100	49.5	18.8
% Entitled FSM	3023	0	84	15.0	12.2
Mean IDACI (normal score)	3023	-1.8	2.1	0.0	0.66
Mean IDACI decile	3023	1	10	5.4	1.9
% SEN (School Action Plus or above)	3023	0	49	8.2	5.8
% Moved non-standard times	3023	0	100	9.3	9.7
% English Additional Language (EAL)	3023	0	100	13.2	19.7
% White British	3023	0	100	76.0	27.1
1 Maintained	835			27.6%	
2 Voluntary aided	395			13.1%	
3 Foundation	373			12.3%	
4 Academy-Converter	1045			34.6%	
5 Academy-Sponsored	360			11.9%	
7 Other (Free school, CTC, UTC, Studio)	15			0.5%	

### Further NPD documentation

Technical documents describing the NPD can be found on the DFE website at: [http://www.education.gov.uk/schools/performance/primary\\_13/documents.html](http://www.education.gov.uk/schools/performance/primary_13/documents.html).

# EAL Gaps in Educational Attainment

## Key Stage 2 (KS2)

### Achievement

The dataset analysed included 524,621 students whose EAL status was known and were attending 14,710 maintained, mainstream primary schools in England. Table 3.X shows the differences between the educational attainment of students recorded as EAL or FLE in terms of continuous attainment scores. The EAL gap is expressed in terms of NC points scores and in a standardised form as an effect size (Cohen's d).

According to convention on effect sizes all the EAL gaps are extremely small. The only gap of any substantial size was on the reading test (1.3 points), indicating the average EAL student was around 5 NC months behind the average FLE student. There were smaller gaps for writing (0.8 points or 3 NC months) and APS (0.6 points or 2 NC months), and only trivial differences in the GPS and the mathematics tests.

**Table 3.3. KS2 continuous measures: England 2013**

KS2 attainment	EAL Students (n=89,965)		FLE Students (n=431,506)		Mean EAL- FLE gap	Effect Size (Cohen's d*)
	Mean	SD	Mean	SD		
Average Points Score <sup>†</sup>	28.0	5.07	28.6	4.47	-0.60	-0.13
Reading test <sup>†</sup>	27.3	5.43	28.6	4.76	-1.28	-0.25
Grammar, punctuation & spelling (GPS) test	28.2	5.96	28.2	5.61	0.03	0.01
Writing TA	27.1	5.24	27.9	4.68	-0.78	-0.16
Maths test <sup>†</sup>	28.7	5.69	28.9	5.14	-0.18	-0.03

*Notes: \* Cohen's d calculated using the pooled SD. Cohen (1988) gives minimum thresholds for small, moderate and large effect sizes of 0.20, 0.50 and 0.80 respectively. † Fine grade scores. TA= Teacher Assessment.*

The differences between EAL and FLE students in the percentages of students who achieved the KS2 threshold of Level 4B or above are presented in Table 3.4. The table presents both the percentage point difference and as the effect size measure the Odds Ratio (OR). ORs less than 1 indicate fewer EAL students than FLE students achieve the threshold, while ORs above 1 indicate more EAL than FLE students achieve the threshold.

The largest differences were again found for reading, with over eight percent fewer EAL students achieving Level 4B+. In terms of effect size this was the only difference to reach conventional levels of note. As with the continuous measures of attainment, there was little disparity when it came to the mathematics test, and indeed the odds of EAL students achieving level 4B+ on the GPS test were slightly higher than for FLE students.

**Table 3.4. KS2 threshold measures: Percentage differences between EAL and FLE students 2013**

Level 4B or above in:	EAL percentage level 4B+ (n=91,827)	FLE percentage level 4B+ (n=433,430)	Gap (EAL - FLE)	Effect Size (Odds Ratio*)
Reading, Writing and Mathematics (RWM)	59.1%	64.8%	-5.6%	0.78
Reading test	68.5%	76.9%	-8.4%	0.65
Grammar, Punctuation & Spelling (GPS) test	66.2%	65.1%	1.1%	1.05
Maths test	72.4%	74.2%	-1.8%	0.91

*Notes: \* Cohen's (1988) minimum thresholds for small, moderate and large OR effect sizes are 1.5 (or 0.67), 3.5 (or 0.29), and 9 (or 0.11) but many would consider these extremely conservative.*

## Progress

Table 3.3 presents the proportion of students making 2 or more levels progress between age 7 and age 11 *progress* rather than *attainment*. The progress of EAL children was found to be *greater* than that of FLE children particularly for mathematics. This means that although there was a small tendency for EAL students to have lower achievement at KS2, on average those recorded as EAL had made more progress over the past four years (since Key Stage 1). In other words, EAL students are commonly behind, but are also catching up, by the time of Key Stage 2 national assessments.

**Table 3.5: KS2 progress for EAL and FLE students: England 2013**

2 or more levels of progress KS1-KS2	Percentage EAL Students achieving (n=79,471)	Percentage FLE Students achieving (n=427,757)	FLE - EAL	Effect Size (Odds Ratio*)
Reading	89.6%	88.7%	-0.93%	1.10
Writing	93.3%	92.2%	-1.07%	1.17
Mathematics	91.5%	88.3%	-3.24%	1.43

Of course excluded from the progress measures are EAL students who entered the country during the course of KS2 and therefore do not a valid KS1 (age 7) score. We shall explore this as a factor in the analysis to follow in Part 4.

## Key Stage 4 (KS4)

### Achievement

The Key Stage 4 (KS4) sample included 555,373 students for whom EAL status was known attending 2,997 maintained mainstream schools. The average Y11 group contained 85 students (SD = 62.4, range = 13 -593). The differences between the educational attainment of the 70,897 EAL students (12.8%) and 484,476 FLE students (87.2%) are shown in Table 3.X. The EAL gap is expressed in terms of point scores and in a standardised form as an effect size (Cohen's d).

The EAL gaps presented in Table 3.1 are negligible for Best 8 points score and for mathematics. The average score for EAL students was slightly below FLE students in English (1.6 points or about one-quarter of a GCSE grade,  $d=-0.15$ ). EAL students clearly outperform FLE students in foreign languages (i.e., any language of their choice including community languages) a gap of 7.8 points or over a whole GCSE grade higher ( $d = 0.36$ ). This does not just reflect community languages since the advantage was maintained for a measure including only the three main taught modern foreign languages (German, French or Spanish) where EAL students outperformed FLE students by 2.3 points (Cohen's  $d= 0.24$ ).

**Table 3.6. KS4 continuous assessments: Mean differences between EAL & FLE students 2013**

Key Stage 4 Measures (Continuous)	EAL students (n = 70,897)		FLE Students (n = 484,476)		Mean gap (EAL-FLE)	Effect Size (Cohen's d <sup>a</sup> )
	Mean	SD	Mean	SD		
Best eight points score	347.8	77.4	347.0	73.4	0.8	0.01
English <sup>b</sup>	38.5	11.1	40.1	10.2	-1.6	-0.15
Mathematics <sup>b</sup>	40.0	11.3	39.9	12.1	0.1	0.01
Any foreign language <sup>bc</sup>	27.0	23.5	19.2	21.4	7.8	0.36
French/German/Spanish <sup>d</sup>	43.1	9.8	40.8	9.5	2.3	0.24

**Notes:**

<sup>a</sup> = Cohen's (1988) minimum thresholds for small, moderate and large d effect sizes are 0.20, 0.50 and 0.80.

<sup>b</sup> = the following points are awarded for each GCSE grade respectively: U/X=0, G= 16, F= 22, E= 28, D= 34, C= 40, B= 46, A= 52, A\*= 58. <sup>c</sup> = Any foreign language including community languages (see Appendix to Part 6 for a list). <sup>d</sup> = French, German or Spanish only (based 241,545 students who entered for these exams whereas all other measures based on whole cohort with 0 recorded for not entered). Where a student sat two (n= 15,147) or three (n= 225) languages only the highest score was used.

In Table 4.2. we present the percentages of students who achieve the threshold of Grade C or above. These findings are consistent with the findings presented in Table 4.1.

**Table 3.7. Key Stage 4 threshold assessments: England in 2013**

<b>KS4 threshold measures (% achieving Grade C or above)</b>	<b>EAL students (n = 70,897)</b>	<b>FLE Students (n = 484,476)</b>	<b>Gap (EAL – FLE)</b>	<b>Effect Size (OR)</b>
5 or more A*-C or equivalent including English & maths	59.2%	62.2%	-3.0%	0.88
English A*-C	65.5%	70.2%	-4.7%	0.81
Mathematics A*-C	72.7%	72.7%	0.0%	1.00
Any language A*-C	47.4%	31.7%	15.7%	1.92
Modern Foreign language A*-C	74.9%	67.4%	7.5%	1.45

## Progress

Table 4.3 present student progress age 11-16. The first and more sensitive measure uses fine-grained points score to calculate age 11-16 value-added scores where 0 indicates expected progress. EAL students make 2.3 points more progress than FLE students in English (almost half a GCSE grade  $d=0.32$ ) and 3.2 points more progress in maths (or over half a GCSE grade,  $d= 0.46$ ). A higher percentage of EAL than FLE students make 2 or more levels of progress, with Odds Ratios of 1.50 and 1.60 for English and maths respectively.

**Table 3.8. Age 11-16 progression measures for EAL and FLE students: England in 2013**

<b>Student progress age 7-11</b>	<b>EAL students (n = 70,897)</b>			<b>FLE students (n = 484,476)</b>			<b>EAL-FLE gap (VA score / %2+lev)</b>	<b>Effect Size (Cohen's d / Odds Ratio)</b>
	Mean VA score	SD	% 2+ levels	Mean VA score	SD	% 2+ levels		
English	<b>2.0</b>	6.1	<b>78.2</b>	<b>-0.2</b>	7.2	<b>70.9</b>	2.3 / 7.4	0.32 / 1.50
Mathematics	<b>2.8</b>	6.7	<b>79.6</b>	<b>-0.4</b>	6.9	<b>71.1</b>	3.2 / 8.5	0.46 / 1.60

*Note: Value added scores are the variables KS4\_ENGVASCR and KS4\_MATVASCR in the NPD. 2+ levels progress threshold are the variables KS4\_Flag24ENGPrg and KS4\_Flag24MATPrg in the NPD.*

## Part 4: Risk and resilience factors in the attainment of EAL students

We completed separate regression analyses of student background with attainment within EAL and FLE groups to identify the biggest risk/resilience factors for EAL students and to be able to compare the size of the risk between EAL and FLE students. There were few differences between KS2 and KS4, so below we report the KS2 results. The main risk factors among EAL students in rough order of impact were:

- **Identified SEN:** Compared to students with no recorded SEN, EAL students at School Action, School Action Plus and with statements were 16, 24 and 40 NC months behind respectively.
- **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 (17%) than FLE students (2%) and had a very large impact on achievement for EAL students but no any impact for FLE students. The average EAL international arrival achieved a KS2 score 12 NC months below a stable EAL student, but among FLE students there was no impact on KS2 score.
- **Pupil mobility:** In addition to the above, EAL students joining their primary school in Y5 and Y6 were a further 4 and 12 NC months respectively behind those joining in Y3/4 or those who remained in the same school throughout KS2, again strikingly more negative associations than for FLE students.
- **Ethnic group:** EAL students from the White Other (10 NC months), Black African (4 NC months) and Pakistani (4 NC months) ethnic groups were substantially more at risk than their peers from the same ethnic group but with FLE.
- **Entitlement to FSM:** EAL students entitled to FSM on average scored around 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 1SD above the average deprivation scored around 4 NC months lower than a student from a neighbourhood 1 SD below the average deprivation.
- **Region:** 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 were 8 NC months below their London peers.
- **Age:** Younger students tended to achieve lower scores than older students with a 0.50 point (2 NC months) difference across a 6 month age range.
- **Gender:** EAL boys on average achieved just 1 NC month lower than EAL girls.

## Introduction

The analysis in the previous chapter showed that overall students recorded as EAL lag slightly behind at KS2 in terms of average achievement. However it is well known that risks to educational attainment (such as EAL status) do not impact in isolation from others and that the effects of risks can vary between different groups of students (Luthar, 2003; Schoon, 2006; Hall *et al.*, 2013). The analyses of this section aims to elaborate upon these possibilities. With a focus on overall attainment, we evaluate the association between student background measures and achievement separately for EAL and FLE students. We consider both simple descriptive statistics and modelling to indicate the unique associations of each background variable with attainment after adjusting for all other background measures.

The analyses seek to address the following two key questions:

- How do a range of student background variables impact on the educational achievement of EAL students?
- Are the 'risk-factors' for low achievement for EAL students the same as the risk factors for FLE students?

## Key Stage 2

Table 4.1 presents the associations between nine student background measures and the KS2 Average Points Score (APS) of EAL and FLE students. We discuss the results in the Table in two parts:

- First, we look specifically at the association between ethnicity and EAL with achievement. This is important because, as we shall see, the two measures are very closely related.
- Second, we look at the associations between the rest of the student background factors and EAL with achievement.

**Table 4.1: KS2 Average Points Score by student background: EAL and FLE students 2013**

Variable	Value	EAL				English First (EF)			
		KS2 aps fine-grade			Level 4B+ RWM	KS2 aps fine-grade			Level 4B+ RWM
		Mean	N	SD	Mean	Mean	N	SD	Mean
Gender	girl	<b>28.1</b>	44388	4.9	60.9%	<b>28.8</b>	211553	4.2	66.9%
	boy	<b>27.8</b>	45577	5.2	57.9%	<b>28.4</b>	219953	4.6	62.9%
Season of birth	Autumn	<b>28.6</b>	29888	5.0	63.7%	<b>29.2</b>	144798	4.4	69.5%
	Spring	<b>27.9</b>	29545	5.1	58.6%	<b>28.6</b>	139171	4.4	64.8%
	Summer	<b>27.5</b>	30532	5.0	55.8%	<b>28.0</b>	147537	4.5	60.5%
Ethnic group	White Irish	<b>29.3</b>	27	4.2	70.4%	<b>29.6</b>	1697	4.5	73.3%
	Traveller Irish	<b>22.4</b>	6	7.6	16.7%	<b>23.0</b>	357	5.4	24.0%
	Traveller Gypsy/Roma	<b>17.9</b>	608	6.1	5.9%	<b>23.2</b>	832	5.1	23.2%
	White other groups	<b>27.1</b>	16505	5.6	52.3%	<b>29.5</b>	5949	4.5	72.1%
	Mixed White & African	<b>28.2</b>	613	4.9	63.3%	<b>28.5</b>	2083	4.4	64.0%
	Mixed White & Caribbean	<b>27.7</b>	160	4.9	58.8%	<b>27.9</b>	6959	4.3	58.7%
	Mixed White & Asian	<b>28.9</b>	832	4.9	63.0%	<b>29.7</b>	4232	4.5	72.5%
	Other mixed background	<b>28.7</b>	1966	4.8	64.4%	<b>29.0</b>	6416	4.4	68.9%
	Indian	<b>29.4</b>	10603	4.6	71.0%	<b>30.5</b>	2798	4.2	77.9%
	Pakistani	<b>27.5</b>	19944	4.6	54.9%	<b>28.7</b>	2621	4.4	65.9%
	Bangladeshi	<b>28.3</b>	8961	4.6	61.4%	<b>29.6</b>	367	4.3	71.3%
	Any other Asian	<b>29.3</b>	6375	4.9	67.9%	<b>29.5</b>	1442	4.5	71.6%
	Black African	<b>27.9</b>	11886	4.7	60.3%	<b>29.0</b>	4870	4.4	69.8%
	Black Caribbean	<b>27.1</b>	301	4.5	50.3%	<b>27.3</b>	6944	4.3	54.5%
	Black other groups	<b>27.0</b>	1218	5.1	55.0%	<b>27.7</b>	2119	4.3	58.2%
	Chinese	<b>31.1</b>	1379	4.7	77.5%	<b>31.9</b>	376	4.2	85.6%
	Any other ethnic group	<b>27.6</b>	6661	5.1	56.6%	<b>29.2</b>	1087	4.4	68.8%
	Unclassified/Refused	<b>28.2</b>	515	5.0	62.9%	<b>28.5</b>	2362	4.5	63.5%
White British	<b>29.1</b>	1405	4.8	69.7%	<b>28.6</b>	377995	4.4	64.8%	
FSM	Entitled FSM	<b>26.9</b>	21840	5.0	51.6%	<b>26.3</b>	72101	4.7	45.1%
	Not entitled FSM	<b>28.3</b>	68125	5.0	61.8%	<b>29.0</b>	359405	4.2	68.9%
IDACI deprivation quintile	Very low	<b>29.8</b>	5215	4.9	71.9%	<b>29.8</b>	100629	4.1	74.9%
	Low	<b>29.0</b>	6981	4.9	66.1%	<b>29.0</b>	97574	4.3	68.7%
	Average	<b>28.2</b>	13050	5.1	60.2%	<b>28.4</b>	91241	4.4	63.4%
	High	<b>27.8</b>	25728	5.1	58.0%	<b>27.7</b>	77250	4.5	58.0%
	Very high	<b>27.6</b>	38682	5.0	57.1%	<b>27.3</b>	63604	4.5	54.0%
SEN stage	No SEN identified	<b>29.1</b>	71709	4.4	68.7%	<b>29.9</b>	335201	3.4	76.6%
	School Action	<b>24.6</b>	11305	4.1	25.7%	<b>25.1</b>	52463	3.7	26.7%
	School Action Plus	<b>22.8</b>	5510	5.3	19.0%	<b>23.6</b>	34291	4.8	22.5%
	Statemented	<b>18.9</b>	1441	7.3	13.0%	<b>20.3</b>	9551	6.6	15.6%
Change of school	Joined Y6	<b>24.3</b>	6266	6.7	35.1%	<b>26.9</b>	18581	4.8	50.7%
	Joined Y5	<b>26.3</b>	8350	5.7	46.1%	<b>27.8</b>	37120	4.6	57.3%
	Joined Y3/Y4	<b>28.1</b>	24007	4.8	59.2%	<b>28.4</b>	103226	4.5	63.6%
	Stable	<b>28.7</b>	51342	4.5	64.6%	<b>28.8</b>	272579	4.3	67.4%
Region	North East	<b>27.5</b>	1449	5.3	54.7%	<b>28.7</b>	23399	4.3	67.3%
	North West	<b>27.7</b>	9189	5.0	58.0%	<b>28.7</b>	63172	4.3	66.5%
	Yorkshire & the Humber	<b>26.5</b>	8160	5.4	48.4%	<b>28.2</b>	45191	4.5	62.2%
	East Midlands	<b>27.4</b>	5065	5.3	56.3%	<b>28.5</b>	39703	4.4	64.1%
	West Midlands	<b>27.8</b>	10963	4.9	56.3%	<b>28.4</b>	46631	4.5	62.9%
	East of England	<b>27.7</b>	6393	5.2	55.0%	<b>28.4</b>	51868	4.5	63.0%
	London	<b>28.6</b>	37370	4.8	64.4%	<b>29.0</b>	41277	4.5	68.8%
	South East	<b>28.1</b>	8854	5.1	60.3%	<b>28.6</b>	73549	4.4	65.4%
South West	<b>27.4</b>	2522	5.3	54.4%	<b>28.6</b>	46716	4.4	64.6%	
KS1 tested	No KS1 (age 7) score	<b>24.5</b>	12991	6.4	34.4%	<b>28.1</b>	8884	5.1	62.3%
	Has KS1 (age 7) score	<b>28.6</b>	76974	4.5	63.6%	<b>28.6</b>	422622	4.4	64.9%
<b>Grand Total</b>		<b>28.0</b>	<b>89965</b>	<b>5.0</b>	<b>59.4%</b>	<b>28.6</b>	<b>431506</b>	<b>4.4</b>	<b>64.9%</b>

Notes: SEN=Special Educational Needs; IDACI= Income Deprivation Affecting Children Index



## EAL, ethnicity and achievement

There is substantial overlap between students' ethnic group and the EAL indicator. Table 4.2 presents the cross tabulation of ethnic group by EAL.

**Table 4.2: EAL by ethnic group: KS2 cohort January 2013**

Ethnic group	English First		EAL		Total
	N	%	N	%	N
White Irish	1,698	98.4%	27	1.6%	1725
Traveller Irish	362	98.4%	6	1.6%	368
Traveller Gypsy/Roma	839	57.8%	612	42.2%	1451
White other groups	5,954	26.4%	16,625	73.6%	22579
Mixed White & African	2,088	77.2%	615	22.8%	2703
Mixed White & Caribbean	6,970	97.8%	160	2.2%	7130
Mixed White & Asian	4,244	83.5%	836	16.5%	5080
Other mixed background	6,424	76.5%	1,976	23.5%	8400
Indian	2,805	20.9%	10,632	79.1%	13437
Pakistani	2,631	11.6%	20,106	88.4%	22737
Bangladeshi	369	3.9%	9,041	96.1%	9410
Any other Asian	1,449	18.5%	6,402	81.5%	7851
Black African	4,883	29.1%	11,920	70.9%	16803
Black Caribbean	6,956	95.8%	304	4.2%	7260
Black other groups	2,121	63.4%	1,224	36.6%	3345
Chinese	376	21.4%	1,382	78.6%	1758
Any other ethnic group	1,090	14.0%	6,699	86.0%	7789
Unclassified/Refused	2,364	82.1%	515	17.9%	2879
White British	378,437	99.6%	1,405	.4%	379842
Total	432,060	82.7%	90,487	17.3%	522547

It is clear that ethnic group and EAL are very closely related. For example 96% of Bangladeshi students are recorded as EAL, as are 88% of Pakistani, 88% of Chinese, 86% of any other group, 79% of Indian, 74% of White Other and 71% of Black African students. At the other extreme only 4% of Black Caribbean, 2% of Mixed White and Caribbean and <1% of White British students are coded EAL. In some ways then EAL acts as a summary or proxy variable for minority ethnicity status, albeit with the notable exception of the Black Caribbean and Mixed White and Black Caribbean groups. Of the 142,705 minority ethnic students nearly two-thirds (63%) are included in the EAL group.

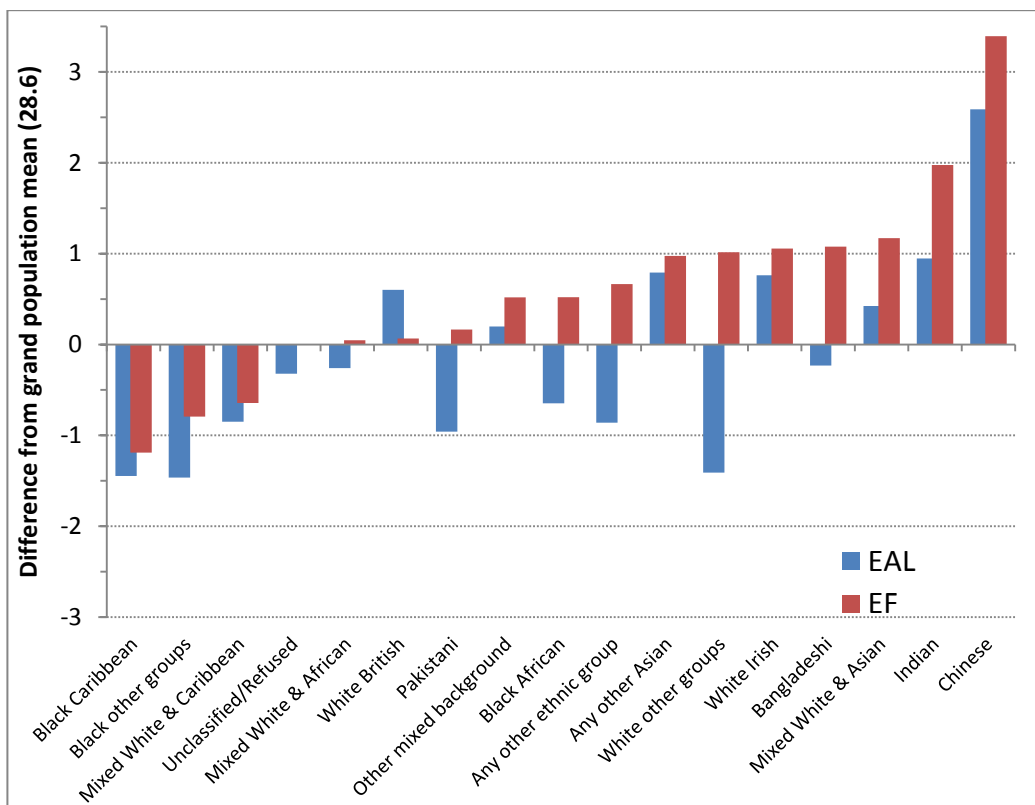
In a simple linear regression analysis of KS2 average points score, ethnic group explains a far greater proportion of the variance in KS2 achievement than does EAL: Ethnic group explains 1.8% of the variation, 10 times greater than EAL which explains only 0.2% of the variation. This is perhaps not surprising when it is considered the binary EAL indicator obscures the quite considerable differences in achievement between different ethnic groups such as Indian, Bangladeshi and Pakistani students, as well as not identifying some very low achieving minority groups such as Black Caribbean and Mixed White and Black Caribbean students together with White British students.

Turning now to the data on achievement by ethnicity and EAL presented in Table 4.1. For greater clarity, the ethnic\* EAL data are plotted in Figure 4.1 with the mean score for each ethnic and EAL combination deviated from the population grand mean for KS2 APS (28.5). We see that the pattern of differences across ethnic groups are broadly similar regardless of whether we look at FLE or EAL students: The three Black 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 students 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 of the variability within ethnic groups. Therefore when both ethnicity and EAL are included together as predictors of KS2 they jointly can explain around 2.2% of the KS2 variation, although the effect size for ethnicity (0.018) remains substantially greater than EAL (0.003).

On average EAL students are behind FLE students by about 0.6 points, but this gap is particularly large for White Other (-2.43), Any Other (-1.43), Black African (1.17) and Pakistani (1.12) students, where the gap is about twice the average size.

**Figure 4.1: KS2 APS by ethnic group and EAL 2013**



To summarise, the EAL variable in the NPD used on its own may simply be a poor proxy for ethnicity, rather than providing information about the students fluency with English which is

how it is often mistakenly interpreted. However it may be useful to include EAL in models alongside ethnicity as a means of accounting for some of the variation in attainment within ethnic groups. In the analyse to be presented in Part 5 we will therefore include both ethnic group and EAL in contextual and contextual value-added model of students attainment/progress. However it is important **not to interpret EAL as a measure of fluency in English but simply as a marker of exposure (at home or in the wider community) to a language other than English.**

## Other risk factors and EAL achievement

### Descriptive statistics

Table 4.1 also presented the association between eight other student background factors and KS2 achievement. Figure 4.2 plots this data. The dark blue bars show the association of the variable with attainment for EAL students and the red bars for FLE students. For example among EAL students, boys on average achieved slightly lower scores than girls, although the difference is small (0.3 points), and this pattern was essentially the same for FLE students where again boys tend to score slightly lower than girls.

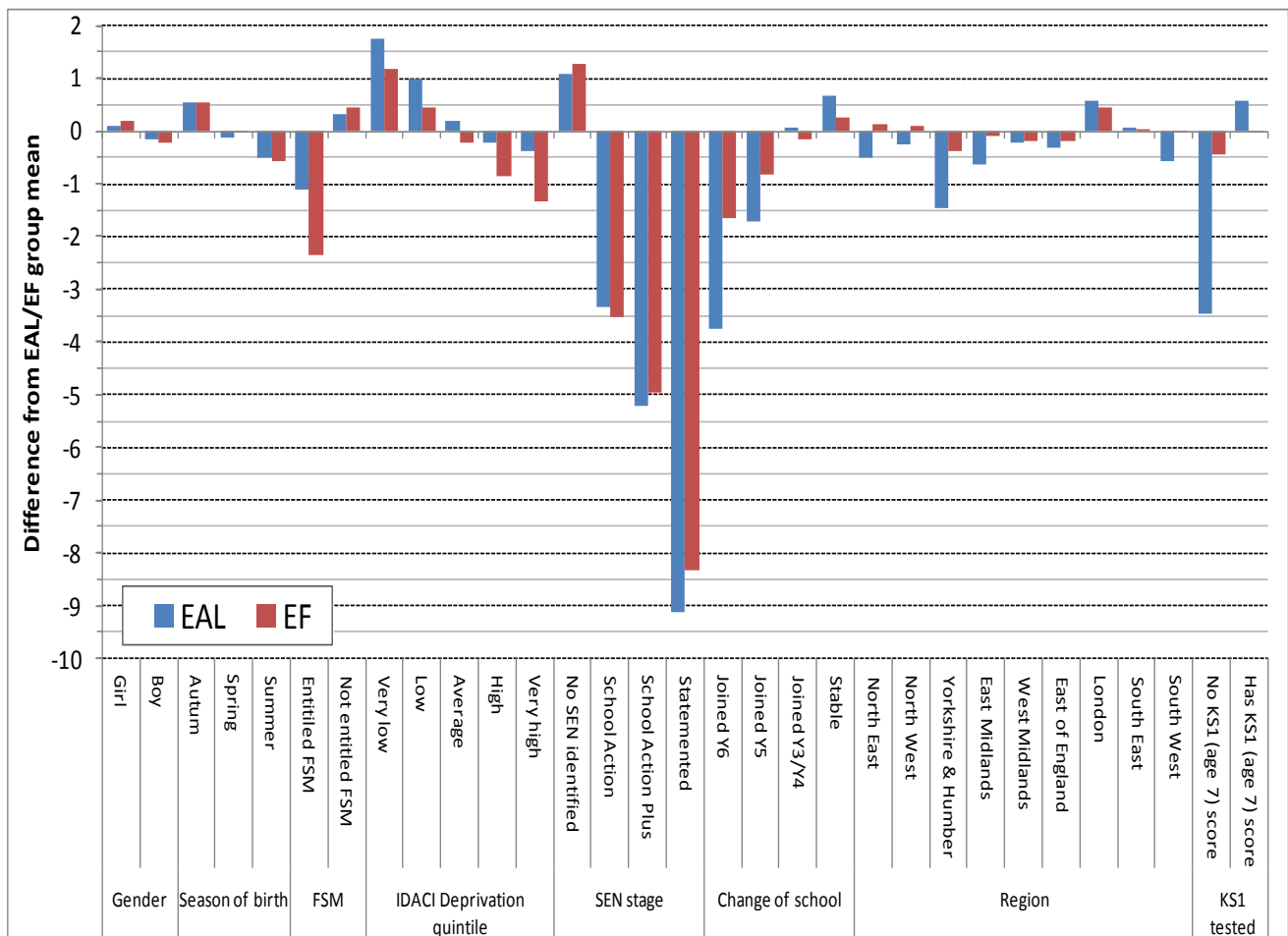
Most risk factors for low achievement among EAL students were the same as among FLE students:

- **Gender:** Boys tend to achieve slightly lower scores than girls
- **Age:** Younger students (summer born) tended to achieve lower score than spring born, and lower again than the oldest (autumn born) students
- **SEN:** Students stage of Special Educational Needs (SEN) was the biggest risk factor, with statement students scoring around 10 points (over 3 NC years) below those with no SEN.
- **Entitlement to FSM:** Students entitled to FSM on average scored substantially (1.4 points) lower than those not entitled to FSM. This was smaller than the FSM gap among FLE students.
- **Neighbourhood deprivation:** EAL students from the 20% most deprived neighbourhoods scored substantially lower (2.1 points) than students living the 20% least deprived neighbourhoods.

The other three factors showed the same direction of risk among both EAL and FLE students, but were much bigger risks for EAL students:

- **Region:** EAL students in London tended to achieve much higher scores than EAL students in other regions, particular Yorkshire & the Humber, North West and East Midlands. While these regional patterns were in the same direction among FLE students the gaps were substantially bigger for EAL students.

Figure 4.2: Association between student background and achievement for EAL and FLE students KS2 2013



*Note: White Irish, Traveller Irish and Gypsy/Roma are excluded because of the very small numbers of students in these groups but their data are reported in Table 4.1.*

- **No prior KS1 (age 7) score:** Students without a prior KS1 score achieved lower scores than those who did have a KS1 score, but this was strikingly larger for EAL students (4 points or over 16 NC months) compared to FLE students (0.5 points or just 2 NC months).
- **Pupil mobility:** Students joining their primary school in Y5/6 have lower achievement than those joining in Y3/4 or those who remained in the same school throughout the four years of KS2, and again with strikingly more negative associations for moving to a new school in Y5/6 for EAL students than for FLE students.

### Contextualised model

The previous section has described a series of bivariate analyses. This section computes statistical models to allow all the background variables to be taken into account simultaneously to determine the unique association of each background variable with achievement. One model is run for EAL students and a separate model for FLE students. We are now able to assess all background variables while controlling for the others e.g. to explore the association with region and achievement after taking account of FSM, IDACI and so on. NB We do not include ethnic group in this analysis because of its close relationship to EAL, ethnicity and EAL will be considered jointly in Part 5.

Table 4.3 presents the results for KS2. Any point score difference needs to be at least 0.5 to warrant attention. The results essentially confirm those presented earlier. Considering the contextualised differential impact of background measures within the EAL and FLE groups (rather than just raw differences) the results of Table 4.3 suggest that most student background measures have a consistent impact for both EAL and FLE students. For example the average boy is close to -0.30 points behind the average girl, a three month change in age below the Y6 average is associated with a -0.27 point decrease, a one SD change in IDACI score is associated with a -0.52 point decrease in KS2 APS.

The largest differential impacts concerns whether a child arrived in the English education system after KS1 (as proxied by the absence of a KS1 test score). For the average FLE child, there was very little consequence (-0.1 points) whereas the average EAL child was behind by -3.4 points, over a year's expected progress. Smaller but still notable differential effects were found for SEN. For SEN, being statemented and EAL was associated with (on average) more than a 1.3 points less than being statemented but FLE. For school mobility, being EAL and arriving in a school in Y6 was also associated with (on average) 3 points (12 NC months) lower achievement compare to 1.2 points (4 NC months) for FLE students<sup>9</sup>.

**Table 4.3. Contextualised variations in KS2 APS (fine-grade) within EAL and FLE students**

Variable	English as Additional Language (EAL)	English First Language (EF)
Intercept	31.4	31.2
Boy	-0.29	-0.29
FSM	-0.89	-1.19
SA	-4.4	-4.4
SAP	-6.3	-5.8
Statemented	-10.6	-9.3
Joined in Y6	-3.0	-1.2
Joined in Y5	-1.1	-0.7
Joined in Y3/4	0.0	-0.2
North East	-0.95	-0.60
North West	-1.02	-0.86
Yorkshire & Humber	-2.06	-1.38
East Midlands	-1.39	-1.21
West Midlands	-1.13	-1.06
East of England	-1.15	-1.25
South East	-0.95	-1.12
South West	-1.17	-1.10
No KS1 test score	-3.36	-0.12
Age (per month below mean)	-0.09	-0.09
IDACI (1 SD)	-0.52	-0.51

*Notes: Intercept represents female, non-SEN, school-stable, non-FSM, mean IDACI ,mean age, London-residing children; Region coefficients are all versus London; SEN, Special Educational Needs; FSM= Free School Meal; IDACI= Income Deprivation Affecting Children Index normal score.*

<sup>9</sup> note that this in addition to the negative effect of being new to the English educational system

## KS2 Reading and mathematics tests

The results for the KS2 reading and mathematics tests followed the same pattern as for KS2 average points score, so we do not repeat the whole analysis here. The Appendices to Part 4 contains additional tables includes the equivalent to Tables 4.1 and Figure 4.1 and 4.2 for both the KS2 reading test score and the KS2 mathematics test.

## Key Stage 4 (KS4)

In this section we present the same set of analyses as reported for KS2 points score but now for Best 8 points score. Table 4.4 presents the associations between nine student background measures and the KS4 Best 8 score of EAL and FLE students. As for KS2 we present the findings in two parts, firstly by looking at the association between ethnicity and EAL and achievement, and secondly between the other background factors and EAL and achievement (i.e., gender, season of birth, entitlement to FSM, neighbourhood deprivation, special education needs, region and new arrival in England).

### EAL, ethnicity and achievement at KS4

Table 4.5 presents the cross tabulation of ethnic group by EAL. Though the overall proportion of students who are recorded as EAL is lower in KS4 than in KS2, ethnic group and EAL are still very closely related, with the proportion of students recorded as EAL ranging from 91% of Bangladeshi students to 0.3% of White British students.

**Table 4.5: EAL by ethnic group for KS4: England 2013**

Ethnicity	English First		EAL		Total
	N	%	N	%	
White Irish	1,849	99.2%	14	0.8%	1,863
Traveler Irish	122	98.4%	2	1.6%	124
Traveler Gypsy/Roma	384	50.0%	384	50.0%	768
White other groups	6,312	33.4%	12,560	66.6%	18,872
Mixed White & African	1,809	79.7%	461	20.3%	2,270
Mixed White & Caribbean	7,030	98.7%	90	1.3%	7,120
Mixed White & Asian	3,748	86.4%	589	13.6%	4,337
Any other mixed background	5,835	80.0%	1,458	20.0%	7,293
Indian	4,206	31.6%	9,122	68.4%	13,328
Pakistani	3,728	21.5%	13,600	78.5%	17,328
Bangladeshi	694	9.2%	6,866	90.8%	7,560
Any other Asian	1,767	23.3%	5,805	76.7%	7,572
Black African	6,011	38.0%	9,797	62.0%	15,808
Black Caribbean	7,659	96.6%	270	3.4%	7,929
Black other groups	2,115	70.9%	868	29.1%	2,983
Chinese	570	25.7%	1,647	74.3%	2,217
Any other ethnic group	1,390	19.7%	5,673	80.3%	7,063
Unclassified/Refused	4,493	89.7%	515	10.3%	5,008
White British	424,754	99.7%	1,176	0.3%	425,930
<b>Total</b>	<b>484,476</b>	<b>87.2%</b>	<b>70,897</b>	<b>12.8%</b>	<b>555,373</b>

**Table 4.4: KS4 Best 8 points and proportion 5+ A\*-C of EAL and FLE students 2013**

Variable	Value	EAL				English First (EF) Language			
		Best 8 score			5+ A*C	Best 8 score			5+ A*C
		Mean	N	SD	incl EM	Mean	N	SD	incl EM
Ethnicity	0 White British	<b>360.1</b>	1176	72.7	64.4%	<b>346.4</b>	424754	73.5	61.8%
	1 White Irish	<b>370.0</b>	14	69.1	85.7%	<b>355.0</b>	1849	76.9	69.8%
	2 Traveller Irish	<b>225.0</b>	2	278.6	50.0%	<b>216.6</b>	122	134.0	18.9%
	3 Traveller Gypsy/Roma	<b>173.2</b>	384	122.3	6.5%	<b>258.6</b>	384	117.2	23.2%
	4 White other groups	<b>333.2</b>	12560	91.3	49.2%	<b>359.4</b>	6312	75.1	70.6%
	5 Mixed White & African	<b>349.0</b>	461	69.7	55.3%	<b>349.3</b>	1809	72.0	66.6%
	6 Mixed White & Caribbean	<b>349.5</b>	90	71.5	64.4%	<b>335.2</b>	7030	76.3	55.9%
	7 Mixed White & Asian	<b>360.3</b>	589	72.6	66.4%	<b>363.5</b>	3748	71.8	71.3%
	8 Any other mixed background	<b>357.6</b>	1458	70.2	65.2%	<b>352.6</b>	5835	72.8	67.5%
	9 Indian	<b>371.8</b>	9122	63.8	74.1%	<b>383.9</b>	4206	59.7	81.3%
	10 Pakistani	<b>345.3</b>	13600	67.3	54.9%	<b>353.2</b>	3728	68.5	62.1%
	11 Bangladeshi	<b>350.0</b>	6866	70.4	63.7%	<b>366.6</b>	694	62.2	73.6%
	12 Any other Asian	<b>356.7</b>	5805	75.7	63.2%	<b>366.9</b>	1767	70.6	73.2%
	13 Black African	<b>339.8</b>	9797	70.7	57.8%	<b>356.2</b>	6011	61.0	69.1%
	14 Black Caribbean	<b>327.0</b>	270	66.2	47.4%	<b>334.6</b>	7659	66.7	54.7%
	15 Black other groups	<b>341.9</b>	868	67.4	52.0%	<b>339.6</b>	2115	66.9	57.8%
	16 Chinese	<b>388.8</b>	1647	71.1	75.3%	<b>407.6</b>	570	52.4	89.5%
	17 Any other ethnic group	<b>345.7</b>	5673	81.9	57.5%	<b>360.4</b>	1390	68.8	70.6%
18 Unclassified/Refused	<b>345.3</b>	515	92.5	61.4%	<b>345.2</b>	4493	79.8	60.9%	
Gender	Girl	<b>357.9</b>	35056	74.4	63.9%	<b>357.3</b>	239733	70.8	66.9%
	Boy	<b>338.0</b>	35841	78.9	54.6%	<b>337.0</b>	244743	74.6	57.6%
Season of birth	Autumn	<b>351.7</b>	23647	76.8	62.2%	<b>350.3</b>	163729	74.0	64.8%
	Spring	<b>346.6</b>	23335	79.0	58.4%	<b>346.8</b>	157087	73.7	62.1%
	Summer	<b>345.2</b>	23915	76.2	57.0%	<b>344.0</b>	163660	72.4	59.7%
FSM	Entitled FSM	<b>332.7</b>	18070	79.8	51.2%	<b>304.3</b>	62029	90.1	36.7%
	Not entitled FSM	<b>353.0</b>	52827	75.9	61.9%	<b>353.3</b>	422447	68.5	66.0%
IDACI quintile	Very low	<b>374.8</b>	4170	72.3	72.1%	<b>368.2</b>	113650	62.7	75.6%
	Low	<b>361.2</b>	5884	75.7	65.3%	<b>355.7</b>	112101	67.3	68.0%
	Average	<b>354.2</b>	10823	75.9	61.5%	<b>343.5</b>	102712	72.4	60.1%
	High	<b>346.1</b>	19992	77.8	58.3%	<b>332.2</b>	86083	77.6	52.6%
	Very high	<b>340.5</b>	29844	77.1	56.0%	<b>322.1</b>	68730	82.6	46.0%
SEN	No SEN identified	<b>358.2</b>	56909	72.1	66.6%	<b>360.5</b>	391276	61.4	71.1%
	School Action	<b>316.8</b>	9321	73.6	32.0%	<b>305.9</b>	53355	77.2	27.9%
	School Action Plus	<b>289.2</b>	3683	94.8	25.1%	<b>271.5</b>	29345	103.4	22.3%
	Statemented	<b>262.4</b>	984	103.2	17.0%	<b>264.1</b>	10500	100.4	17.4%
Mobility	Joined Y10/Y11	<b>251.6</b>	4450	125.6	25.2%	<b>268.0</b>	8903	108.7	33.2%
	Joined Y7-Y9 NOT Jul-Sep	<b>330.9</b>	8560	80.6	44.8%	<b>317.7</b>	26417	88.5	47.6%
	Stable	<b>357.8</b>	57887	65.7	63.9%	<b>350.3</b>	449156	70.3	63.6%
Region	North East	<b>355.9</b>	1054	71.1	57.0%	<b>352.8</b>	27016	68.4	60.9%
	North West	<b>338.7</b>	7022	79.8	54.5%	<b>345.3</b>	71606	73.1	61.5%
	Yorkshire and The Humber	<b>334.5</b>	5660	88.6	49.2%	<b>347.4</b>	51671	72.3	61.4%
	East Midlands	<b>340.8</b>	4316	86.1	53.3%	<b>345.5</b>	43831	73.4	61.1%
	West Midlands	<b>353.2</b>	8963	71.5	57.5%	<b>349.6</b>	53991	69.9	61.6%
	East of England	<b>344.3</b>	5054	83.1	55.3%	<b>343.1</b>	58337	76.1	61.3%
	London	<b>351.2</b>	29381	73.3	64.5%	<b>349.6</b>	45724	72.7	66.1%
	South East	<b>354.6</b>	7360	76.5	60.7%	<b>348.7</b>	80067	75.8	64.0%
	South West	<b>339.6</b>	2087	80.6	51.2%	<b>344.2</b>	52233	74.6	61.0%
Arrival	Has KS2 (age 11) score	<b>358.1</b>	57269	64.5	65.0%	<b>347.1</b>	473558	72.9	62.2%
	No KS2 (age 11) score	<b>304.6</b>	13628	106.6	34.6%	<b>342.9</b>	10918	92.7	61.6%
<b>Grand Total</b>		<b>347.7</b>	<b>71246</b>	<b>77.5</b>	<b>59.1%</b>	<b>346.9</b>	<b>487939</b>	<b>73.5</b>	<b>62.1%</b>

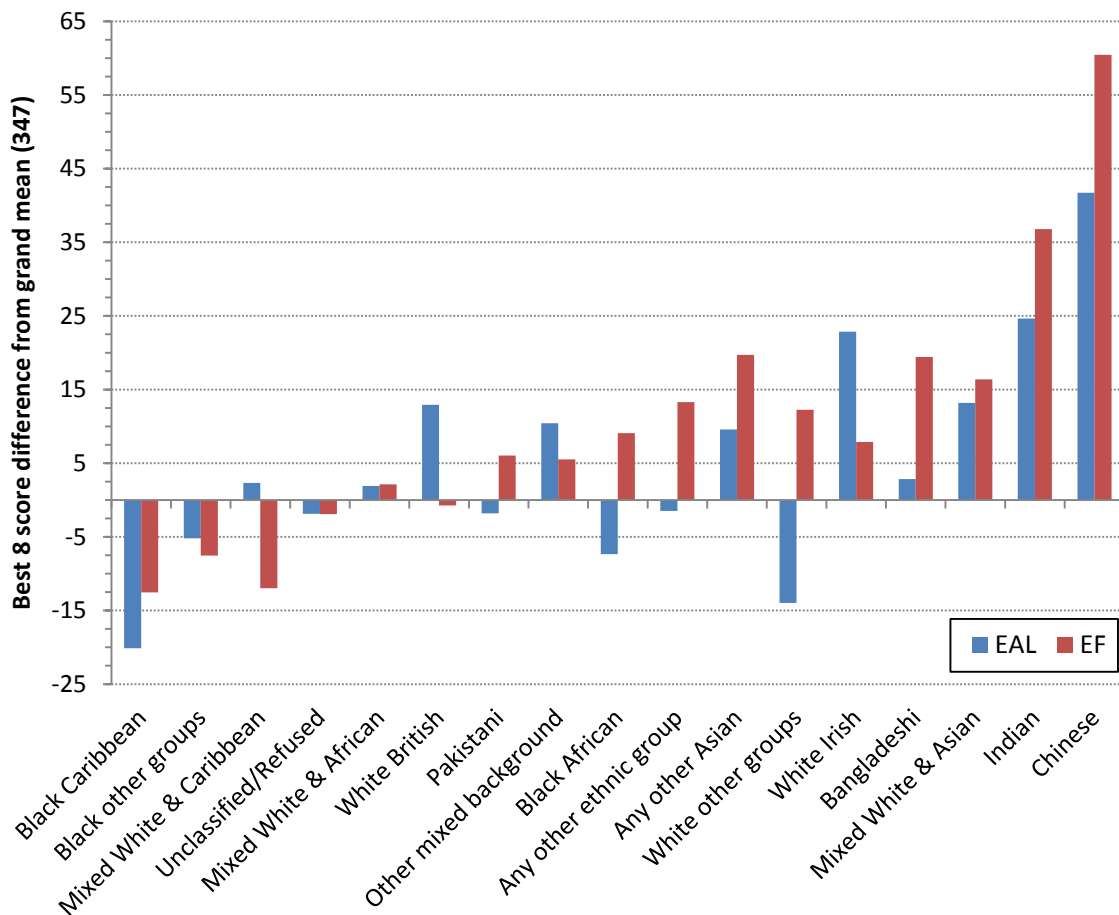
We repeat the separate and combined analysis of EAL and ethnicity this time using the Best 8 points score. On its own, EAL explained no variance in Best 8 score at all (0.00%). In contrast ethnicity explained 1.2% of the variance in best 8 score. When ethnicity and EAL

were included together the variance explained raised very slightly to 1.3%, so EAL does help explaining a very small proportion of the variance in achievement *within* ethnic group.

Figure 4.3 plots the mean Best 8 score for each ethnic and EAL combination deviated from the grand population mean Best 8 score (347.1). EAL is associated on average with a gap of around 12 points, small when considering we have taken 16 points as a reasonable threshold (one-third of grade in all eight subjects). However the EAL gap was large in four ethnic group: White Other EAL students scored 26 points lower than their White Other FLE peers; Chinese EAL students scored 18 points lower, Bangladeshi and Black African EAL students both 17 points lower, than their FLE peers.

To summarise, the conclusions are similar to KS2, that EAL may have a small role to play in accounting for variation in achievement but only when it is included alongside ethnicity.

**Figure 4.3: KS4 Best 8 score by ethnic group and EAL: England 2013**

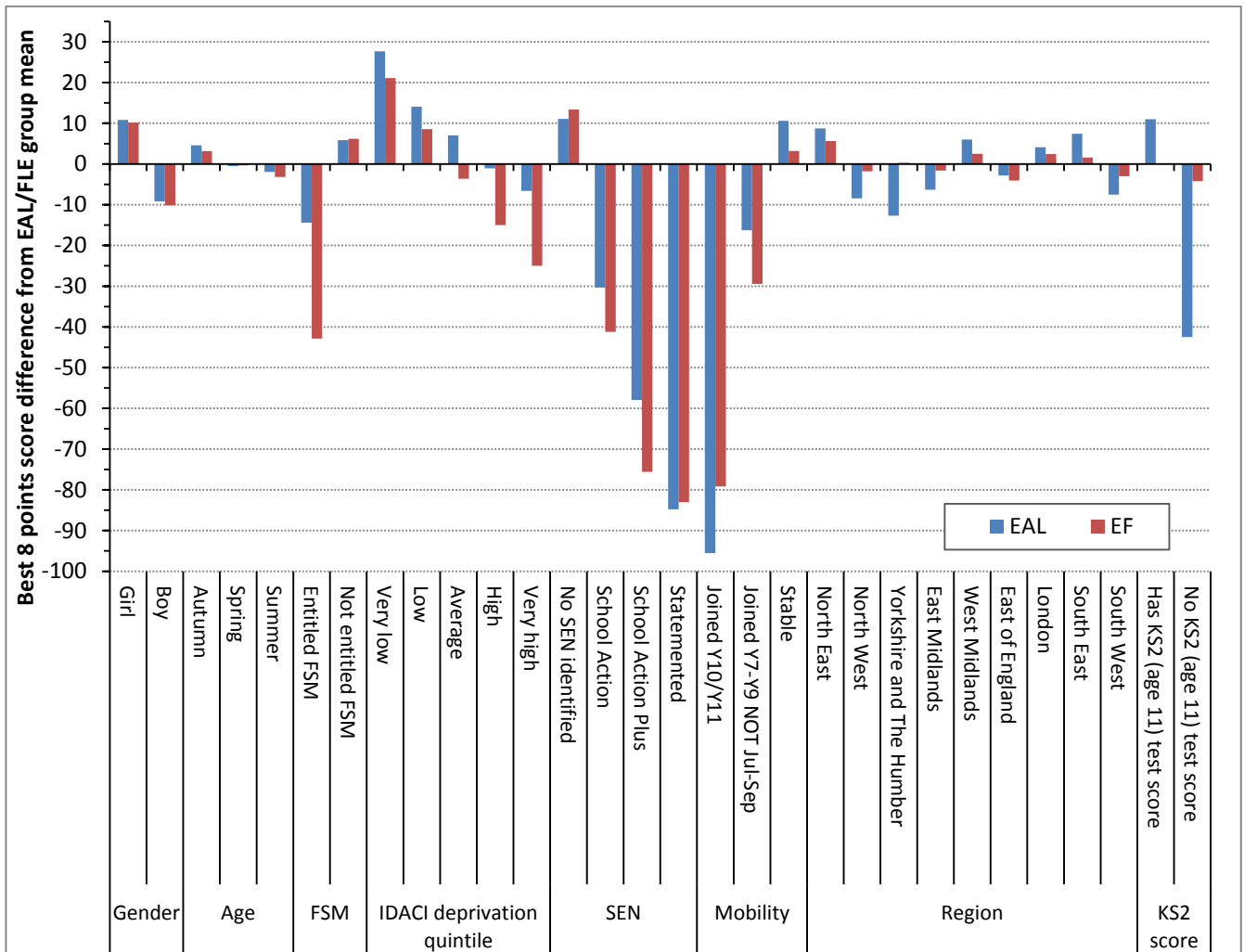


### Other background factors and achievement among EAL students KS4

Table 4.6 presents the KS4 outcomes separately for EAL and FLE students in relation to student background, and Figure 4.4 presents the data in graph format.



Figure 4.4: Best 8 scores by background characteristics for EAL & FLE students: KS4 2013



Rather than discuss the raw results in detail we move straight to the contextualised analysis, as presented in Table 4.6. In relation to the achievement of EAL students the following risk/resilience factors were noted, reported in descending order of size effect:

- **SEN:** EAL students with Statements, at School Action Plus or at School Action scored respectively -98, -67 and -41 points below those with no identified SEN. SEN was a stronger predictor of Best 8 score among FLE students, accounting for 15.3% of the variance, than among EAL students where it accounted for 8.2% of the variance.
- **No prior KS2 (age 11) score:** EAL student's with no prior KS2 score (presumably international arrivals) score fully 32 points below EAL students with age 11 test scores. This was substantially larger than for FLE students where international arrivals on average actually had an adjusted Best 8 scores nine points higher than those with a prior attainment score.
- **Pupil mobility:** EAL students who moved secondary school in Y10/Y11 on average scored 88 points lower than stable students, with a much smaller gap of 11 points for those joining at non-standard times during Y7-Y9. These were in addition to the associations with international mobility. This effect was stronger among EAL (106 points) than among FLE students (86 points).
- **Socioeconomic status:** this factor was measured by two variables:

- **Neighbourhood deprivation:** EAL students from more deprived neighbourhoods (1SD below IDACI mean) on average scored 17 points below those from more advantaged neighbourhoods (1SD above IDACI mean). Although the deprivation gap is notable it was even larger among FLE students at 23 points.
- **Entitlement to FSM:** EAL students entitled to FSM scored on average 13 points lower than those not entitled to FSM. While this is notable, it is much smaller than the FSM gap among FLE speakers which was twice as large at 26 points. (NB this gap is somewhat smaller than the 'raw' gap shown in Table 5.X because we have also included neighbourhood deprivation).
- **Gender:** EAL boys on average achieved 16 points lower than girls, similar to the gender difference among FLE students.
- **Region:** EAL students from five regions (Yorkshire & Humberside, North West, East Midlands, East England and South West) scored around 15 points lower than EAL students in London. These regional gaps were approximately the same magnitude among FLE students. Regional differences appear to be smaller at KS4 than at KS2.
- **Age:** Younger EAL students on average achieved lower score than older students but the gap was very small (3.6 points difference between those 3 months below the average and those 3 months above the average age). Again the effect was similar for FLE students.

**Table 4.6. Contextualised variation in KS4 Best 8 score within EAL and FLE students: England 2013**

Variable	Values	EAL	EF
	Intercept	368.2	331.2
Age	Age (1 month)	-0.6	-0.5
Gender	Girl (vs. boy)	16.1	15.4
SES	Entitled FSM	-13.0	-26.1
	IDACI (1 SD)	-8.4	-11.4
SEN	School Action	-40.9	-46.0
	School Action Plus	-66.6	-75.9
	Statemented	-97.6	-85.3
Mobility	Joined Y10/Y11	-87.4	-71.1
	Joined Y7-9 (Not Jul-Sep)	-11.1	-22.6
Int. Arrival	No KS2 test score	-32.2	8.9
Region	North East	2.3	-3.1
	North West	-14.3	-13.8
	York & Humberland	-17.6	-12.5
	East Midlands	-15.4	-16.1
	West Midlands	-1.4	-9.1
	East England	-13.4	-20.3
	South East	-5.9	-15.3
	South West	-14.2	-18.9
Variance explained		25.8%	23.3%

*Notes:* <sup>a</sup> For female, non-FSM, non-SEN, school-stable, mean IDACI, mean age, London-residing children; Region coefficients are all versus London; SEN, Special Educational Needs; FSM= Free School Meal (Eligible); IDACI, Income Deprivation Affecting Children Index

## Part 5: Contextual and Contextual Value Added (CVA) models and school effects

At KS2, EAL continues to explain a small but unique proportion of the variation in student attainment even when all available student background variables (age, gender, ethnicity, FSM, IDACI, SEN, mobility, region) are simultaneously taken into account. EAL is associated with a KS2 average points score about 0.70 points (2.5 NC months) below students recorded as FLE. However at KS4 the association between EAL and achievement is trivial.

Where students recorded as EAL have been attending an English primary school for at least four years age 7-11 they make better progress than FLE students. However this calculation necessarily excludes EAL students who enter primary school directly from abroad during the key stage, and this group achieve around 2.0 points (or 8 NC months) below average. The same is true for KS4 although the size of the effect is somewhat smaller, around 12 Best 8 points.

The percentage of EAL students in the school has minimal association with student attainment or progress. In fact FLE students had marginally higher attainment and made marginally more progress in high %EAL schools than in low %EAL schools, net of all other factors.

The size of the EAL advantage in progress does vary across schools, although in the vast majority of schools EAL students made more progress than FLE students. At KS2 school variation in the size of the EAL gap was larger than school variation in the FSM or gender gaps, but at KS4 the school variation in all three gaps was of similar size. Even though the statistical models control for a range of student background variables it is still possible this variation might reflect the differing compositions of the EAL group in different schools.

### Introduction

The analyses presented in this chapter seeks to:

- Determine whether EAL adds any explanatory power to models including the full range of available student background variables;
- Determine whether any school composition variables also impact on student attainment and progress. Of particular interest will be the possible association with the percentage of students in the school recorded as EAL;
- Assess the extent to which the EAL gap varies across schools

## Key Stage 2

In this section we analyse the KS2 average points score presenting a series of models in Table 6.1 which are described in detail below.

### Effects of student background on student attainment/progress

**Model 0:** The 'Null model' contains just an intercept term and exists just to define the multi-level nature of the data. It indicates that approximately 11% of the variation in student achievement lies between schools, indicating multi-level models are appropriate given the nested structure of the data (students grouped within schools). The figure of 11% is broadly in line with previous analyses of England KS2 data (DFES, 2004).

**Model 1:** The 'ethnicity and EAL' model also serves as a baseline against which to compare later models that add the full range of student background variables. We note here that, when ethnicity is included in the model, on average being recorded as EAL is associated with a  $-.87$  point decrement (over 3 NC months) relative to FLE students. However, modelling the interaction between ethnicity and EAL (not shown) indicated the negative impact of EAL was substantially greater among White Other, Any Other and Black African students, as we showed in Part 4. These results indicate we need to be particularly aware of the power of EAL as an explanatory variable when considering the achievement of White Other and Black African students and we will return to a further analysis of White Other and Black African students in Part 6.

**Model 2:** This model takes account of the full range of student background variables. Specifically in addition to ethnicity and EAL the model adjusts for students age, gender, stage of special education need, mobility, socio-economic circumstances (whether entitled to a FSM and neighbourhood deprivation, IDACI), whether the student had been tested at KS1 (as a proxy for international arrival), pupil mobility and England region. Accounting for these variables has a substantial impact on the explanatory power of the model, explaining 36% of the variation between students and 43% of the variation between schools.

**Table 5.1: Contextualised & Contextual Value-Added (CVA) models for KS2 APS 2013**

Variable	Model 0	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	28.5	28.5	31.4	31.7	31.7	15.9
EAL		-0.87	-0.70	-0.68	-0.55	0.61
White Irish		0.45	0.56	0.57	0.54	0.46
Traveller Irish		-5.26	-2.27	-2.25	-2.29	0.21
Traveller Gypsy/Roma		-6.37	-4.12	-4.11	-4.09	-0.36
White other groups		-0.13	-0.01	0.00	-0.04	0.73
Mixed White & African		0.11	0.26	0.26	0.25	0.10
Mixed White & Caribbean		-0.59	-0.12	-0.11	-0.14	-0.14
Mixed White & Asian		0.94	0.77	0.78	0.75	0.37
Other mixed background		0.44	0.48	0.49	0.46	0.21
Indian		1.94	1.21	1.21	1.18	0.36
Pakistani		0.46	0.27	0.30	0.31	-0.11
Bangladeshi		1.10	0.54	0.57	0.59	0.20
Any other Asian		1.52	1.12	1.12	1.09	0.64
Black African		0.36	0.51	0.52	0.50	0.19
Black Caribbean		-1.26	-0.66	-0.63	-0.71	-0.44
Black other groups		-0.71	-0.34	-0.32	-0.36	-0.27
Chinese		3.13	2.52	2.51	2.43	1.39
Any other ethnic group		0.17	0.28	0.30	0.28	0.48
Unclassified/Refused		-0.02	0.27	0.27	0.26	0.20
White British (Reference)		-	-	-	-	-
Girl (Vs. Boy)			-0.30	-0.30	-0.30	-0.60
Entitled FSM			-1.00	-0.98	-1.13	-0.34
IDACI (normalised)			-0.44	-0.40	-0.40	-0.15
SEN- School action			-4.48	-4.47	-4.47	-1.03
SEN- School Action Plus			-5.93	-5.92	-5.92	-1.60
SEN Statemented			-9.40	-9.40	-9.39	-2.98
Mobile - Joined Y6			-1.69	-1.68	-1.68	-0.52
Mobile- Joined Y5			-0.74	-0.74	-0.73	-0.31
Mobile- Joined Y3/4			-0.15	-0.15	-0.14	-0.24
North East			-0.68	-0.73	-0.69	-0.07
North West			-0.97	-1.04	-1.01	-0.37
Yorkshire & Humber			-1.53	-1.63	-1.60	-0.71
East Midlands			-1.24	-1.36	-1.33	-0.65
West Midlands			-1.14	-1.21	-1.19	-0.62
East of England			-1.30	-1.44	-1.41	-0.93
South East			-1.15	-1.30	-1.29	-0.74
South West			-1.13	-1.28	-1.25	-0.57
(London=base)			-	-	-	-
Not tested KS1			-1.98	-1.98	-1.98	na
Age			-0.09	-0.09	-0.09	0.05
School %EAL (mean centred)				-0.002	0.002	0.005
School %FSM (mean centred)				-0.012	-0.018	0.004
School %EAL * EAL					-0.007	-0.008
School %FSM * FSM					0.021	0.010
Age 7 points score (X=15.4, sd=3.67)						0.892
<b>Random part</b>						
Student variance	18.75	18.31	12.02	12.02	12.01	5.43
School variance	2.22	2.08	1.28	1.26	1.24	1.17
Student variance reduction	-	2.4%	35.9%	35.9%	35.9%	71.0%
School variance reduction	-	6.5%	42.5%	43.4%	44.2%	47.2%
Intercept					1.29	1.17
EAL					1.02	0.40
FSM					0.28	0.23
Gender					0.17	0.08

The EAL the coefficient reduces somewhat from -0.87 to -0.70. This may be because some of the EAL variation is now more accurately apportioned to the substantial negative effect for students with no prior attainment score (over 2 points or 8 NC months). Of the 22,238 students with no prior KS1 scores a small proportion (4.8%) were recorded as stable on the mobility variable, possibly indicating the KS1 score was missing due to absence or some other reason, but over 95% were recorded as entering the school during Y3-Y6, presumably as international arrivals. Nevertheless EAL does still have some small but unique explanatory power even when all available student background variables are accounted for.

**Model 5:** Model 5 is a Contextual Value Added (CVA) model that includes each student's KS1 average points score (the average across reading, writing and mathematics assessments). With prior attainment at age 7 included all coefficients can now be interpreted as indicators of association with student progress age 7-11. We see now that EAL has a positive coefficient of 0.61, indicating that on average students recorded as EAL make 0.61 points (or 2.5 NC months) more progress than comparable FLE students. So where students recorded as EAL have been attending an England primary school for at least four years they make better progress than FLE students. However this calculation necessarily excludes EAL students who enter primary school directly from abroad during KS2 (which is why the 'no KS1 score' row is blank in Model 5) and we know these are a large group within EAL with particularly low achievement.

## Effects of school composition on student attainment/progress

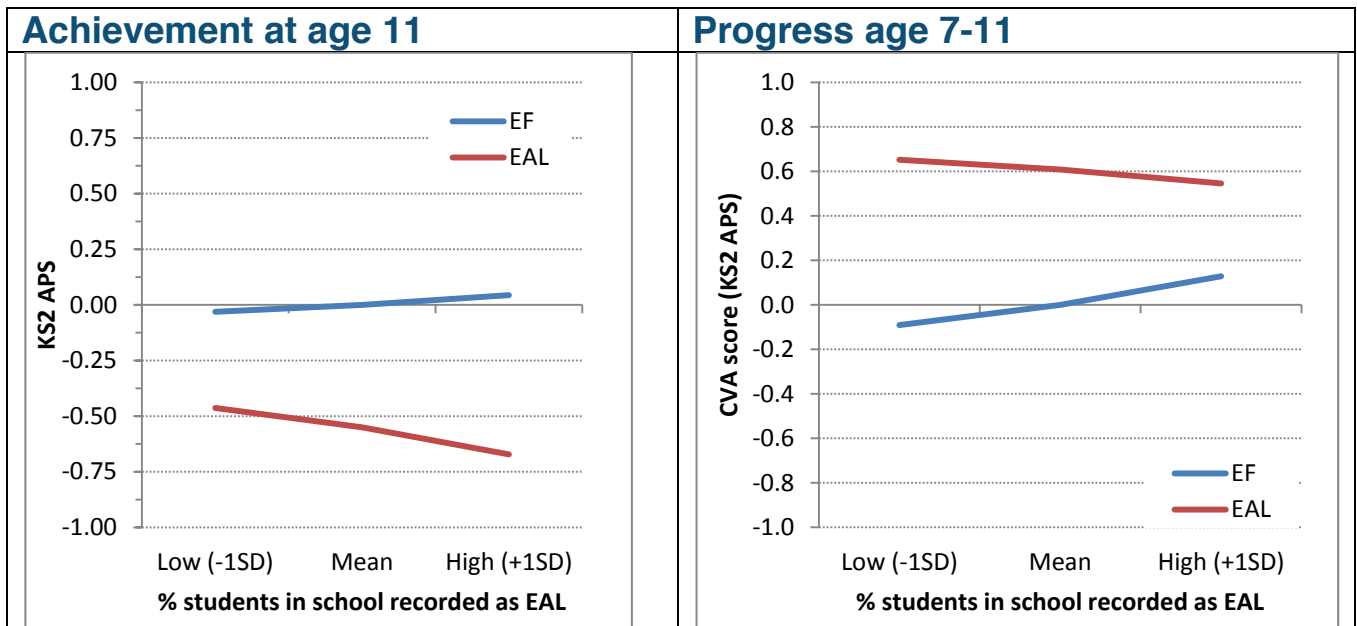
**Model 3** was designed to assess whether school composition variables had an association with achievement. As discussed in Part 3, given the small size of most primary school Y6 cohorts measures of school composition were based on whole school data. There was no substantial association with variables indicating the % of girls, % SEN students, school size or school type but there were associations with the percentage of EAL students in the school (%EAL). The coefficients in the table represent the change in KS2 average score associated with a 1% point change in the % of students in the school recorded as EAL. To get an indication of the 'real' size of association it is necessary to multiply these by the typical range of %EAL across schools, as indicated by the mean and SD given in Table 3.1. For %EAL the range across schools was low (0%), average (15%) and high (35%). This indicates a negligible difference (-0.05 points) between attending a low and a high %EAL school. (NB These coefficients are for compositional effects after taking account of each student's EAL status as well as all the other variables in the model).

### School % EAL

Following from the studies reviewed in Part 2, and work by Strand (2014c), of particular interest were possible interactions between an individual student's EAL status and the percentage of EAL students in the school. Figure 5.1 below plots the performance of EAL and FLE students separately in schools where the proportion of EAL students is low, average and high. We see there is negligible difference in achievement among FLE students in low vs. high %EAL schools (0.05 points). **Thus there is no evidence that attending school with a high proportion of EAL students has a negative impact on the achievement of**

**FLE students.** For EAL students, attending a schools with high %EAL was associated with slightly lower achievement at age 11 than attending a low %EAL school, although the difference is extremely small -0.20 points.

**Figure 5.1: Achievement at age 11 and progress age 7-11 by student EAL and the proportion of EAL students in the school**



*Notes: Achievement coefficients taken from model 4 and progress age 7-11 coefficients taken from model 5.*

Figure 5.1 also includes the associations with student progress age 7-11 drawn from Model 5 (CVA model). The EAL gap in progress is slightly smaller in schools with a high %EAL students, largely because FLE students in these schools make slightly (0.20 points) more progress than FLE students in low %EAL schools. These difference are small and not too much should be made of them, but if anything **attending school with a high proportion of EAL students has a positive association with progress for FLE students.**

This analysis assumes a linear relationship between %EAL and achievement which may not be a valid assumption. However we tested the associations by dividing schools into five quintile bands for %EAL and testing the interaction between quintile band and EAL status, making no assumption of linearity. The results were broadly consistent with those reported above.

### School variation in the size of EAL, FSM and gender progress gaps at KS2

Model 5 directly estimates school variation in the size of the gender, EAL and FSM gaps in student progress by allowing the coefficients for these variables to vary randomly at level 2. Table 5.2 below shows the fixed (Level 1 or student) effect of each variable and the SD of the Level 2 or school variation around this fixed or average gap. For example in the average school EAL students make 0.61 points more progress than FLE students, however the EAL advantage ranged from 0.0 up to 1.2 NC points across schools<sup>10</sup>. So EAL students make

<sup>10</sup>. This is the range of +/- 1 SD around the average within-school gap, or the difference between schools at the 16th centile and schools at the 84th centile in terms of the size of the EAL progress gap.

more progress than FLE students in the vast majority of schools. Similarly students entitled to FSM make -0.34 points less progress than non-FSM students, and while there is some variation across schools only a few schools appear to eliminate it, with two-thirds of schools having a FSM gap in the range from -0.82 to 0.14. Finally girls tend to make less progress than boys age 7-11 by 0.60 points, and this seems to be true in practically all schools (range across two-thirds of schools from -0.89 to -0.31).

**Table 5.2: School variation in gender, EAL and FSM gaps at KS2**

Variable	Level 1 (student) fixed coefficient	Level 2 (School) SD	16th centile school (-1SD)	84th centile school (+1SD)
Gender	-0.60	0.29	-0.89	-0.31
EAL	0.61	0.63	-0.02	1.24
FSM	-0.34	0.48	-0.82	0.14

*Note: All three coefficients allowed to vary at the school level simultaneously. The school SD is the square root of the variance figures given in the random section of model 5.*

We conclude that there is evidence of school variation in the size of the EAL gap across primary schools in England, and there seems to be more variation between schools in the EAL gap (SD= 0.63) than in the FSM (SD= 0.48) or gender (SD= 0.29) gaps. These estimate of school variation are net of the measured association with prior attainment, ethnicity, gender, entitlement to FSM, SEN, mobility, and of the %EAL and %FSM, so we would expect to have accounted for school variation associated with for example a large proportion of recent entrants from Eastern Europe in one school vs. high achieving second or third generation Bangladeshi students in another. This would seem to suggest that some schools are better at facilitating the progress of EAL learners than others. However it may still be the case that variation in the EAL gap might reflect unmeasured factors related to the nature of the EAL group in different schools, for example more engaged and supportive parents.

## Key Stage 4

Table 5.3 present the same series of analyses as those just presented for KS2, but for Best 8 points score at age 16. The conclusion are similar to those for KS2, so we shall describe them relatively briefly.

### Effects of student background on student attainment/progress

**Model 0:** The 'Null model' indicates that approximately 16% of the variation in student achievement lies between schools, indicating multi-level models are appropriate given the nested structure of the data (students grouped within schools). The figure is broadly in line with previous analyses of England data (DfES, 2004).

**Model 1:** We note here that, when ethnicity is included in the model, on average being recorded as EAL is associated with a 3 point decrement in Best 8 score which is negligible (remember we have set a threshold of at least 16 points for an association to be notable). However again, as we showed in Part 4, we need to remain aware that EAL is associated



with a considerable gap within the White Other and Black African groups in particular, which we will return to in Part 6.

**Model 2:** This model takes account of the full range of student background variables as listed previously. The EAL coefficient is now positive, indicating EAL students score 1.4 points above similar FLE students, but again the size of this gap is negligible.

**Model 5:** Model 5 includes each student's KS2 average points score in the model so all coefficients can now be interpreted as indicators of association with student progress age 11-16. We see now that on average students recorded as EAL make 15.7 points more progress than comparable FLE students. **So where students recorded as EAL have been attending an England secondary school for at least five years they make better progress and have caught up with FLE students by age 16.** However this calculation necessarily excludes the 19% of EAL students who enter their secondary school directly from abroad, who have Best 8 scores at least 12 points lower, rising to 32 points if they joined at a non-standard time in Y7-Y9 and 86 points if they joined during Y10/Y11.

**Table 5.3: Contextualised & Contextual Value-Added (CVA) models for KS2 APS 2013**

Variable	Model 0	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	343.7	345.5	365.8	367.5	364.2	91.4
EAL		-3.3	1.4	1.4	0.9	15.7
White Irish		-0.3	3.8	3.7	3.8	1.5
Traveller Irish		-123.8	-81.4	-81.4	-81.3	-60.9
Traveller Gypsy/Roma		-113.8	-81.2	-81.2	-81.0	-27.5
White other groups		1.8	6.4	6.4	6.7	14.5
Mixed White & African		3.7	9.8	9.8	9.9	6.5
Mixed White & Caribbean		-7.7	-1.0	-1.0	-0.8	-0.6
Mixed White & Asian		12.0	12.1	12.1	12.2	8.5
Other mixed background		5.8	8.9	8.9	9.0	6.1
Indian		28.6	19.9	19.8	20.1	15.2
Pakistani		10.8	11.2	11.1	11.4	10.4
Bangladeshi		18.9	17.6	17.6	17.6	14.8
Any other Asian		13.9	15.6	15.5	15.8	18.0
Black African		7.1	15.3	15.3	15.1	17.4
Black Caribbean		-7.4	0.2	0.2	0.5	7.1
Black other groups		-1.0	8.5	8.5	8.7	11.2
Chinese		37.6	35.2	35.1	35.5	25.3
Any other ethnic group		8.4	15.3	15.3	15.2	20.4
Unclassified/Refused		-6.7	-0.1	-0.1	0.0	0.4
White British (Reference)		-	-	-	-	-
Girl (Vs. Boy)			15.5	15.5	15.5	16.8
Entitled FSM			-21.8	-21.7	-24.2	-15.6
IDACI (normalised)			-10.4	-10.3	-10.2	-6.6
SEN- School Action			-45.9	-45.9	-45.8	-13.2
SEN- School Action Plus			-75.9	-75.9	-75.8	-39.8
SEN Statemented			-83.4	-83.4	-83.2	-17.4
Mobile - Joined Y10/11			-74.3	-74.2	-74.0	-60.8
Mobile - Y7-Y9 NOT Jul-Sep			-19.9	-19.9	-19.7	-18.2
North East			-0.1	4.1	4.3	5.2
North West			-12.6	-9.9	-9.9	-2.5
Yorkshire & Humber			-11.7	-9.7	-9.6	2.5
East Midlands			-14.7	-13.4	-13.4	-1.3
West Midlands			-6.2	-4.5	-4.6	1.7
East of England			-17.4	-17.0	-17.2	-5.0
South East			-11.9	-11.8	-12.0	-1.1
South West			-15.7	-14.6	-14.8	-2.4
(London=base)			-	-	-	-
Not tested KS2 (International arrival)			-12.1	-12.1	-11.9	na
Age			-0.49	-0.49	-0.49	0.42
School (Y11) %EAL				-0.34	0.15	-0.04
School (Y11) %FSM				0.16	-0.47	0.14
School %EAL * EAL					0.02	-0.03
School %FSM * FSM					0.41	0.36
Age 11 points score (X=27.9, sd=3.91)						9.03
<b>Random part</b>						
Student variance	4753	4706	3672	3672	3669	2659
School variance	870	845	539	528	520	374
Student variance reduction	-	1.0%	22.7%	22.7%	22.8%	44.1%
School variance reduction	-	2.9%	38.0%	39.3%	40.2%	57.0%
Intercept					542	374
EAL					193	107
FSM					274	228
Gender					81	74

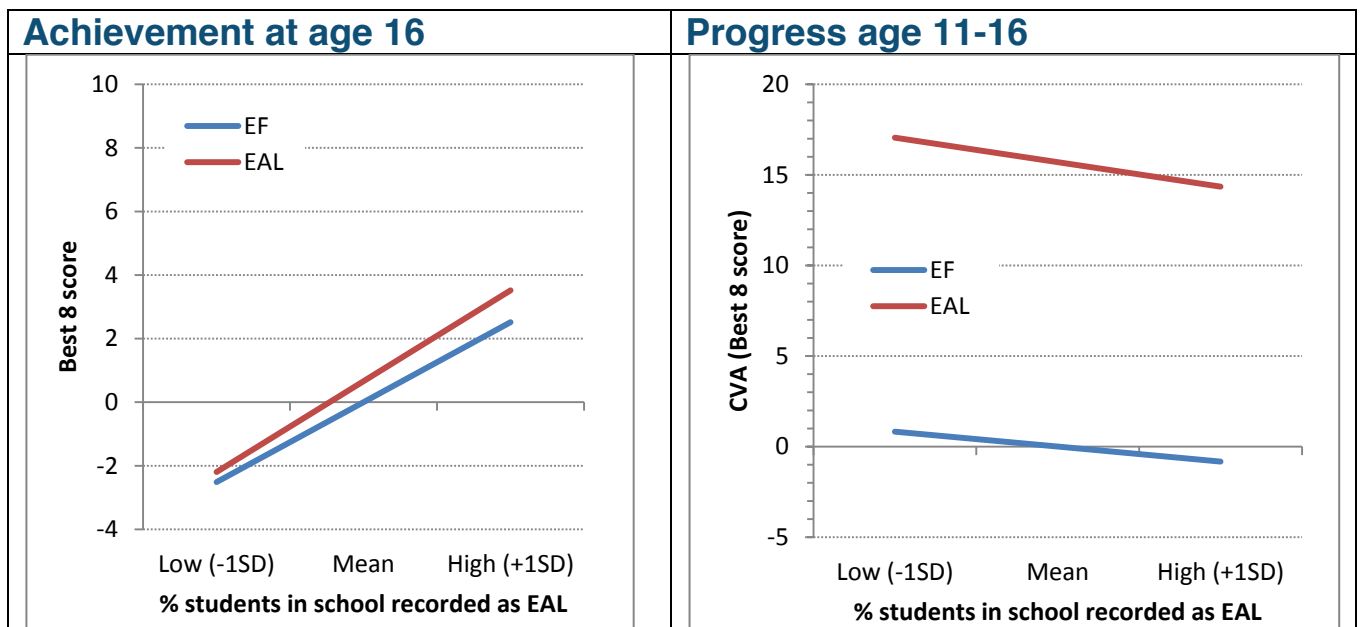
## Effects of school composition on student attainment/progress

Models 3 and 4 were designed to assess whether school composition variables had an association with achievement. Given the average Y11 cohort is relatively large (mean size = 185 students) we calculated composition variables directly for the Y11 cohort (see Table 3.1). There was no substantial association with variables indicating the % of girls, %SEN students, % mobile students, %EAL students, school size or school type and only a moderate association with the percentage of student entitled to FSM (%FSM). We present the %EAL associations below even though they are small because they are of key interest to this research.

### School % EAL

Figure 5.2 below plots the performance of EAL and FLE students separately in schools with low (0%), average (13%) and high (33%) proportions of EAL students. We see that on average students in high %EAL schools achieve around 5 points above low %EAL schools, a very small difference, and the effects is broadly consistent for both EAL and FLE students<sup>11</sup>. **Thus there is no evidence that attending schools with a high proportion of EAL students has a negative association on the achievement of FLE students.** The same pattern is true for progress age 11-16, the difference between low %EAL and high %EAL schools is just 3 points, negligible, and consistent for both EAL and FLE students.

**Figure 5.2: Achievement at age 11 and progress age 7-11 by student EAL and the proportion of EAL students in the cohort**



*Notes: Achievement coefficients from model 4 and progress coefficients from model 5.*

Again, we tested these associations in a non-linear form by dividing schools into five quintile bands for %EAL and testing the interaction between quintile band and EAL status, making no assumption of linearity. The results were broadly consistent with those reported above.

<sup>11</sup> It is important to remember these coefficients are for compositional effects after taking account of each student's EAL status, as well as all the other variables in the model.

## School variation in the size of EAL, FSM and gender progress gaps at KS4

Model 5 directly estimates school variation in the size of the gender, EAL and FSM progress gaps by allowing the coefficients for these variables to vary randomly at level 2. Table 5.4 below shows the fixed effect of each variable and the SD of the school variation around this fixed or average gap.

**Table 5.4: School variation in gender, EAL and FSM gaps for Best 8 score**

Variable	Level 1 (student) fixed coefficient	Level 2 (School) SD	16th centile school (-1SD)	84th centile school (+1SD)
Gender	16.8	8.6	8.2	25.4
EAL	15.7	10.4	5.3	26.1
FSM	-15.6	15.1	-30.7	-0.5

*Note: All three coefficients allowed to vary at the school level simultaneously. The school SD is the square root of the variance figures given in the random section of model 5.*

For example for EAL the fixed effect is 15.7 points while the school variation around this gap has a SD of 10.4, so the range encompassing two-thirds of schools is from 5 to 26 points. So while the gap may vary EAL students make more progress than FLE students in almost all schools. Students entitled to FSM make 15.7 points less progress than non-FSM students, and few schools appear to eliminate the FSM gap, with two-thirds of schools having a FSM gap in the range from -31 to -1 points. Finally girls tend to make more progress than boys age 11-16 by 17 points, and this seems to be true in practically all schools (range across two-thirds of schools from 8 to 25 points).

As for KS2 we conclude that there is evidence of school variation in the size of the EAL gap across schools in England, but that EAL students seem to make more progress than comparable FLE students in the vast majority of schools. This estimate of school variation is net of the measured association of progress with ethnicity, entitlement to FSM, SEN, mobility and so on. However it is still the case that variation in the EAL gap might reflect the differing compositions of the EAL group in different schools, as highlight at KS2.

## Part 6: Using first language and ethnicity to identify low attaining groups

An analysis of the Longitudinal Study of Young People in England (LSYPE) reveals:

- EAL students with English as their main language who were born in the UK or arrived age 0-4 do not differ significantly in achievement at age 14 from English only speakers. However those who have more recently entered the UK (age 5-14) have significantly lower scores than English only speakers.
- In contrast, EAL students with a language other than English as their main language achieve significantly lower scores at age 14 than both English only and EAL - English main groups, regardless of when they arrived in the UK. The gap is large (around 0.50 SD) for UK born and those who entered UK at age 0-10, but even larger (-1.0 SD) for those who have very recently entered the UK age 11-14.
- The associations weakened somewhat by age 16, reflecting greater than average progress by EAL students, particular those reporting English as their main language. However EAL other main language still lagged behind, particularly those who had entered age 11-14.

Black African and White Other ethnic groups had particularly high proportions of students who arrived in the UK between ages 5-14, each over 40% compared to the sample average of 3%. Going back to the NPD and using the data on these students first language revealed:

- Within the White Other ethnic group, there were minimal differences between English, Russian, Spanish, French and Italian speakers, but Romanian, Turkish and Portuguese speakers were about 7 NC months behind, and Lithuanian, Polish and Albanian speakers about 4 NC months behind, White Other English speakers. At KS4, Spanish, Russian and Italian speakers did better than English speakers, while Slovak, Lithuanian, Romanian and Latvian speakers did significantly less well than White Other English speakers.
- Within the Black African ethnic group, at KS2 Igbo and Yoruba speakers do as well as English speakers, but French & Arabic speakers are 4 NC months behind, Lingala speakers 6 NC months behind and Portuguese speakers 8 NC months behind Black African English speakers. At KS4 again Igbo & Yoruba speakers are doing as well or better than English speakers, but Somali and Lingala 16 points behind and Portuguese speakers fully 24 points behind.

## **Analyses of additional data sources - LSYPE**

We have seen that achievement within the group of students identified as EAL in the NPD is extremely varied and the group is very heterogeneous. An important risk factor related to EAL attainment that we have sought to proxy in the NPD through absence of a prior attainment score is date of arrival in England. There is however an educational dataset called the Longitudinal Study of Young People in England (LSYPE) that contains direct data on students' year of arrival in England along with their achievement in national tests at age 11, 14 and 16. We can draw on the LSYPE to directly evaluate association between achievement and regency of arrival in England. We have also hypothesized based on previous research in London schools (e.g. Strand & Demie, 2005; Demie & Strand, 2006) that fluency in English is a key factor associated with achievement. EAL students who are at the earlier stages of learning English are likely to have substantially lower attainment than more advanced English learners, and indeed EAL students fully fluent in English typically have higher levels of achievement than mono-lingual English speakers. There is no direct measure of the fluency in English of students in LSYPE, but among those with multiple languages, all of whom are likely to be recorded as EAL in the NPD, data are collected directly from the young people on which they consider their main language.

We will use the LSYPE to address three broad questions. First, can young peoples' self-reports of their own first language be used to refine the school-sourced EAL measure from the NPD? Second, to what extent is recent arrival to the UK a risk factor for lower attainment, and particularly so for EAL students? Third do some ethnic groups have a particularly high proportion of recent arrivals? If so this might suggest further analysis of the NPD for those particular ethnic groups?

## **The Longitudinal Study of Young People in England (LSYPE)**

The Longitudinal Study of Young People in England (LSYPE) is a longitudinal panel study initiated by the DFE in 2004. LSYPE recruited a nationally representative sample of over 15,000 students from Y9 and interviewed them along with their parents/guardians in 2004. Subsequently the sample and parents have been re-interviewed on a regular basis. The sample included students from all school types including the Independent sector, and recruited substantial boosts for ethnic minority and deprived students. Data from the Annual School Census (ASC) and attainment data from KS2 tests in 2001, KS3 tests in 2004 and GCSE results in 2006 have also been matched for the cohort. As a result LSYPE presents a unique insight into the context, experiences and attitudes of young people and their families with regards to their schools and their education. Key strengths of this dataset are that it is detailed and nationally representative (Strand, 2008). There has been quite extensive analysis of the LSYPE in relation to ethnicity, SES, gender and educational achievement / progress and interested readers are referred to Strand (2007, 2008, 2011, 2012, 2014) and Strand et. al. (2010).

## The measure in LSYPE

### EAL

Each student when interviewed at age 14 was asked whether English was their first or main language<sup>12</sup>. The results are presented in Table 6.1.

**Table 6.1: Is English your first or main language?**

Is English your first or main language?	Estimate	Standard Error	Un-weighted Count
English only	90.8%	.3%	12126
English first/main and speaks other languages	5.2%	.2%	1791
Respondent is bilingual	1.2%	.1%	452
No, another language is first/main language	2.8%	.1%	1061
Total	100.0%	0.0%	15430

Note: The LSYPE oversampled among ethnic minorities and students from deprived areas so percentages are population estimates adjusted for design and non-response weights.

Around 9.2% of the sample responded that they speak a language other than English, almost identical to the proportion (8.8%) recorded as EAL in the 2004 secondary school census. The NPD EAL flag is unfortunately not one of the variables matched into the LSYPE dataset, but we can speculate that all these students would be recorded by their schools as EAL in the NPD.

Interestingly however over two-thirds of the EAL students (6.4% of all students) indicate substantial familiarity with English, either naming it as their first language or responding they are bilingual. Only a relatively small proportion (2.8%) indicate that a language other than English was their first or main language.

Table 6.2 presents age 14 achievement data in the form of the KS3 English, maths and science test scores by language group. This indicates that the distinction within the EAL students is an important one. There are only small differences between English only speakers and EAL students who identify English as their first/main language or as bilingual. In contrast to all three of those groups EAL students who identify another language is their main language score around half a SD below the sample average (ranging from -.40 in maths to -.58 in science).

Given these results subsequent analyses will distinguish between (a) EAL students who report English as their main language / bilingual (EAL-English Main), and (b) EAL students who report a language other than English as their main language (EAL-Other Main).

<sup>12</sup>. A similar question was asked of the head of the household about the main language of the home, but we have not used this because it predominantly indicates the language of the parents, and English as first language is substantially under-reported relative to the student-sourced measure.

**Table 6.2: Achievement at age 14 by First language**

First Language	KS3 normalised test score							
	English		Maths		Science		Average	
	Mean	SE	Mean	SE	Mean	SE	Mean	SE
English only	.06	.02	.06	.02	.06	.02	.11	.02
English first/main & speaks others	.03	.03	.03	.03	-.07	.03	.05	.03
Bilingual	-.07	.06	-.02	.06	-.14	.06	-.03	.06
Another language is first language	-.51	.04	-.40	.04	-.58	.04	-.48	.04

### Length of residence in UK

The LSYPE also records where a student was born and, if not the UK, the year they first lived in the UK or, if they had not lived continuously in the UK since they first came here the year their current spell in the UK started. Table 6.3 reports the age of arrival data broken down by EAL group. A substantial majority of EAL English Main were UK born (79%) whereas for the EAL Other Main this proportion was substantially lower (43%). Conversely a high proportion of EAL Other Main entered the UK after the age of 5 (46%) compared to EAL English Main (13%).

**Table 6.3: Age of entry to UK by EAL**

EAL		Age arrive in UK				
		UK born	Age 0-4	Age 5-10	Age 11-14	Total
EAL: English Main	Estimate	78.8%	8.3%	9.2%	3.7%	100.0%
	Unweighted N	1719	158	145	78	2100
EAL: Other Main	Estimate	43.3%	10.8%	24.4%	21.5%	100.0%
	Unweighted N	541	111	165	159	976
English Only	Estimate	97.8%	1.1%	.8%	.2%	100.0%
	Unweighted N	11506	163	147	62	11878
Total	Estimate	95.2%	1.8%	1.9%	1.0%	100.0%
	Unweighted N	13766	432	457	299	14954

## EAL, recency of arrival in England and educational achievement

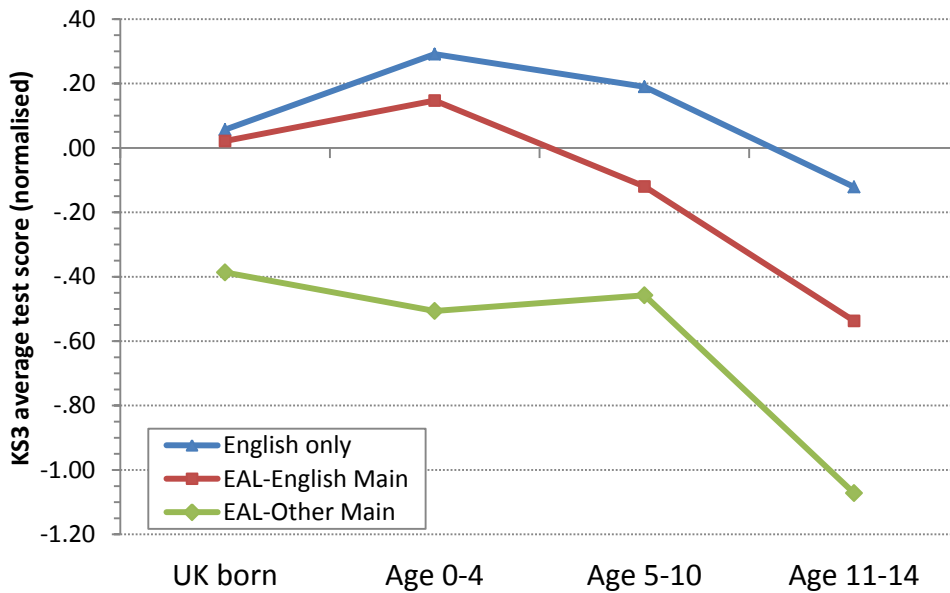
### Attainment at age 14

Figure 6.1 presents the KS3 average points score (normalised) by EAL group. EAL students with English as their main language who were born in the UK or arrived age 0-4 do not differ significantly in achievement from English only speakers. However those who have more recently entered the UK (age 5-10 and age 11-14) have significantly lower scores than English only speakers.

In contrast, EAL students with other main language achieve significantly lower scores than both English only and EAL-English main groups, regardless of when they arrived in the UK. The gap is large, around 0.50 SD, for UK born and those who entered UK age 0-10, but even larger (-1.0 SD) for those who have very recently entered the UK age 11-14.



**Figure 6.1: Age 14 average points score by EAL and recency of arrival in UK**

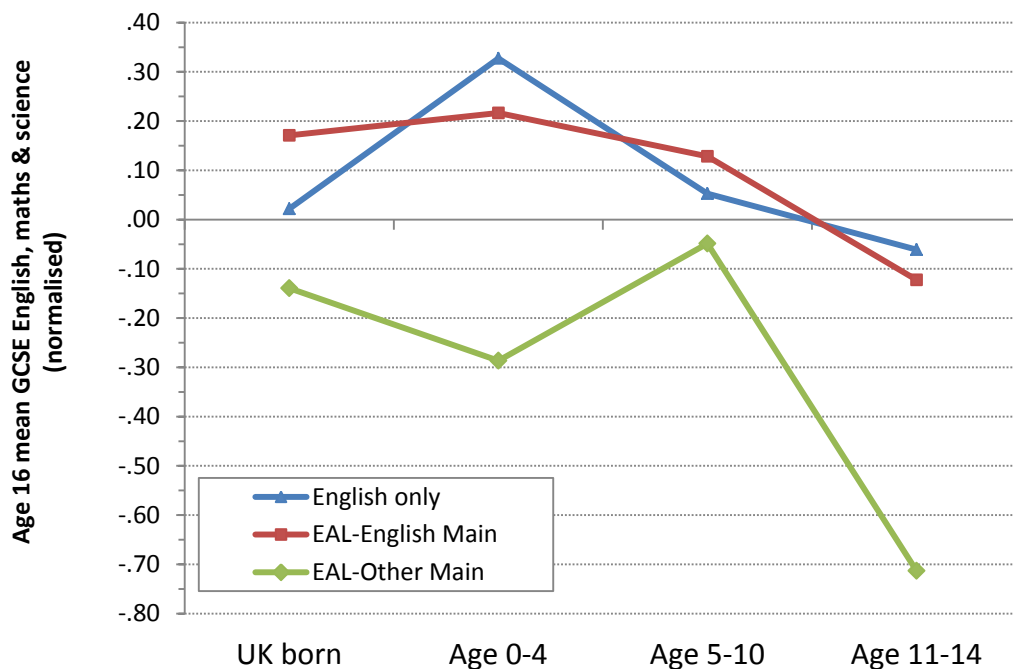


Notes: For full model see Appendix to Part 6.

### Attainment at age 16

The same students were followed up to age 16 and GCSE results collected. Figure 6.2 presents the average of the GCSE English, maths and science scores (normalised). The absolute size of the difference between EAL students and English only speakers has decreased substantially compared to age 14. EAL-English Main score above the population average for UK born and entry before age 5 and there are now no significant differences between EAL-English Main and English only speakers, regardless of age of entry to UK. Among EAL-Other Main the average performance has improved, from around -0.40 SD to -0.20 SD among those who are UK born or entered before age 10. The gap among the most recent entrants (-0.80 SD) remains extremely large.

**Figure 6.2: Age 16 points score for English, maths and science by EAL and recency of arrival in UK**



## Ethnicity, EAL and recency of arrival

Table 6.4 breaks down the date of arrival data by ethnic group. A substantial majority of most ethnic minority students are UK born, Indian (91%), Mixed Heritage (88%), Black Caribbean (87%), Pakistani (86%) and Bangladeshi (82%). However fewer than half the White Other (49%) and Black African (45%) students are UK born.

**Table 6.4: Age of arrival in UK by ethnic group**

Ethnic group		Age arrive in UK				Total
		UK born	Age 0-4	Age 5-10	Age 11-14	
White Other groups	Estimate	49.1%	11.8%	30.9%	8.2%	100%
	Unweighted N	97	24	59	17	197
Mixed heritage	Estimate	88.1%	6.1%	3.1%	2.7%	100%
	Unweighted N	701	32	21	21	775
Indian	Estimate	90.8%	3.8%	3.0%	2.4%	100%
	Unweighted N	884	32	29	19	964
Pakistani	Estimate	86.0%	7.6%	3.9%	2.5%	100%
	Unweighted N	734	58	36	24	852
Bangladeshi	Estimate	82.2%	10.8%	4.1%	2.8%	100%
	Unweighted N	546	70	27	16	659
Black Caribbean	Estimate	87.2%	2.3%	6.4%	4.1%	100%
	Unweighted N	475	14	43	24	556
Black African	Estimate	44.5%	14.2%	21.1%	20.1%	100%
	Unweighted N	250	87	123	124	584
Any other group	Estimate	60.7%	9.0%	17.8%	12.4%	100%
	Unweighted N	278	35	71	49	433
White British	Estimate	98.7%	.8%	.5%	.0%	100%
	Unweighted N	9789	80	47	4	9920
Total	Estimate	95.2%	1.8%	1.9%	1.0%	100%
	Unweighted N	13754	432	456	298	14940

This particularly high proportion of international arrivals aged 5-14 among White Other and Black African groups, both over 40%, suggests there may be value in looking in more detail at the specific languages reported for students in these ethnic groups. It may be that there are association between achievement and the specific language spoken (e.g. Polish) that tend to be correlated with lower fluency in English and more recent arrival in the UK. The interface of ethnic group and specific first language may be fruitful in identifying underperforming groups at risk of poor performance in national tests.

### Summary

An analysis of the LSYPE indicates that:

- Around 9.2% of students in the LSYPE speak a language in addition to English, close to the 8.8% recorded in the NPD for this cohort, and it is likely that all would all be recorded

as EAL by their schools in the NPD. However within this group there are significant differences in achievement between those students who report English as their main language and those who reported another language as their main language, with the later group significantly more at-risk of low achievement at age 14.

- More recent arrival in the UK, particularly when aged 11-14, was associated with much lower achievement at age 14 for both EAL groups. The association weakened somewhat by age 16, reflecting greater than average progress by EAL students, particularly those reporting English as their main language, but students who had entered age 11-14 with a language other than English as their main language still lagged substantially behind.
- Black African and White Other ethnic groups had particularly high proportions of students who arrived in the UK between ages 5-14, each over 40% compared to the sample average of 3%. Further empirical work on the NPD data utilising the specific language recorded may offer further insights into patterns of achievement within these ethnic groups.

## **Further analysis of the NPD: Combining first language with ethnicity to identify groups with low achievement**

### **Rationale**

White Other and Black African ethnic groups are extremely heterogeneous. For example we saw in Part 4 that, both at KS2 and at KS4, they had the largest EAL/FLE gap, with students recorded as EAL within these groups scoring below the national average while those recorded as FLE scored above the national average. However the EAL indicator itself encompasses substantial heterogeneity, since some of the students may be second or third generation while others may be part of the 40% in these ethnic groups who from LSYPE we estimate have arrived after the age of 5. One way of attempting to better understand variation within the EAL group is to explore the associations with attainment of the specific first language spoken by the student. However, just as Part 4 showed that EAL status was closely entwined with ethnic minority background, this will also be the case with first language. For example Demie (2013) showed 80% of French speakers among the White Other ethnic group achieve 5+ A\*-C grades including English & maths, well above the national average of 59%, but just 46% of French speakers among the Black African ethnic group achieve this success. Language groups cannot be understood if decoupled from ethnic background.

Therefore we will conduct the analysis of first languages within the two most linguistically diverse ethnic groups: White Other and Black African. Comparisons are made between students with FLE and those who are recorded as EAL but broken down into the ten most frequent languages spoken within the ethnic group. The purpose is to determine whether there are meaningful patterns of achievement within the EAL group in relation to the actual first language spoken. For example among White Other students are there particular issues of low achievement associated with Polish, Turkish or Portuguese speakers?

The associations between the student's first language and their attainment are likely to vary depending on many other background characteristics of both the student, their family, their school and their neighbourhood. As a result differences in achievement between language groups may reflect socio-economic differences or other demographic factors. Therefore we build upon the simple descriptives by using multiple regression to compare the differences between language groups that are over and above differences linked to age, gender, social disadvantage, SEN, school mobility, region and international arrival during KS2. Do differences between first language groups just reflect such factors or are there more substantial associations?

## Variation within the 'White other' group by first language

### Key Stage 2

#### Descriptive statistics on attainment

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. A frequency count identified 22 languages recorded with at least 100 students, a full list is included in Appendix 6. However to keep the analysis manageable and based upon robust sample sizes only the top 10 first languages other than English are included in the following analysis.

Table 6.5 presents KS2 test scores for the ten most common non-English languages within the White Other ethnic group along with English. Figure 6.3 plots the difference between the KS2 reading and mathematics test score for English speakers and each of the other languages. A number of observations are apparent.

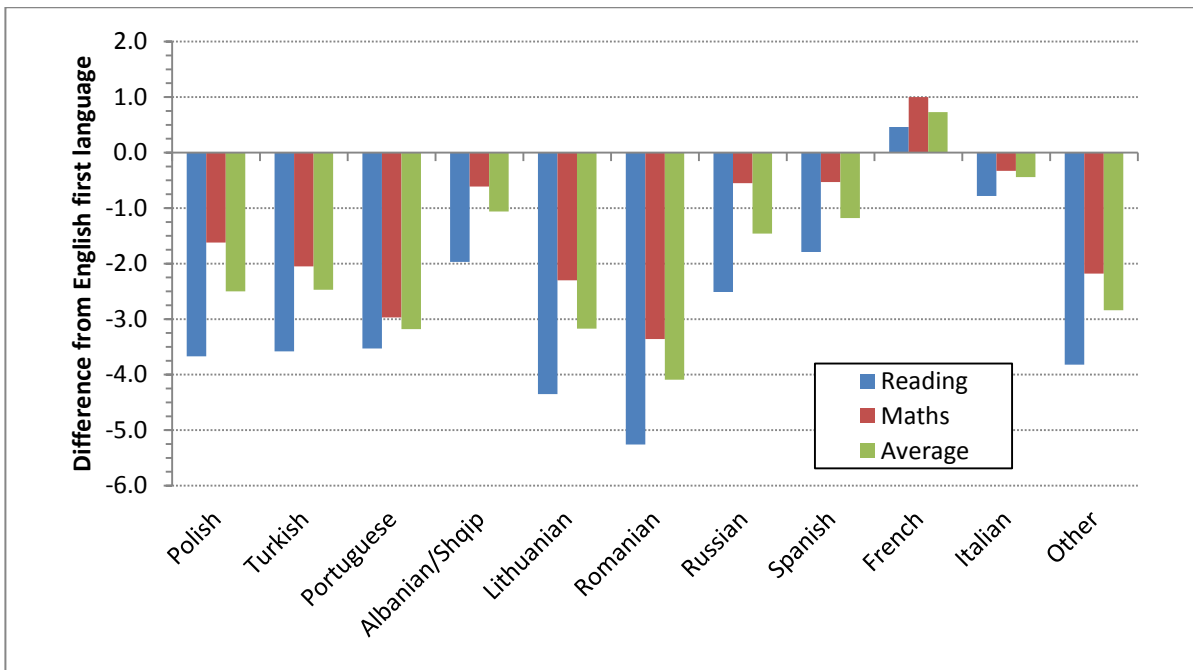
First, there is considerable diversity in the average KS2 scores within the White Other EAL group. For example, the average French speaker outperforms the average English speaker, e.g. 78% achieve Level 4B or above in reading, writing and maths (RWM) compared to 72% of English first language. Italian speakers also score very close to English First Language. These differences are however the exception. For most students, 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.

Second, differences between language group are smaller for mathematics than for reading, but the pattern of performance by first language remains the same. For mathematics it is again Romanian, Lithuanian, Portuguese, Turkish and Polish students who most lag behind English first language. For this reason further analyses below will use KS2 average points score since the patterns across language groups do not appear to vary substantially by domain.

**Table 6.5. KS2 attainment by the 10 most common non-English first languages within the 'White Other' ethnic group**

White Other groups: English and 10 most common other languages	N	%	KS2 fine-grade points score						% Level 4B+ RWM
			Average		Reading		Maths		
			Mean	SD	Mean	SD	Mean	SD	
English	5,954	26.3%	<b>29.5</b>	4.5	<b>29.6</b>	4.5	<b>29.9</b>	5.2	72%
Polish	4,796	21.2%	<b>27.0</b>	5.3	<b>25.9</b>	6.2	<b>28.2</b>	5.6	51%
Turkish	1,553	6.9%	<b>27.0</b>	4.5	<b>26.0</b>	5.1	<b>27.8</b>	5.0	47%
Portuguese	1,182	5.2%	<b>26.3</b>	5.0	<b>26.1</b>	5.7	<b>26.9</b>	5.3	48%
Albanian/Shqip	978	4.3%	<b>28.4</b>	4.2	<b>27.6</b>	4.6	<b>29.3</b>	4.9	62%
Lithuanian	971	4.3%	<b>26.3</b>	5.4	<b>25.3</b>	6.4	<b>27.6</b>	5.6	45%
Romanian	661	2.9%	<b>25.4</b>	6.5	<b>24.3</b>	7.0	<b>26.5</b>	6.8	44%
Russian	570	2.5%	<b>28.0</b>	5.6	<b>27.1</b>	6.1	<b>29.3</b>	6.0	57%
Spanish	562	2.5%	<b>28.3</b>	5.1	<b>27.8</b>	5.6	<b>29.3</b>	5.4	61%
French	419	1.9%	<b>30.2</b>	4.9	<b>30.1</b>	4.9	<b>30.9</b>	5.7	78%
Italian	412	1.8%	<b>29.1</b>	4.9	<b>28.8</b>	5.1	<b>29.5</b>	5.7	67%
Other	4,567	20.2%	<b>26.7</b>	6.3	<b>25.8</b>	7.0	<b>27.7</b>	6.7	52%
<b>TOTAL</b>	<b>22,625</b>	<b>100.0%</b>	<b>27.7</b>	<b>5.4</b>	<b>27.1</b>	<b>6.1</b>	<b>28.6</b>	<b>5.8</b>	<b>58%</b>

**Figure 6.3: Difference between the mean score for FLE and each of the other first languages within the 'White Other' ethnic group**



**Socio-economic and demographic variation by language group**

The language groups not only differ in their KS2 achievement, they also differ on some of the demographic variables that we have seen are correlated with achievement. For example Table 6.6 presents language group differences in the SES measures (entitlement to FSM and IDACI) and whether students were tested at KS1 as a proxy for entry to England from abroad during KS2.

**Table 6.6: breakdown of first language by selected demographic variables: White Other ethnic group**

White Other group: English and 10 most common other languages	% entitled FSM	IDACI score and band						% not tested at KS1
		Mean score	Very low	Low	Avg.	High	Very high	
English	12.2%	-0.25	28%	23%	20%	16%	13%	9.6%
Polish	4.9%	0.49	5%	10%	22%	31%	32%	27.3%
Turkish	33.7%	1.10	2%	5%	8%	20%	64%	5.9%
Portuguese	17.6%	0.54	6%	11%	20%	26%	37%	24.4%
Albanian/Shqip	46.5%	1.01	1%	5%	9%	27%	58%	2.6%
Lithuanian	7.1%	0.56	4%	9%	19%	32%	36%	50.4%
Romanian	5.6%	0.53	7%	9%	16%	35%	34%	63.2%
Russian	12.3%	0.32	11%	13%	21%	27%	28%	45.6%
Spanish	13.7%	0.24	17%	15%	15%	22%	31%	36.3%
French	9.1%	-0.29	26%	27%	19%	15%	13%	19.3%
Italian	15.5%	0.09	18%	15%	22%	23%	22%	20.1%
Other	17.0%	0.35	12%	13%	18%	24%	32%	37.7%
<b>TOTAL</b>	<b>14.5%</b>	<b>0.31</b>	<b>13%</b>	<b>14%</b>	<b>18%</b>	<b>24%</b>	<b>30%</b>	<b>24.5%</b>

*Note: IDACI score is normalised to have a mean of 0 and SD of 1. IDACI bands are quintiles each representing 20% of the population.*

We see that French first language have a similar SES profile to English first language. However many of the lower achieving language groups have high levels of socio-economic deprivation, particularly Turkish and Albanian speakers but also Portuguese, Lithuanian, Romanian and Polish all have a mean IDACI score of at least 0.50 (i.e. the average students lives in a neighbourhood 0.50 SD above mean deprivation). While just 5% of Polish students, 6% of Romanian and 7% of Lithuanian students are entitled to FSM, this seems something of an anomaly since their IDACI profiles show high proportions living in the more deprived neighbourhoods and low proportions living in less deprived neighbourhoods. It may be that take up of state benefits is low in these groups but in-work poverty is high. 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.

### **Contextualised differences controlling for student background**

It is therefore possible that at least some of the low achievement of these language groups reflect socio-economic factors. We therefore complete a regression analysis to see whether differences in demographic variables can account for the variation between first language groups. Table 6.7 and Figure 6.4 presents the results.

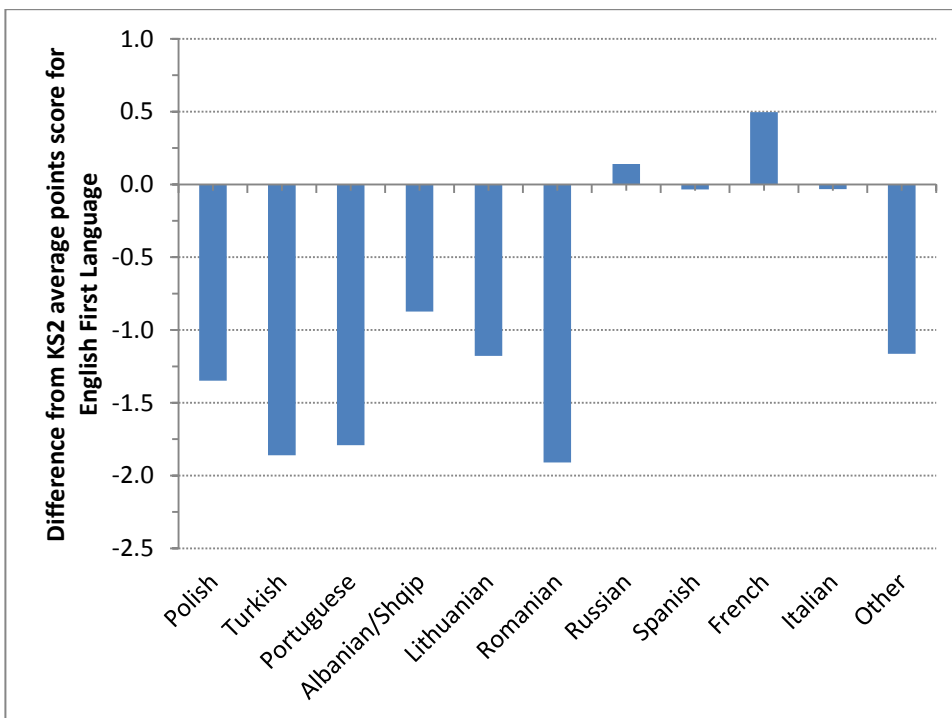
The relationship between the student background variables and KS2 achievement has already been described extensively in Part 4, so the analysis here focuses only on the language group coefficients and how they change following control for student background. The gap between English and the other languages groups are all smaller after controlling for student background, reflecting lower SES and greater international mobility.

**Table 6.7. Contextualised models of KS2 attainment within the White Other ethnic group**

<b>First language</b>	<b>Model 1</b>	<b>Model 2</b>
Polish	-2.5	-1.3
Turkish	-2.5	-1.9
Portuguese	-3.2	-1.8
Albanian/Shqip	-1.0	-0.9
Lithuanian	-3.2	-1.2
Romanian	-4.0	-1.9
Russian	-1.5	0.1
Spanish	-1.2	0.0
French	0.7	0.5
Italian	-0.5	0.0
Other Non-English	-2.8	-1.2

*Note: Coefficients are contrasts with First language English. Model 2 adjusts for student background variables of: age, gender, SEN stage, pupil mobility, FSM, Neighbourhood deprivation (IDACI), whether student has prior attainment score (proxy for international migration) and region. See Appendix to Part 6 for all coefficients.*

**Figure 6.4: Mean KS2 points score by first language after adjusting for student background variables**



After accounting for student background there are 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. The average result for the smaller first language groups outside the top 10 (see Appendix 6) also indicates an average gap of around 1 point.

## Key Stage 4

### Descriptive statistics

Table 6.8 presents the KS4 achievement data for White other groups by first language. The top 11 languages other than English are presented as Italian and Latvian tied in 10th place. The languages are the same as at KS2 except for the absence of French in the top 10, with only minor changes in ranking. The results indicate a similar pattern to differences at KS2. Spanish, Italian, Albanian and Russian speakers perform at par with English speakers in Best 8 score, English and maths. However there is roughly a 20 point gap in Best 8 score for Polish, Turkish, and Portuguese speakers, a 50 point gap for Lithuanian, Romanian and Latvian speakers and a 120 point gap for Slovak speakers. Only 18.7% of Slovak speakers achieved 5+A\*-C incl EM compared to 70.5% of those with English first language.

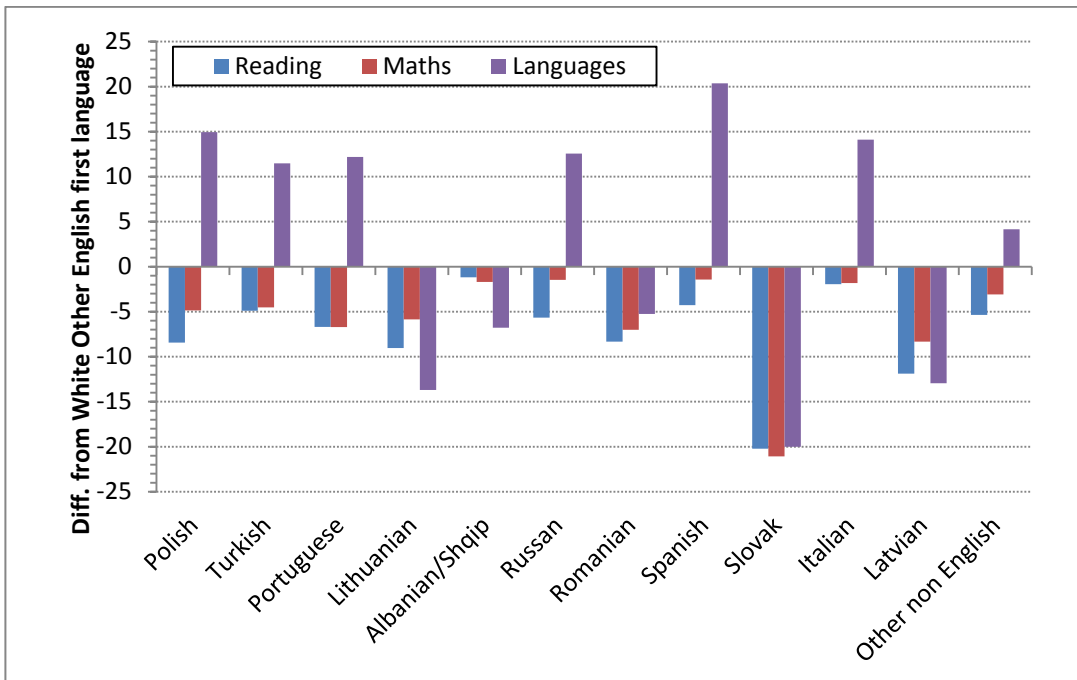
**Table 6.8: KS4 Attainment for White other students by first language**

White Other groups by First language	N	%	KS4 points scores								5+A*-C incl Eng & Maths
			Best 8		English		Maths		Languages		
			Mean	SD	Mean	SD	Mean	SD	Mean	SD	
English	6,337	33.2%	<b>359.4</b>	75.2	<b>42.1</b>	10.2	<b>42.2</b>	11.2	<b>27.8</b>	23.5	70.5%
Polish	3,310	17.3%	<b>334.9</b>	86.0	<b>33.7</b>	12.7	<b>37.4</b>	12.1	<b>42.8</b>	20.3	43.7%
Turkish	1,067	5.6%	<b>340.5</b>	69.2	<b>37.2</b>	9.8	<b>37.7</b>	11.8	<b>39.3</b>	21.8	50.6%
Portuguese	977	5.1%	<b>332.3</b>	81.1	<b>35.4</b>	11.5	<b>35.5</b>	12.5	<b>40.0</b>	20.3	45.3%
Lithuanian	821	4.3%	<b>308.0</b>	94.8	<b>33.1</b>	12.8	<b>36.4</b>	12.3	<b>14.1</b>	20.6	40.4%
Albanian/Shqip	588	3.1%	<b>353.3</b>	64.6	<b>40.9</b>	8.9	<b>40.5</b>	10.6	<b>21.0</b>	22.1	65.8%
Russian	386	2.0%	<b>348.2</b>	87.3	<b>36.5</b>	13.4	<b>40.7</b>	11.8	<b>40.4</b>	23.9	54.4%
Romanian	364	1.9%	<b>304.4</b>	112.6	<b>33.8</b>	15.1	<b>35.2</b>	15.6	<b>22.6</b>	24.2	43.1%
Spanish	345	1.8%	<b>354.5</b>	86.7	<b>37.9</b>	12.9	<b>40.8</b>	12.5	<b>48.2</b>	18.8	59.7%
Slovak	252	1.3%	<b>236.6</b>	129.9	<b>21.9</b>	16.5	<b>21.1</b>	18.4	<b>7.8</b>	16.8	18.7%
Italian	244	1.3%	<b>359.9</b>	71.5	<b>40.2</b>	10.1	<b>40.4</b>	10.9	<b>41.9</b>	22.4	61.1%
Latvian	244	1.3%	<b>300.0</b>	94.6	<b>30.2</b>	12.4	<b>33.9</b>	13.5	<b>14.9</b>	22.4	27.5%
Other non English	4,176	21.9%	<b>337.0</b>	96.5	<b>36.8</b>	13.6	<b>39.1</b>	13.8	<b>32.0</b>	24.7	54.9%
TOTAL	19,111	100%	<b>341.7</b>	87.3	<b>37.7</b>	12.6	<b>39.2</b>	12.8	<b>32.0</b>	24.2	56.2%

Results for separate subjects of English, maths and foreign language are presented in Figure 6.5. Remembering that 6 points represent a whole GCSE grade these differences are large and not very much different in maths than in English. However six of the groups of other language speakers outperformed English speakers in GCSE foreign languages. Polish, Turkish, Portuguese, Russian, Spanish and Italian students achieved GCSE language scores substantially higher than English speakers or other language groups. These are among the 19 languages in which GCSEs can be taken (see Appendix to Part 6) and these students may achieve success as mother tongue speakers even if their school does not teach the GCSE. Other language speakers, e.g. Lithuanian, Romanian, Latvian and Slovak speakers, may be disadvantaged in this regard and could achieve slightly lower Best 8 scores, but the results for these groups are very low for English and mathematics as well, this is not just about GCSE languages.



**Figure 6.5: KS4 Attainment for White other students by first language**



**Contextualised model**

Socio-economic difference between first language groups are presented in Table 6.9 and again we see these are large.

**Table 6.9: socio-economic disadvantage and first language: White Other KS.**

White Other groups by First language	% entitled FSM	IDACI score and band						% not tested at KS2
		Mean score	Very low	Low	Avg.	High	Very high	
English	11.1%	-0.16	24%	22%	21%	18%	15%	9.0%
Polish	5.4%	0.45	6%	12%	22%	31%	29%	44.4%
Turkish	39.3%	1.17	2%	4%	8%	20%	66%	7.8%
Portuguese	19.0%	0.64	5%	8%	18%	31%	39%	30.9%
Lithuanian	7.1%	0.55	3%	10%	20%	34%	33%	54.0%
Albanian/Shqip	49.5%	1.04	2%	4%	9%	22%	63%	4.3%
Russian	10.9%	0.34	11%	13%	19%	27%	30%	54.4%
Romanian	7.7%	0.50	6%	9%	18%	35%	32%	76.9%
Spanish	17.4%	0.30	13%	13%	16%	29%	29%	43.8%
Slovak	31.0%	0.64	4%	5%	14%	39%	38%	61.1%
Italian	13.5%	0.19	15%	17%	25%	20%	23%	20.9%
Latvian	5.3%	0.51	5%	11%	18%	33%	34%	79.5%
Other non English	14.4%	0.36	12%	13%	19%	24%	32%	37.6%
<b>TOTAL</b>	<b>14.1%</b>	<b>0.30</b>	<b>13%</b>	<b>15%</b>	<b>19%</b>	<b>24%</b>	<b>29%</b>	<b>28.8%</b>

In particular White Other FLE are more socio-economically advantaged than the other language groups. It is also notable that the four language groups with the lowest attainment have extremely high levels of international arrival in England during secondary school, including 54% of Lithuanian, 61% of Slovak, 77% of Romanian and 80% of Latvian speakers.

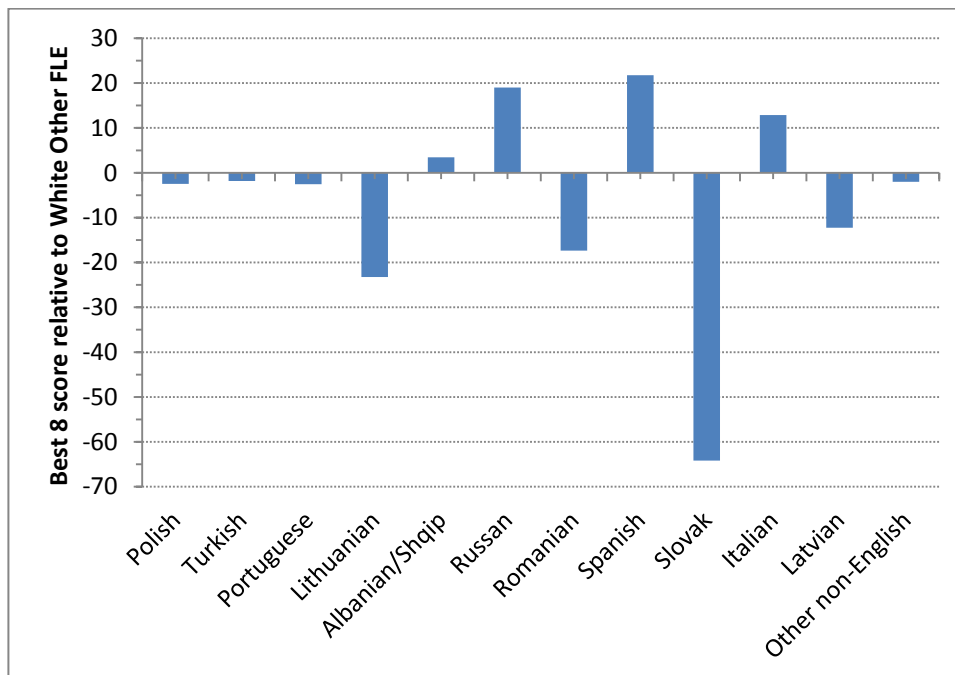
We therefore move to a contextualised model and Table 6.10 presents the results. Model 1 presents the difference between each language group and FLE before taking account of context, while Model 2 presents the results after adjusting for student background. While adjusting for background reduces many of the differences, Figure 6.6 shows that - relative to our index of 16 points as a notable threshold - Russian and Spanish speakers achieving more highly than comparable FLE, but that Romanian, Lithuanian, and Slovak speakers continue to score substantially below White Other FLE speakers.

**Table 6.10: Best 8 score by first language for White Other group at KS4**

First language	Raw	Contextualised
Polish	-5.8	-2.5
Turkish	-7.0	-1.8
Portuguese	-7.7	-2.6
Lithuanian	-28.9	<b>-23.2</b>
Albanian/Shqip	-3.1	3.5
Russian	11.2	<b>19.0</b>
Romanian	-25.5	<b>-17.4</b>
Spanish	13.6	<b>21.8</b>
Slovak	-73.8	<b>-64.2</b>
Italian	3.4	12.9
Latvian	-22.0	-12.3
Other non-English	-5.1	-2.0
Adjusted R2	4.9%	28.4%

*Note: Coefficients are contrasts with First language English. Model 2 adjusts for student background variables of: age, gender, SEN stage, pupil mobility, Entitlement to FSM, Neighbourhood deprivation (IDACI), whether student has prior attainment score (proxy for international migration) and England region. Differences greater than 16 points indicated in bold. Full model included in Appendix 6.*

**Figure 6.6: KS4 Best 8 score of White Other students by First language**



# Variation within the 'Black African group by first language

## Key Stage 2

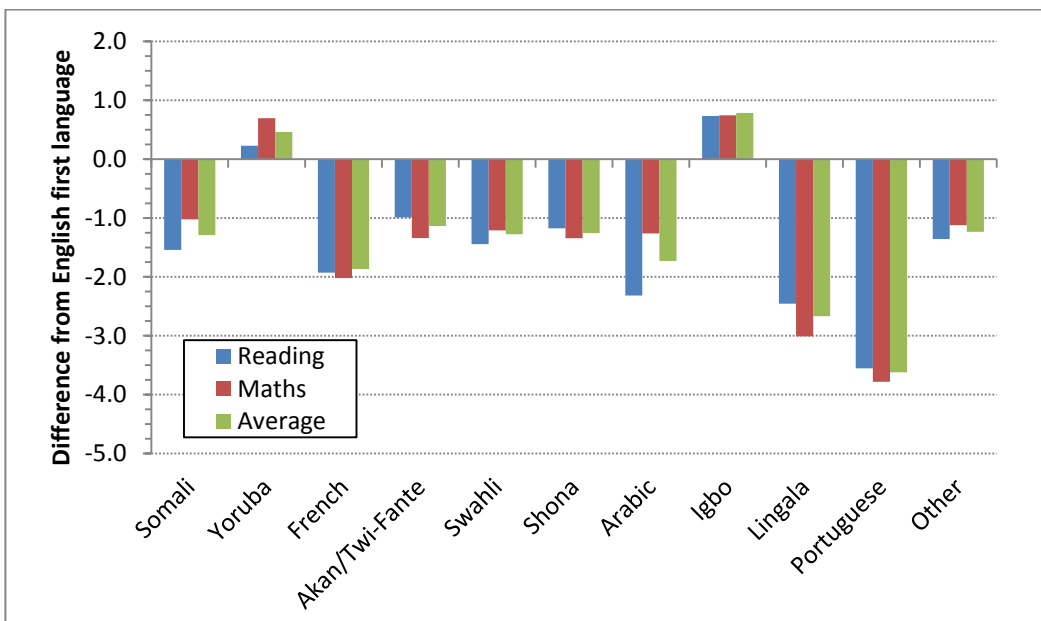
### Descriptive statistics

Table 6.11 presents the KS2 scores for English and the ten most common non-English first languages within the Black African ethnic group. As within the comparisons conducted within the White Other ethnic group considerable variation is apparent.

**Table 6.11: Variations in KS2 scores within the Black African group**

Black African: English and 10 most common other languages	N	%	KS2 fine-grade points score						% Level 4B+ RWM
			Average		Reading		Maths		
			Mean	SD	Mean	SD	Mean	SD	
English	4,883	28.9%	<b>29.0</b>	4.4	<b>28.9</b>	4.4	<b>29.4</b>	5.2	69.8%
Somali	3,810	22.6%	<b>27.7</b>	4.5	<b>27.3</b>	5.0	<b>28.4</b>	5.0	58.6%
Yoruba	1,369	8.1%	<b>29.5</b>	4.4	<b>29.1</b>	4.5	<b>30.1</b>	5.1	74.6%
French	891	5.3%	<b>27.2</b>	4.8	<b>26.9</b>	5.3	<b>27.4</b>	5.4	55.6%
Akan/Twi-Fante	834	4.9%	<b>27.9</b>	4.6	<b>27.9</b>	4.8	<b>28.0</b>	5.2	61.6%
Swahli	445	2.6%	<b>27.7</b>	4.6	<b>27.4</b>	4.9	<b>28.2</b>	5.2	61.3%
Shona	417	2.5%	<b>27.8</b>	4.5	<b>27.7</b>	4.7	<b>28.0</b>	5.2	59.0%
Arabic	410	2.4%	<b>27.3</b>	5.6	<b>26.6</b>	6.2	<b>28.1</b>	6.0	54.1%
Igbo	358	2.1%	<b>29.8</b>	4.0	<b>29.6</b>	3.9	<b>30.1</b>	4.8	75.4%
Lingala	330	2.0%	<b>26.4</b>	4.6	<b>26.4</b>	5.0	<b>26.4</b>	5.1	46.4%
Portuguese	307	1.8%	<b>25.4</b>	5.0	<b>25.3</b>	5.9	<b>25.6</b>	5.1	42.0%
Other	2,831	16.8%	<b>27.8</b>	4.8	<b>27.5</b>	5.1	<b>28.3</b>	5.4	59.9%
<b>TOTAL</b>	<b>16,885</b>	<b>100.0%</b>	<b>28.2</b>	<b>4.7</b>	<b>27.9</b>	<b>4.9</b>	<b>28.6</b>	<b>5.3</b>	<b>63.1%</b>

**Figure 6.7. 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.

### Socio-economic and demographic variation

The language groups not only differ in their KS4 achievement, they also differ on some of the demographic variables correlated with achievement. Table 6.12 presents language group differences in the SES measures (entitlement to FSM and IDACI) and whether students were tested at KS2 as a proxy for international entry to England during secondary school.

**Table 6.12: breakdown of first language by selected demographic variables: Black African ethnic group**

Black African: English and 10 most common other languages	% entitled FSM	IDACI score and band						% not tested at KS2
		Mean score	Very low	Low	Avg.	High	Very high	
English	21.9%	0.67	5%	9%	16%	28%	42%	10.5%
Somali	62.3%	1.31	0%	1%	5%	21%	72%	12.0%
Yoruba	16.6%	0.94	2%	3%	9%	33%	53%	10.9%
French	53.6%	1.11	1%	3%	7%	23%	65%	12.2%
Akan/Twi-Fante	22.1%	1.05	1%	3%	10%	24%	61%	11.8%
Swahli	48.8%	0.96	2%	5%	11%	26%	56%	9.7%
Shona	18.0%	0.50	6%	11%	21%	29%	33%	19.2%
Arabic	52.4%	0.99	3%	5%	10%	24%	58%	19.5%
Igbo	19.3%	0.98	1%	2%	11%	26%	59%	11.2%
Lingala	75.2%	1.36	1%	1%	5%	18%	75%	4.2%
Portuguese	47.2%	1.21	0%	3%	7%	21%	68%	27.4%
Other	33.9%	1.02	2%	4%	9%	26%	59%	18.9%
<b>TOTAL</b>	<b>37.1%</b>	<b>0.98</b>	<b>3%</b>	<b>5%</b>	<b>11%</b>	<b>26%</b>	<b>57%</b>	<b>13.0%</b>

All Black African language groups, including those with English as their first language, have much higher than average levels of socio-economic disadvantage. Thus the mean IDACI normal score for all Black African students is 0.98, indicating that the average Black African student lives in a neighbourhood a full 1SD above the average level of deprivation, and the average level of entitlement to FSM is 37%. However Black African students with FLE are slightly less disadvantaged than the other language groups (Mean IDACI=0.67, %FSM=22%).

### Contextualised differences controlling for student background

Table 6.13 and Figure 6.8 presents the results. 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 student 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.

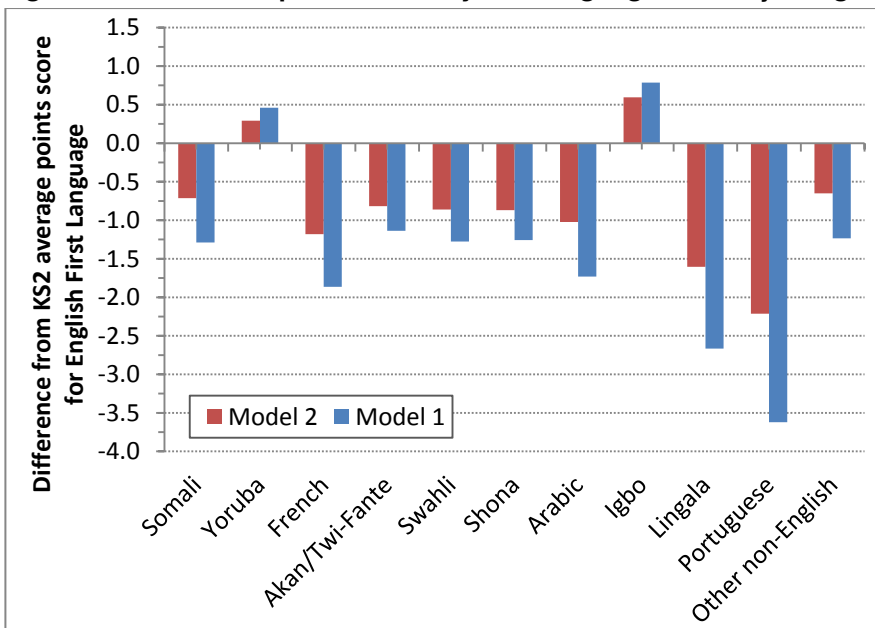


**Table 6.13: Mean KS2 points score by first language adjusting for student background variables**

First Language	Model 1	Model 2
Somali	-1.3	-0.7
Yoruba	0.5	0.3
French	-1.9	<b>-1.2</b>
Akan/Twi-Fante	-1.1	-0.8
Swahli	-1.3	-0.9
Shona	-1.3	-0.9
Arabic	-1.7	<b>-1.0</b>
Igbo	0.8	0.6
Lingala	-2.7	<b>-1.6</b>
Portuguese	-3.6	<b>-2.2</b>
Other non-English	-1.2	-0.7

*Note: Coefficients are contrasts with First language English. Model 2 adjusts for student background variables of: age, gender, SEN stage, pupil mobility, FSM, Neighbourhood deprivation (IDACI), whether student has prior attainment score (proxy for international migration) and England region. Adjusted differences greater than 1 point indicated in bold. Full model given in Appendix 6.*

**Figure 6.8: Mean KS2 points score by first language after adjusting for student background variables**



## Key Stage 4

### Descriptive statistics

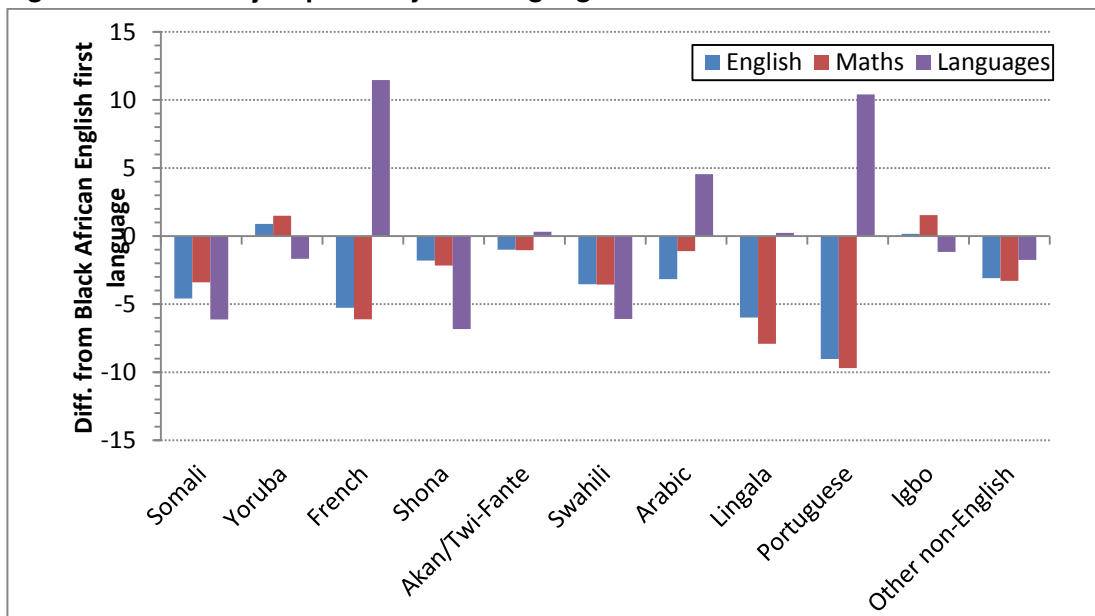
The most common first language for Black African students was English, recorded for 38% of students. There were 10 other language recorded with each accounted for least 1% of the cohort, these are listed in Table 6.14 below. The list is substantially the same as for KS2 except that Arabic appears in the top 10 at KS4.

**Table 6.14: KS4 scores by First Language within the Black African group**

Black African by First language	N	%	KS4 points scores								5+A*-C incl Eng & Maths
			Best 8		English		Maths		Languages		
			Mean	SD	Mean	SD	Mean	SD	Mean	SD	
English	6,030	37.8%	<b>356.2</b>	61.0	<b>41.9</b>	8.3	<b>41.6</b>	10.4	<b>24.7</b>	21.6	69.1%
Somali	2,787	17.5%	<b>327.6</b>	75.0	<b>37.3</b>	10.4	<b>38.2</b>	12.5	<b>18.6</b>	20.7	53.5%
Yoruba	984	6.2%	<b>365.0</b>	55.6	<b>42.8</b>	7.5	<b>43.1</b>	9.4	<b>23.0</b>	21.2	76.2%
French	596	3.7%	<b>332.8</b>	73.1	<b>36.6</b>	10.4	<b>35.5</b>	12.5	<b>36.1</b>	22.1	47.0%
Shona	573	3.6%	<b>347.9</b>	60.5	<b>40.1</b>	8.6	<b>39.4</b>	10.6	<b>17.9</b>	20.3	63.0%
Akan/Twi-Fante	551	3.5%	<b>351.6</b>	61.4	<b>40.9</b>	9.5	<b>40.5</b>	10.0	<b>25.0</b>	21.0	68.6%
Swahili	337	2.1%	<b>332.7</b>	78.9	<b>38.4</b>	10.4	<b>38.0</b>	11.8	<b>18.6</b>	20.8	54.0%
Arabic	262	1.6%	<b>345.2</b>	76.1	<b>38.7</b>	10.0	<b>40.5</b>	11.7	<b>29.2</b>	23.5	60.3%
Lingala	245	1.5%	<b>323.8</b>	70.1	<b>35.9</b>	10.1	<b>33.7</b>	11.7	<b>24.9</b>	23.1	38.8%
Portuguese	211	1.3%	<b>312.6</b>	79.9	<b>32.9</b>	12.2	<b>31.9</b>	13.7	<b>35.1</b>	21.0	37.4%
Igbo	161	1.0%	<b>362.4</b>	60.7	<b>42.1</b>	8.4	<b>43.1</b>	8.7	<b>23.5</b>	22.0	73.9%
Other non-English	3,214	20.1%	<b>342.7</b>	68.9	<b>38.8</b>	10.0	<b>38.3</b>	11.9	<b>22.9</b>	22.4	57.4%
TOTAL	15,951	100%	<b>346.0</b>	67.7	<b>39.9</b>	9.5	<b>39.7</b>	11.5	<b>23.4</b>	21.9	62.1%

Attainment difference by first language were marked. In terms of Best 8 score, Yoruba and Igbo speakers again score slightly above FLE speaking peers, while Portuguese (-44), Lingala (-32), Somali (-29), Swahili (-24) and French (-23) speakers all scored significantly below the mean for Black African FLE. The results for individual subjects are presented in Figure 6.9 and follow the same pattern except for MFL, where French, Portuguese and Arabic speakers did particularly well, possibly because these languages are among those that can be taken as GCSEs, and the student may be entered as a mother tongue speaker even if the school does not teach the GCSE (see list in Appendix to Part 6).

**Figure 6.9: KS4 subject points by first language Black African**



### Contextualised model

As a whole Black African students experience higher levels of socio-economic deprivation (SED) than White British students, over one-third (33.4%) are entitled to FSM and the average IDACI score was 0.93. However within the Black African group students with FLE were on average less disadvantaged than those with non-English first languages. Also a

particularly high proportion of Shona (32%) and Portuguese (36%) speakers had no prior KS2 test scores.

**Table 6.15: Socio-economic deprivation by first language: Black African students KS4**

White Other groups by First language	% entitled FSM	IDACI score and band						% not tested at KS2
		Mean score	Very low	Low	Avge.	High	Very high	
English	19.4%	0.73	5%	8%	15%	27%	46%	10.8%
Somali	64.6%	1.27	0%	2%	6%	22%	70%	16.9%
Yoruba	18.0%	0.97	2%	3%	10%	29%	56%	11.7%
French	53.0%	1.14	1%	3%	8%	24%	64%	22.5%
Shona	10.5%	0.52	6%	11%	21%	28%	34%	31.9%
Akan/Twi-Fante	19.8%	1.06	1%	4%	11%	24%	61%	12.2%
Swahili	47.2%	0.98	2%	5%	10%	27%	55%	21.7%
Arabic	52.3%	1.05	2%	6%	10%	22%	60%	21.0%
Lingala	68.2%	1.30	1%	1%	3%	19%	76%	5.7%
Portuguese	51.7%	1.10	2%	3%	6%	28%	61%	35.5%
Igbo	15.5%	0.88	4%	6%	12%	24%	55%	14.9%
Other non-English	34.2%	0.95	2%	4%	11%	26%	56%	24.1%
TOTAL	33.4%	0.93	3%	5%	11%	26%	55%	16.5%

Table 6.16 presents the differences in Best 8 score before (Model 1) and after (model 2) controls for student background. While student background accounts for some of the variation between language groups, three groups (Portuguese, Lingala and Somali) still have Best 8 scores at least 16 points below their FLE peers.

**Table 6.16: Best 8 score by first language adjusting for student background: Black African KS4**

Students' First language	Model 1	Model 2
Somali	-19.1	<b>-16.2</b>
Yoruba	6.3	10.3
French	-15.2	-10.2
Shona	-11.9	-6.7
Akan/Twi-Fante	-6.7	-1.5
Swahili	-19.6	-13.1
Arabic	-5.1	2.2
Lingala	-23.9	<b>-16.2</b>
Portuguese	-32.5	<b>-24.3</b>
Igbo	1.8	11.1
Other non-English	-7.8	-5.2
Adjusted R2	3.4%	24.0%

*Note: Coefficients are contrasts with First language English. Model 2 adjusts for student background variables of: age, gender, SEN stage, pupil mobility, Entitlement to FSM, Neighbourhood deprivation (IDACI), whether student has prior attainment score (proxy for international migration) and England region. Differences greater than 16 points indicated in bold. The full model is included in Appendix 6.*



## Part 7: Implications for Policy and Practice

The findings have already been summarised in the executive summary, so will not be repeated here. We highlight however some possible implications for policy, particularly with regard to funding.

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 in the English language that is the major factor influencing the degree of support an individual student will require, and schools will 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, but other high risk factors, such as new international arrivals, should also be funded. We note there is a proposal in a recent DFE consultation on 'Fairer Schools Funding' in March 2014 to allocate £505 for a primary student and £1,216 for a secondary student who enters the English state school in the past three years. 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.

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# Appendices

## Appendix to Part 3: Calculating KS2 fine grades

NC levels are blunt instruments placing students in a small number of discrete levels. At KS1 teachers can award sub-divisions within levels (e.g. 2C, 2B and 2A) but there is no such differentiation at KS2 where pupils are simply recorded using the whole level (with the vast majority at 3, 4 or 5). However the DFE calculate KS2 English and maths fine grades using the test marks achieved by the pupil to make finer distinctions within the levels based on the marks achieved. The DFE has a formula to calculate the fine grade which is:

$$\text{Fine Grade} = \text{Level} + \frac{\text{mark} - \text{level min.}}{\text{level max.} - \text{level min.} + 1}$$

A couple of examples may clarify. These use the 2012 data but the same principle applies in 2013.

### 2012 English fine grade scores

	Pupil A	Pupil B	Pupil C	Pupil D
English level	4	4	5	5
Reading mark	26	35	40	47
Writing mark	30	40	40	47
Total marks	56	75	80	94
Mark range for the level	53-78	53-78	79-100	79-100
Fine Grade	4.12	4.85	5.05	5.68

Pupil A is at the lower end of the Level 4 mark range (56 marks) and therefore achieves a fine grade score of 4.12. However Pupil B is near the top end of the Level 4 mark range (75 marks) and therefore has a fine grade of 4.85. The same applies to Pupils C and D but for the level 5 range. The use of the KS2 fine grade in our analysis allows for a more differentiated measure of a pupils achievement that would be available just using whole levels.

In 2013 fine grades are only calculated for the reading test and for the mathematics test, There were no fine grades provided for the GPS test. Teacher Assessments (TA) at KS2 are made in terms of whole levels only and so there are no fine grades.

# Appendix to Part 4: Descriptive statistics for the reading and maths tests

**Table A4.1 Mean KS2 reading score (fine grade) by student background and EAL status**

Variable	Value	EAL				English First (EF)				Total			
		KS2 reading test			Level 4B+	KS2 reading test			Level 4B+	KS2 reading test			Level 4B+
		Mean	N	SD	Mean	Mean	N	SD	Mean	Mean	N	SD	Mean
Gender	girl	27.7	44406	5.2	71.2%	29.1	211572	4.5	79.9%	28.8	255978	4.6	78.4%
	boy	26.9	45599	5.5	66.4%	28.1	219985	4.9	74.3%	27.9	265584	5.0	73.0%
Season of birth	Autumn	27.8	29898	5.3	72.2%	29.1	144815	4.6	80.3%	28.9	174713	4.7	78.9%
	Spring	27.2	29559	5.4	68.1%	28.6	139190	4.7	77.0%	28.3	168749	4.9	75.4%
	Summer	26.9	30548	5.5	65.9%	28.1	147552	4.8	74.0%	27.9	178100	5.0	72.6%
Ethnic group	White Irish	28.6	27	5.4	77.8%	29.7	1697	4.5	84.5%	29.7	1724	4.5	84.3%
	Traveller Irish	21.4	6	7.8	33.3%	22.8	359	6.3	35.4%	22.8	365	6.4	35.3%
	Traveller Gypsy/Roma	16.9	608	6.4	9.6%	23.2	832	6.4	41.0%	20.5	1440	7.1	27.8%
	White other groups	26.2	16521	6.3	61.0%	29.6	5950	4.5	82.9%	27.1	22471	6.0	66.8%
	Mixed White & African	28.0	613	5.3	74.6%	28.7	2084	4.7	78.0%	28.6	2697	4.8	77.2%
	Mixed White & Caribbean	27.7	160	5.3	69.4%	28.1	6959	4.7	73.7%	28.1	7119	4.7	73.6%
	Mixed White & Asian	28.4	832	5.1	75.2%	29.5	4233	4.5	82.0%	29.3	5065	4.6	80.8%
	Other mixed background	28.2	1967	5.2	74.3%	29.1	6417	4.5	80.6%	28.9	8384	4.7	79.2%
	Indian	28.6	10603	4.6	78.4%	29.7	2800	4.0	85.2%	28.8	13403	4.5	79.8%
	Pakistani	27.1	19952	4.9	66.1%	28.5	2622	4.5	77.1%	27.2	22574	4.9	67.4%
	Bangladeshi	27.6	8964	4.8	70.8%	29.2	367	4.1	79.1%	27.7	9331	4.8	71.1%
	Any other Asian	28.1	6378	5.0	74.7%	29.1	1442	4.4	81.2%	28.3	7820	4.9	75.9%
	Black African	27.6	11890	5.1	71.3%	28.9	4871	4.4	80.8%	27.9	16761	4.9	74.0%
	Black Caribbean	27.1	301	5.0	66.8%	27.4	6944	4.7	69.2%	27.4	7245	4.7	69.1%
	Black other groups	26.9	1219	5.5	68.1%	27.8	2119	4.6	72.8%	27.5	3338	5.0	71.1%
	Chinese	29.4	1380	5.0	82.2%	30.8	376	3.8	90.7%	29.7	1756	4.8	84.0%
	Any other ethnic group	26.8	6664	5.6	65.1%	28.9	1087	4.5	79.6%	27.1	7751	5.5	67.1%
Unclassified/Refused	27.7	515	5.6	70.7%	28.6	2362	4.8	77.7%	28.5	2877	5.0	76.4%	
White British	28.9	1405	5.1	79.5%	28.6	378036	4.7	77.0%	28.6	379441	4.7	77.0%	
FSM	Entitled FSM	26.4	21849	5.5	62.5%	26.3	72122	5.4	60.9%	26.3	93971	5.4	61.3%
	Not entitled FSM	27.6	68156	5.3	70.7%	29.1	359435	4.5	80.3%	28.8	427591	4.6	78.8%
IDACI deprivation quintile	Very low	29.0	5218	5.0	79.8%	29.8	100634	4.2	84.9%	29.7	105852	4.2	84.7%
	Low	28.4	6981	5.1	75.3%	29.1	97582	4.5	80.7%	29.1	104563	4.5	80.3%
	Average	27.5	13057	5.4	70.0%	28.5	91254	4.7	76.1%	28.3	104311	4.8	75.3%
	High	27.1	25738	5.5	67.4%	27.7	77263	4.9	71.4%	27.6	103001	5.1	70.4%
	Very high	27.0	38701	5.4	66.6%	27.2	63616	5.0	67.6%	27.1	102317	5.2	67.2%
SEN stage	No SEN identified	28.4	71738	4.7	77.0%	29.9	335223	3.5	86.8%	29.6	406961	3.8	85.0%
	School Action	24.2	11309	5.0	40.6%	25.2	52474	4.8	48.2%	25.0	63783	4.8	46.9%
	School Action Plus	22.2	5517	6.1	32.0%	23.6	34303	5.9	40.3%	23.4	39820	6.0	39.1%
	Statemented	18.5	1441	7.6	21.5%	20.2	9557	7.4	28.2%	20.0	10998	7.5	27.3%
Change of school	Joined Y6	23.2	6286	7.6	44.4%	27.2	18596	5.3	66.7%	26.2	24882	6.2	61.0%
	Joined Y5	25.4	8354	6.4	56.2%	28.0	37132	5.0	72.0%	27.5	45486	5.4	69.1%
	Joined Y3/Y4	27.4	24018	5.2	69.0%	28.5	103235	4.8	76.4%	28.3	127253	4.9	75.0%
	Stable	28.1	51347	4.7	73.7%	28.8	272594	4.6	78.7%	28.7	323941	4.6	77.9%
Region	North East	26.7	1452	5.8	62.4%	28.6	23400	4.6	78.2%	28.5	24852	4.7	77.3%
	North West	27.1	9193	5.4	67.5%	28.7	63182	4.6	78.0%	28.5	72375	4.7	76.6%
	Yorkshire & the Humber	25.9	8166	6.0	59.3%	28.2	45196	4.9	73.8%	27.8	53362	5.1	71.6%
	East Midlands	26.8	5066	5.9	66.2%	28.5	39707	4.7	76.2%	28.3	44773	4.9	75.1%
	West Midlands	27.1	10970	5.2	66.4%	28.4	46644	4.7	75.4%	28.1	57614	4.8	73.7%
	East of England	27.0	6403	5.7	65.1%	28.5	51877	4.8	76.0%	28.3	58280	4.9	74.7%
	London	27.9	37377	5.1	72.8%	29.0	41279	4.7	79.8%	28.4	78656	4.9	76.5%
	South East	27.6	8856	5.5	70.9%	28.8	73551	4.7	78.4%	28.7	82407	4.8	77.6%
South West	26.9	2522	5.9	65.3%	28.7	46721	4.7	77.6%	28.6	49243	4.8	77.0%	
KS1 tested	No KS1 (age 7) score	23.3	13018	7.1	43.3%	28.5	8889	5.4	76.6%	25.4	21907	7.0	56.7%
	Has KS1 (age 7) score	28.0	76987	4.7	73.1%	28.6	422668	4.7	77.1%	28.5	499655	4.7	76.5%
<b>Grand Total</b>		<b>27.3</b>	<b>90005</b>	<b>5.4</b>	<b>68.8%</b>	<b>28.6</b>	<b>431557</b>	<b>4.7</b>	<b>77.1%</b>	<b>28.4</b>	<b>521562</b>	<b>4.9</b>	<b>75.6%</b>

Figure A4.1:KS2 reading test score by ethnic group and EAL 2013

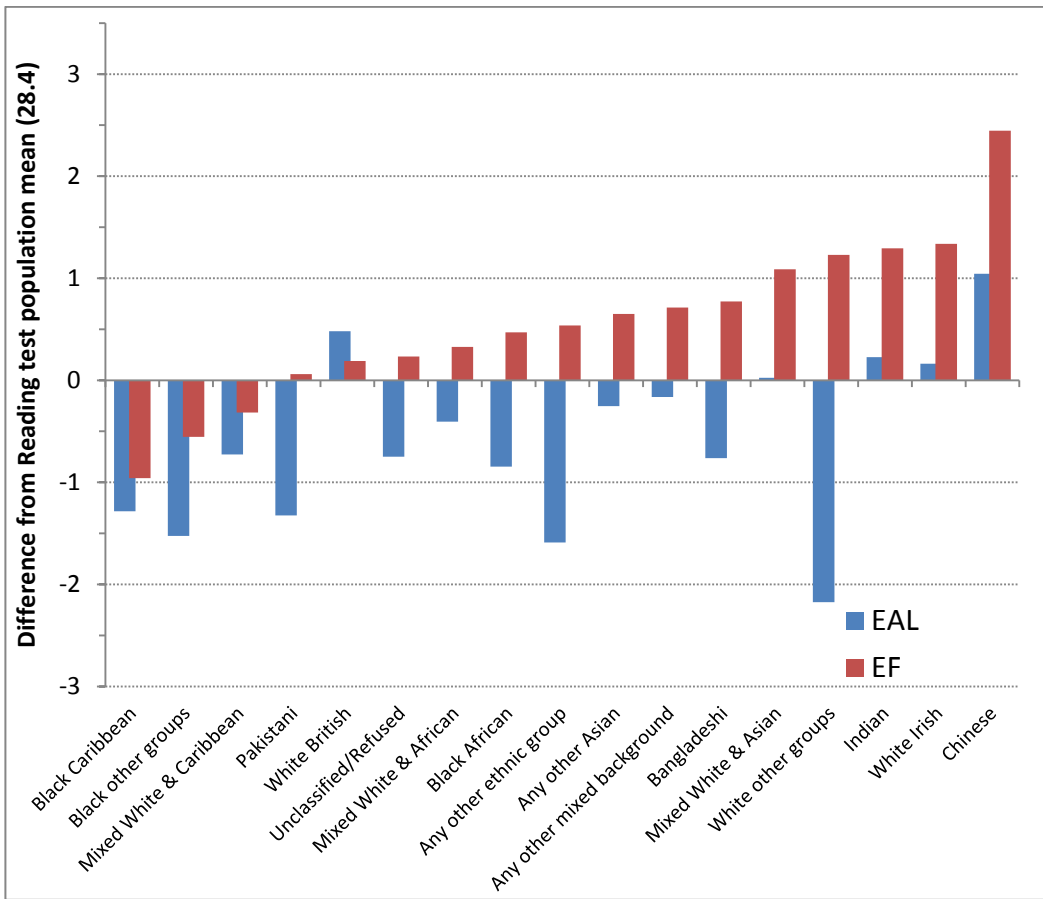
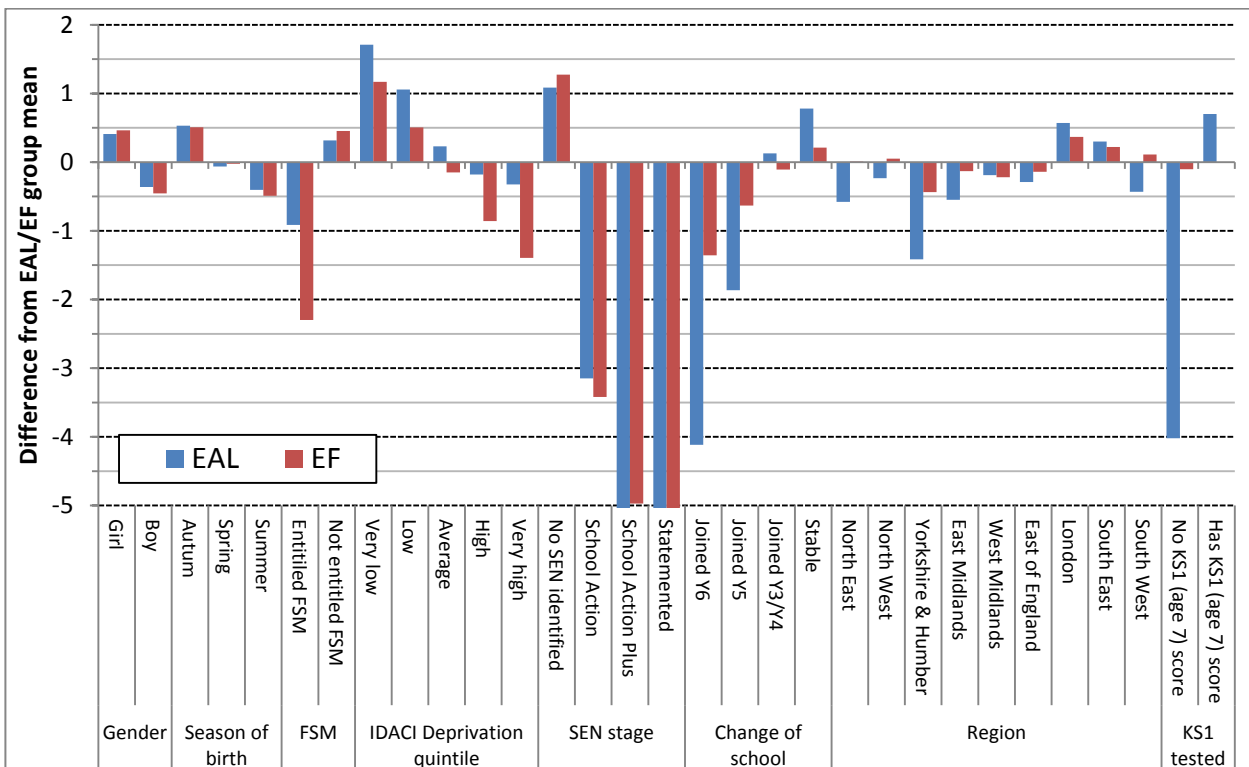


Figure A4.2:Association between student background and KS2 reading test points score (fine grade) for EAL and FLE students 2013



**Table A4.2 Mean KS2 maths test score (fine grade) by student background and EAL status**

Variable	Value	EAL				English First (EF)				Total			
		KS2 maths test			Level 4B+	KS2 maths test			Level 4B+	KS2 maths test			Level 4B+
		Mean	N	SD	Mean	Mean	N	SD	Mean	Mean	N	SD	Mean
Gender	girl	28.5	44420	5.5	71.0%	28.7	211571	4.9	73.3%	28.6	255991	5.0	72.9%
	boy	29.0	45608	5.8	74.1%	29.1	219978	5.3	75.3%	29.1	265586	5.4	75.1%
Season of birth	Autumn	29.3	29902	5.6	76.0%	29.5	144810	5.1	78.0%	29.5	174712	5.2	77.7%
	Spring	28.6	29569	5.7	72.1%	28.9	139187	5.1	74.2%	28.8	168756	5.2	73.9%
	Summer	28.2	30557	5.7	69.7%	28.3	147552	5.1	70.8%	28.3	178109	5.2	70.6%
Ethnic group	White Irish	30.4	27	4.2	81.5%	29.9	1697	5.2	80.7%	29.9	1724	5.2	80.8%
	Traveller Irish	23.2	6	8.6	50.0%	23.4	358	5.5	39.5%	23.4	364	5.5	39.7%
	Traveller Gypsy/Roma	18.9	608	6.5	14.1%	23.6	832	5.3	34.9%	21.6	1440	6.3	26.1%
	White other groups	28.1	16535	5.9	69.3%	29.9	5949	5.2	79.4%	28.6	22484	5.8	71.9%
	Mixed White & African	28.7	614	5.5	71.5%	28.7	2084	5.0	72.6%	28.7	2698	5.1	72.4%
	Mixed White & Caribbean	27.8	160	5.5	68.1%	28.0	6959	5.0	68.7%	28.0	7119	5.0	68.7%
	Mixed White & Asian	29.6	833	5.6	75.2%	30.2	4233	5.3	80.5%	30.1	5066	5.4	79.7%
	Other mixed background	29.3	1967	5.5	75.4%	29.3	6416	5.1	76.8%	29.3	8383	5.2	76.5%
	Indian	30.4	10603	5.4	81.7%	31.3	2800	5.2	85.6%	30.6	13403	5.4	82.5%
	Pakistani	28.0	19952	5.3	68.2%	29.1	2621	5.3	74.9%	28.1	22573	5.3	69.0%
	Bangladeshi	28.8	8965	5.3	74.0%	30.0	367	5.2	79.4%	28.9	9332	5.3	74.2%
	Any other Asian	30.5	6380	5.7	80.5%	30.1	1442	5.4	79.8%	30.5	7822	5.7	80.4%
	Black African	28.3	11888	5.3	71.9%	29.4	4871	5.2	77.4%	28.6	16759	5.3	73.5%
	Black Caribbean	27.1	301	5.0	63.8%	27.4	6944	4.9	65.5%	27.3	7245	4.9	65.4%
	Black other groups	27.4	1219	5.6	65.9%	27.8	2119	4.9	69.0%	27.6	3338	5.2	67.9%
	Chinese	32.9	1380	5.2	90.8%	33.0	376	5.3	90.7%	33.0	1756	5.2	90.8%
	Any other ethnic group	28.6	6670	5.7	72.2%	29.6	1087	5.3	78.0%	28.7	7757	5.6	73.0%
Unclassified/Refused	28.8	515	5.5	74.4%	28.8	2362	5.2	71.9%	28.8	2877	5.3	72.4%	
White British	29.7	1405	5.5	77.8%	28.9	378032	5.1	74.4%	28.9	379437	5.1	74.4%	
FSM	Entitled FSM	27.4	21854	5.6	65.5%	26.5	72118	5.1	58.5%	26.7	93972	5.2	60.1%
	Not entitled FSM	29.1	68174	5.6	74.9%	29.4	359431	5.0	77.5%	29.3	427605	5.1	77.1%
IDACI deprivation quintile	Very low	30.8	5216	5.7	81.5%	30.2	100633	4.9	81.8%	30.2	105849	5.0	81.8%
	Low	29.8	6983	5.6	77.7%	29.4	97581	5.0	76.9%	29.4	104564	5.1	77.0%
	Average	29.0	13061	5.8	72.7%	28.7	91253	5.1	73.0%	28.7	104314	5.2	73.0%
	High	28.5	25745	5.7	71.6%	28.0	77263	5.1	69.2%	28.2	103008	5.2	69.8%
	Very high	28.3	38713	5.5	71.1%	27.6	63611	5.0	66.7%	27.9	102324	5.3	68.4%
SEN stage	No SEN identified	29.9	71759	5.0	80.7%	30.2	335222	4.3	84.1%	30.1	406981	4.4	83.5%
	School Action	25.1	11310	4.8	45.7%	25.3	52475	4.4	44.9%	25.3	63785	4.4	45.0%
	School Action Plus	23.4	5517	5.9	35.1%	24.1	34297	5.4	37.9%	24.0	39814	5.5	37.5%
	Statemented	19.4	1442	7.8	22.3%	20.7	9555	7.1	25.7%	20.6	10997	7.2	25.3%
Change of school	Joined Y6	25.5	6305	7.0	53.2%	27.1	18593	5.3	61.5%	26.7	24898	5.9	59.4%
	Joined Y5	27.3	8360	6.1	63.2%	28.0	37130	5.2	67.3%	27.8	45490	5.4	66.6%
	Joined Y3/Y4	28.8	24016	5.5	72.6%	28.8	103234	5.2	73.1%	28.8	127250	5.3	73.0%
	Stable	29.3	51347	5.3	76.5%	29.2	272592	5.0	76.6%	29.2	323939	5.0	76.6%
Region	North East	28.2	1454	5.8	69.5%	29.2	23399	4.9	77.7%	29.2	24853	5.0	77.2%
	North West	28.5	9196	5.5	72.3%	29.1	63182	4.9	76.6%	29.0	72378	5.0	76.0%
	Yorkshire & the Humber	27.1	8163	5.9	62.9%	28.6	45198	5.1	72.4%	28.3	53361	5.3	70.9%
	East Midlands	28.1	5068	5.7	69.5%	28.8	39707	5.1	73.9%	28.7	44775	5.2	73.4%
	West Midlands	28.4	10974	5.6	69.4%	28.7	46640	5.1	72.5%	28.7	57614	5.2	71.9%
	East of England	28.4	6404	5.9	68.6%	28.7	51871	5.2	72.2%	28.6	58275	5.2	71.8%
	London	29.4	37385	5.5	77.5%	29.4	41280	5.3	77.6%	29.4	78665	5.4	77.6%
	South East	28.8	8860	5.7	71.6%	28.9	73551	5.2	74.1%	28.9	82411	5.2	73.8%
South West	28.3	2524	5.8	68.1%	28.8	46721	5.1	73.5%	28.8	49245	5.1	73.2%	
KS1 tested	No KS1 (age 7) score	25.9	13042	6.7	54.8%	28.3	8888	5.7	70.2%	26.9	21930	6.4	61.0%
	Has KS1 (age 7) score	29.2	76986	5.3	75.6%	28.9	422661	5.1	74.4%	29.0	499647	5.1	74.6%
<b>Grand Total</b>		<b>28.7</b>	<b>90028</b>	<b>5.7</b>	<b>72.6%</b>	<b>28.9</b>	<b>431549</b>	<b>5.1</b>	<b>74.3%</b>	<b>28.9</b>	<b>521577</b>	<b>5.2</b>	<b>74.0%</b>



Figure A4.3:KS2 maths test score by ethnic group and EAL 2013

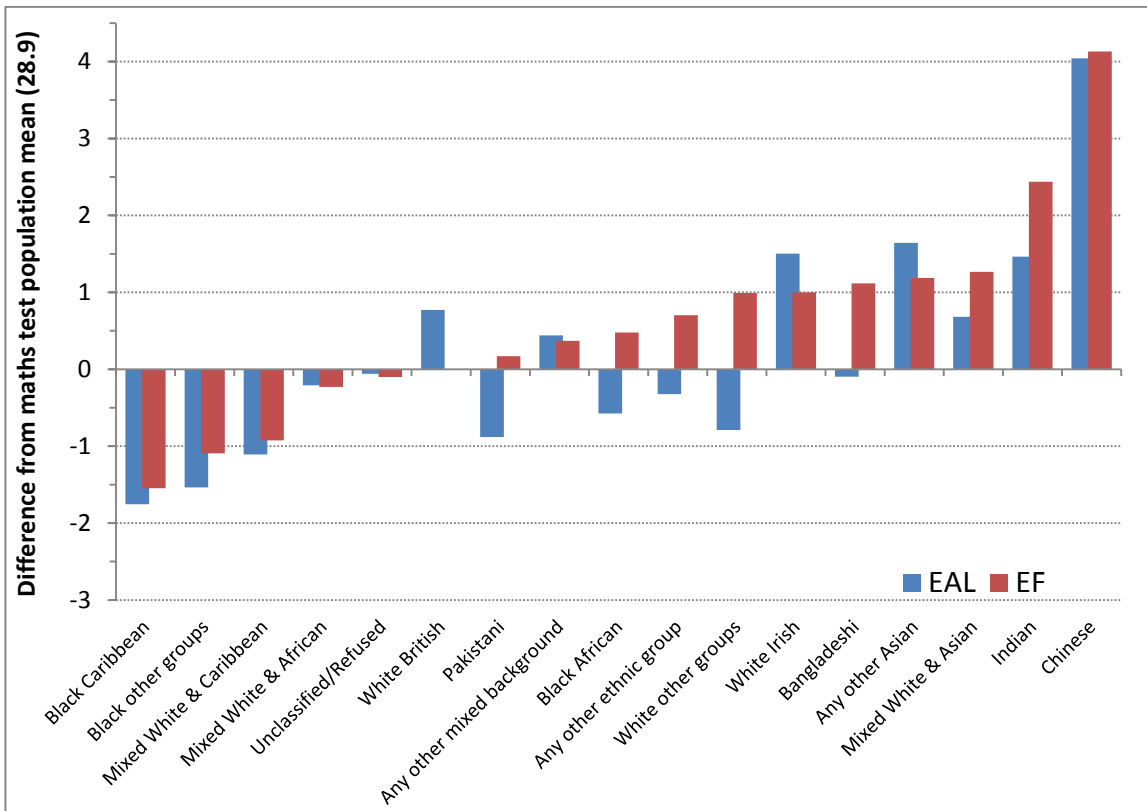
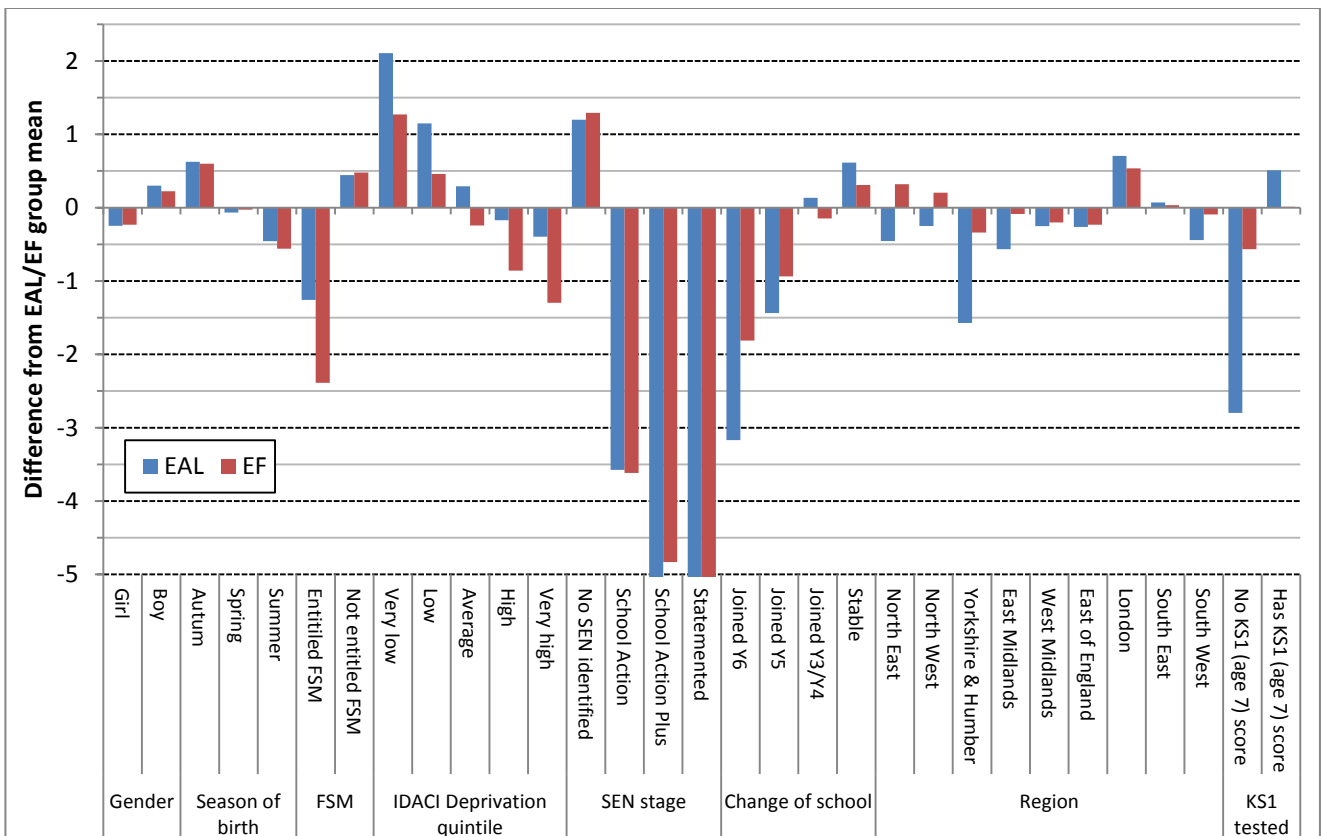


Figure A4.4:Association between student background and KS2 maths test points score (fine grade) for EAL and FLE students 2013



## Appendix to Part 6

**Table A6.1: Regression of EAL status and date of arrival on KS3 average score: LSYPE**

Parameter	Estimate	Std. Error	Hypothesis Test		
			t	df	Sig.
(Intercept)	.057	.018	3.166	627	.002
EAL - English main	-.034	.032	-1.040	627	.299
EAL - Other main	-.445	.050	-8.977	627	.000
English only (reference)	0				
Arrived aged 0-4	.234	.067	3.478	627	.001
Arrived aged 5-10	.136	.072	1.900	627	.058
Arrived aged 11-14	-.179	.128	-1.399	627	.162
UK born (reference)	0				
EAL-English Main * Arrive 0-4	-.110	.116	-.952	627	.341
EAL-English Main * Arrive 5-10	-.279	.119	-2.340	627	.020
EAL-English Main * Arrive 11-14	-.403	.187	-2.159	627	.031
EAL- Other Main & Arrive 0-4	-.353	.109	-3.234	627	.001
EAL- Other Main & Arrive 5-10	-.165	.128	-1.292	627	.197
EAL- Other Main & Arrive 11-14	-.486	.159	-3.053	627	.002

Notes: Completed using SPSS complex samples (CSGLM) to reFLEct sample design and non-response weights.

**Table A6.2: First languages with at least n=100 cases recorded for White Other students: KS2 2013**

White Other: First Language	Freq.	Percent	Cumulative %
English	5954	26.3	26.3
Polish	4796	21.2	47.5
Turkish	1553	6.9	54.4
Other than English (not specified)	1211	5.4	59.7
Portuguese	1182	5.2	65.0
Albanian/Shqip	978	4.3	69.3
Lithuanian	971	4.3	73.6
Romanian	661	2.9	76.5
Russian	570	2.5	79.0
Spanish	562	2.5	81.5
French	419	1.9	83.3
Italian	412	1.8	85.2
Slovak	387	1.7	86.9
Latvian	373	1.6	88.5
Hungarian	315	1.4	89.9
Bulgarian	302	1.3	91.3
Czech	300	1.3	92.6
Greek	252	1.1	93.7
German	244	1.1	94.8
Serbian/Croatian/Bosnian	197	.9	95.6
Arabic	181	.8	96.4
Dutch/FLEmish	118	.5	97.0

Table A6.3. White Other KS2 contextualised model			Table A6.4. White Other KS4 contextualised model		
Variable	Model 1	Model 2	Variable	Model 1	Model 2
Intercept	29.5	32.2	Intercept	359.4	379.2
Polish	-2.5	-1.3	Polish	-24.4	-2.5
Turkish	-2.5	-1.9	Turkish	-18.9	-1.8
Portuguese	-3.2	-1.8	Portuguese	-27.0	-2.6
Albanian/Shqip	-1.0	-0.9	Lithuanian	-51.4	-23.2
Lithuanian	-3.2	-1.2	Albanian/Shqip	-6.0	3.5
Romanian	-4.0	-1.9	Russian	-11.1	19.0
Russian	-1.5	0.1	Romanian	-54.9	-17.4
Spanish	-1.2	0.0	Spanish	-4.9	21.8
French	0.7	0.5	Slovak	-122.7	-64.2
Italian	-0.5	0.0	Italian	0.6	12.9
Other Non-English	-2.8	-1.2	Latvian	-59.4	-12.3
			Other non-English	-22.4	-2.0
Age (months)		-0.12	Age		-0.6
Boy (vs girl)		-0.13	Boy (vs girl)		17.1
Entitled FSM		-1.28	Entitled FSM		-18.2
IDACI score (normalised)		-0.65	IDACI score (normalised)		-10.6
SEN School Action		-3.96	SEN School Action		-36.5
SEN School Action Plus		-5.84	SEN School Action Plus		-74.8
SEN Statemented		-9.64	SEN Statemented		-93.6
Joined Y6		-4.06			
Joined Y5		-1.35	Joined Y10/11		-94.9
Joined Y3/Y4		-0.19	Joined Y7-Y9 (NOT Jul-Sep)		-16.5
North East		-0.46	North East		2.9
North West		-0.64	North West		-10.3
Yorkshire & Humber		-2.29	Yorkshire & Humber		-15.1
East Midlands		-1.17	East Midlands		-23.9
West Midlands		-1.10	West Midlands		-15.0
East of England		-1.22	East of England		-21.4
South East		-0.95	South East		-10.5
South West		-0.97	South West		-14.4
Not tested KS1		-2.89	Not tested KS2		-26.7
Adjusted R2	5.8%	38.7%	Adjusted R2	4.9%	28.4%

Table A6.5. Black African KS2 contextualised model			Table A6.6. Black African KS4 contextualised model		
Variable	Model 1	Model 2	Variable	Model 1	Model 2
Intercept	29.0	31.2	Somali	-28.6	<b>-16.2</b>
Somali	-1.3	-0.7	Yoruba	8.8	10.3
Yoruba	0.5	0.3	French	-23.4	-10.2
French	-1.9	-1.2	Shona	-8.3	-6.7
Akan/Twi-Fante	-1.1	-0.8	Akan/Twi-Fante	-4.7	-1.5
Swahili	-1.3	-0.9	Swahili	-23.5	-13.1
Shona	-1.3	-0.9	Arabic	-11.0	2.2
Arabic	-1.7	-1.0	Lingala	-32.4	<b>-16.2</b>
Igbo	0.8	0.6	Portuguese	-43.6	<b>-24.3</b>
Lingala	-2.7	-1.6	Igbo	6.2	11.1
Portuguese	-3.6	-2.2	Other non-English	-13.5	-5.2
Other non-English	-1.2	-0.7	Age		-0.5
Age (months)		-0.06	Boy (vs girl)		15.5
Boy (vs girl)		-0.16	Entitled FSM		-9.2
Entitled FSM		-0.73	IDACI score (normalised)		-3.9
IDACI score (normalised)		-0.11	SEN School Action		-37.0
SEN School Action		-3.79	SEN School Action Plus		-57.7
SEN School Action Plus		-5.43	SEN Statemented		-100.4
SEN Statemented		-9.97	Joined Y10/11		-64.7
Joined Y6		-2.60	Joined Y7-Y9 (NOT Jul-Sep)		-8.7
Joined Y5		-0.90	North East		10.5
Joined Y3/Y4		-0.31	North West		2.3
North East		-0.27	Yorkshire & Humber		-5.8
North West		-0.32	East Midlands		-6.3
Yorkshire & Humber		-1.40	West Midlands		11.1
East Midlands		-0.82	East of England		-0.6
West Midlands		-0.29	South East		6.6
East of England		-0.28	South West		-14.8
South East		-0.57	Not tested KS2		-20.5
South West		-1.19	Adjusted R2	3.4%	24.0%
Not tested KS1		-2.58			
Adjusted R2	3.4%	34.2%			

**Table A6.7. Modern Foreign Languages offered at GCSE and approximate take up in England**

Language	Approx. taking a full GCSE	N	Listening and reading	Speaking and writing
1 French	163,000		tiered	untiered
2 Spanish	84,700		tiered	untiered
3 German	60,300		tiered	untiered
4 Italian	5,000		tiered	untiered
5 Urdu	4,500		tiered	untiered
6 Polish	3,600		untiered	untiered
7 Arabic	3,400		untiered	untiered
8 Chinese	2,500		tiered	untiered
9 Russian	2,200		untiered	untiered
10 Portuguese	1,800		untiered	untiered
11 Turkish	1,400		untiered	untiered
12 Bengali	1,100		tiered	untiered
13 Japanese	1,100		untiered	untiered
14 Panjabi	900		tiered	untiered
15 Greek	500		untiered	untiered
16 Gujarati	500		untiered	untiered
17 Dutch	400		untiered	untiered
18 Modern Hebrew	400		untiered	untiered
19 Persian	400		untiered	untiered

*Source: QfQual (2014). Consultation on Reforming GCSEs in Modern Foreign and Ancient Languages. p 12/13.*

## List of Abbreviations

APS	Average points score
Best 8	Best 8 points score
CVA	Contextual Value Added
EAL	English as an Additional Language
FLE	English as First Language
FSM	Entitled to a Free School Meal
EYFSP	Early Years Foundation Stage Profile
GCSE	General Certificate of Secondary Education
GPS	KS2 Grammar, Punctuation and Spelling test
IDACI	Income Deprivation Affecting Children Index
KS1-4	Key Stage 1-4
LA	Local Authority
LSYPE	Longitudinal Study of Young People on England
MFL	Modern Foreign Languages
NPD	National Pupil Database
SEN	Special Educational Needs
SES	Socio-economic Status
SED	Socio-economic Deprivation

## Research Team

**Steve Strand.** Steve Strand is Professor of Education at OUDE.

**Lars Malmberg.** Lars-Erik Malmberg is Associate Professor in Quantitative Methods at OUDE.

**James Hall.** James Hall is Research Fellow at the OUDE.