English language acquisition and educational attainment at the end of primary school

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Abstract

The paper analyses the national KS2 test results for 2,300 11 year old pupils in an inner London LEA. A range of concurrent pupil background data was also collected, including whether pupils spoke English as an Additional Language (EAL) and if so their stage of fluency in English. EAL pupils at the early stages (1-3) of developing fluency had significantly lower KS2 test scores in all subjects than their monolingual peers. However EAL pupils who were fully fluent in English achieved significantly higher scores in all KS2 tests than their monolingual peers. The negative association with attainment for the early stages of fluency remained significant after controls for a range of other pupil characteristics, including age, gender, free school meal entitlement, stage of special educational need and ethnic group, although these factors effectively explained the higher attainment of the ‘fully fluent’ group. We conclude that EAL is not itself a good guide to levels of attainment, and a measure of stage of English fluency is necessary to interpret associations with test performance. Alternative measures which focus only on the very early stages of English proficiency, such as the QCA ‘language in common’ steps, are inadequate to assess the impact of bilingualism for all but the very earliest learners of English. Given the uneven distribution of EAL pupils across the country, those schools and LEAs with high concentrations of pupils in the early stages of learning English are likely to be adversely affected in school achievement and attainment tables. The policy implications for national data collection and for the use of such data are considered.
English language acquisition and educational attainment at the end of primary school

Introduction

Over 690,000 pupils in England are recorded as having a mother tongue other than English, accounting for 11.0% of all primary pupils and 9.1% of secondary pupils (DfES, 2004a). The proportion of pupils in England who speak English as an Additional Language (EAL) has increased by over a third since 1997, reflecting a growing bilingual population (DfES, 2005). Many bilingual pupils achieve very highly in comparison with other groups, however a proportion will require targeted support in order to facilitate the learning of English. Analysis of national test and examination results in England has indicated strong relationships between EAL and pupil performance. For example, in national tests at age 11 in 2003, only 67% of pupils with EAL achieved the expected level 4 or above in English compared to 76% of their monolingual peers. This differential is not restricted to English. In maths the proportions are 65% vs. 73%, and in science 77% vs. 88%, for EAL and monolingual English speakers respectively. Similar performance differences are reported in national tests at age 7 and 14, and in GCSE public examinations at age 16 (DfES, 2004a).

The distribution of EAL pupils is extremely uneven across the nation. The proportion of pupils with EAL ranges from 2% in the South-West to over 50% in Inner London (DfES, 2004b). Over half of all pupils learning EAL are located in only 20 of the 150 England LEAs. At the school level, nearly three-quarters of all schools have less than 5% of pupils with EAL, while in a small proportion of schools (7%) pupils with EAL represent over 40% of the roll (OFSTED, 2004). Despite the strong differential performance by EAL, and the strong degree of school and LEA segregation on this factor, EAL is not included as a contextual factor in national school achievement and attainment tables at any key stage.

There has been much research into pupil characteristics associated with educational attainment, including gender, ethnicity, mobility, parental occupation and entitlement to free school meals (Nuttall, 1990; Sammons, 1995; Strand 1997, 1999; Kendall & Hewitt, 1998; Demie, 2001; Demie et. al. 2002). However a review of the literature suggests that the acquisition of fluency in English by bilingual pupils is a relatively under researched area in the UK. There is however a wealth of research from other
countries particularly the United States. For example, Cummins (1991, 1992) carried out extensive research into the length of time needed to acquire English as a second language. They report it takes two years to acquire fluency in ‘superficial’ spoken English, and up to seven years to acquire academic English or full fluency. Collier (1989, 1995) also analysed a substantial body of longitudinal data which suggests that five to seven years may be needed to acquire the academic English that is necessary to fully access the National Curriculum. In fact, young arrivals with no schooling in their first language in either their home country or the host country may take even longer to reach the level of average performance by native speakers on standardized tests in reading, science and social studies, possibly as long as 7 to 10 years (Thomas & Collier, 1997). These finding are recognised by OFSTED and its recent school Inspection guidelines suggest that:

“It takes on average five to seven years to become fully competent in a second language, although individuals will vary in the speed with which they acquire this competence. Fluency in spoken English is usually achieved within two years, but the ability to read and understand more complex texts containing unfamiliar cultural references and to write the academic English needed for success in examinations takes much longer.” (OFSTED, Inspecting English as an additional language, 2001a, p.5).

Recent research has also demonstrated a need for continuing support for particular aspects of bilingual pupils’ language development. For example, many bilingual pupils defined as ‘advanced learners’, in that they have been in the UK for at least five years, continue to under-achieve in writing at both KS2 and KS4 (Cameron, 2003; Cameron & Bester, 2004). The US literature also suggests that, after initial dramatic gains in the early primary years, the rate of progress of EAL pupils can fall significantly behind monolingual English speakers as they undertake more cognitively demanding work of increased complexity in the secondary school years (Thomas & Collier, 1997).

In short, a simple dichotomous measure of EAL is insufficient to do justice to the range and degree of language learning needs of bilingual pupils. There is a need for more research on the way we assess EAL pupils and on the relationship between stages of fluency in English and attainment to improve our knowledge about bilingual pupils and how they might be supported in classroom.
For many years Local Education Authorities (LEAs) in London and elsewhere have used scales to assess EAL pupils stage of fluency in learning English (Hester, 1990). Several LEAs have reported analyses of KS2 and GCSE results which indicate that fewer pupils who are at the early stages (1-3) of learning English achieve the expected levels of performance compared both to EAL pupils who are fully fluent in English and to monolingual English speakers (e.g., London Borough of Tower Hamlets, 1998; Ewens, 1999; Hayes et. al., 2001; Demie et. al., 2003). Stage of fluency in English is therefore potentially a powerful predictor of differential attainment among EAL pupils at all key stages and GCSE. However there is a need to assess the impact of stage of fluency in English while simultaneously assessing the impact of other pupil background characteristics known to be associated with attainment, such as age, gender, socio-economic disadvantage, special educational needs etc. This will allow us to more accurately assess the unique impact of stage of fluency on attainment.

This paper examines the relationship between stage of fluency in English and attainment in national tests at age 11 for a large sample of pupils from inner city primary schools. The following key questions are addressed:

- What is the impact of stage of fluency in English on attainment in National end of Key Stage 2 tests in English, maths and science? Are associations with stage of fluency consistent across all tests?

- What is the unique impact of stage of fluency in English, net of a range of other pupil background factors known to be related to attainment, such as age, gender, special educational needs and entitlement to free school meals?

- What is the impact of stage of fluency in English on pupil progress between national tests completed at age 7 and age 11, net of other pupil background factors?

- What are the implications for how we assess the attainment of bilingual pupils? What implications do the results have for the approach promoted by the QCA through ‘A Language in Common’?
Method

The study LEA
The study LEA is located in inner London and is one of the most ethnically and linguistically diverse boroughs of Britain. The 2004 LEA census recorded the ethnic and language background of all 28,812 LEA pupils. White-British pupils no longer represent the largest group, having decreased by 13% over the last 10 years. African pupils form the largest ethnic group with 23%, followed by Caribbean 22%, White British 19%, mixed race 10%, other White 6% and Portuguese 5%. Overall, 81% of pupils in LEA schools belonged to black and other ethnic minority communities, compared to 66% in 1991 (Demie et. al., 2005). Across the LEA over 145 languages are spoken at home, reflecting the different cultures, experiences and identities of the people in the community. At least 42 languages have more than 20 speakers. Since 1992 the number of bilingual pupils has increased from 28% to 39% (Demie et. al. 2005).

The pupil sample
The specific sample of pupils who results are analysed in this paper consists of all 2,279 pupils from the 59 LEA maintained mainstream primary schools who completed national end of KS2 tests in summer 2002. The national tests cover English (reading and writing), mathematics and science, and are completed at the end of primary school around the age of 11 years. Pupils who were disapplied or absent from the tests were disregarded in the analysis for the relevant test.

Pupil background measures
In January of Year 6, five months prior to the KS2 tests, a borough wide survey had collected a range of further background data on these pupils. The data collected included:

- date of birth, used to calculate age at the time of completing the KS2 tests;
- gender (male/female);
- stage of Special Educational Need (SEN) ranging from 1 (in-school identification) through to 5 (pupil has a formal statement of SEN);
- entitlement to a Free School Meal (FSM), a commonly used measure of family economic disadvantage;
• ethnic group; 10 groups including English/Scottish/Welsh, African, Bangladeshi, Caribbean, Chinese, Indian, Pakistani, Vietnamese, Other Black, Other White (including Greek, Irish & Turkish) and Portuguese;
• mobility (whether the pupil remained in the same school for the whole of KS2);
• prior attainment (average point score in national end of KS1 tests at age 7);
• stage of fluency in English.

Stage of fluency in English
The stages of English Learning (Hester, 1990) have been used in the LEA for many years to enable teachers to assess and monitor the progress of bilingual pupils learning English. For bilingual pupils whose first language is not English, a four point scale is used to indicate proficiency in English, ranging from beginner (stage 1) to fully fluent (stage 4). The stages are summarised as follows:

Stage 1  New to English: Bilingual English learners who might be able to engage in classroom learning activities using their own mother tongue, but need support to operate in English.

Stage 2  Becoming familiar with English: Bilingual English learners who can engage in all learning activities but whose spoken and/or written English clearly shows that English is not their first language. Their oral English is well developed but their literacy development in English is such that they need considerable support to operate successfully in written activities in the classroom.

Stage 3  Becoming confident as a user of English: Bilingual pupils whose oral and written English is progressing well and who can engage successfully in both oral and written activities, but need further support for a variety of possible reasons, for example pupils who are achieving considerable success in subjects such as mathematics and science but much less in others such as English or in Humanities, which are more dependent upon a greater command of English.

Stage 4  Fully fluent in English: Bilingual pupils whose use of English and engagement with the curriculum are considered successful and who do not require additional language support.
A full description of the stages can be found on the Centre for Literacy in Primary Education (CLPE) website at [http://www.clpe.co.uk/pdf/StagesofEnglishLearning.pdf](http://www.clpe.co.uk/pdf/StagesofEnglishLearning.pdf).

**Results**

**Variation in Stage of Fluency in English**

A substantial proportion (37%) of pupils taking KS2 tests in Lambeth schools speak English as an Additional Language (EAL). Around 42% of EAL pupils (15% of the whole sample) are fully fluent in English as well as their home language, but approximately 1 in 5 pupils (21% of the population) are at one of the three stages of acquiring English.

<table>
<thead>
<tr>
<th>Stage of fluency</th>
<th>Number of pupils</th>
<th>% of all pupils</th>
<th>% of EAL pupils</th>
</tr>
</thead>
<tbody>
<tr>
<td>0  mono-lingual English</td>
<td>1442</td>
<td>63.3</td>
<td>-</td>
</tr>
<tr>
<td>1  beginner</td>
<td>33</td>
<td>1.4</td>
<td>3.9</td>
</tr>
<tr>
<td>2  becoming familiar</td>
<td>130</td>
<td>5.7</td>
<td>15.5</td>
</tr>
<tr>
<td>3  becoming confident</td>
<td>327</td>
<td>14.3</td>
<td>39.1</td>
</tr>
<tr>
<td>4  fully fluent</td>
<td>347</td>
<td>15.2</td>
<td>41.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2279</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

The variation across schools in the number of pupils learning English is substantial. Figure 1 shows the percentage of pupils at fluency stages 1-3 for each of the 59 schools in the LEA. While the borough average is 21%, this ranges across schools from 0% to 57%. The average for the 10 schools with the lowest levels is 4% while the average for the 10 schools with the highest levels is 46%.
Associations between Stage of fluency in English and KS2 test scores

Stage of fluency in English has a strong association with performance in end of Key Stage 2 tests. Figure 2 shows the median KS2 average points score and the interquartile range separately for pupils at each stage of fluency in English and for monolingual pupils. The median score (indicated by the thick centre bar) increases substantially across the four stages.

FIGURE 2: KS2 average points score by stage of fluency in English
Figure 3 shows the results for each of the KS2 tests. The figure shows the proportion of pupils achieving the expected level for their age (level 4) or above, for monolingual English speakers, pupils not fully fluent in English (stages 1-3) and EAL pupils fully fluent in English. The performance differential between stage 1-3 learners and monolingual English speakers is most pronounced for English, reading and writing at around 17 percentage points. Performance in writing is particularly low, but this reflects national trends for all pupils. The performance differential is not as strong for maths and science, at 11% and 12% percentage points respectively, but is still marked. The performance of fully fluent EAL pupils exceeds that of monolingual pupils on all tests.

**FIGURE 3: Percentage of pupils achieving Level 4 or above in English, maths and science in KS2 tests by stage of fluency in English**

These findings are summarised in the first section of Table 2. This shows the results of a multivariate multiple regression analysis with only stage of fluency in English entered as an explanatory variable. The KS2 outcomes have been normalised to give a population mean of 0 and SD of 1. Separate dummy variables were entered for each stage of fluency, and the regression coefficient for each variable shows the simple association with KS2 test score. The key findings are: (i) stage of fluency in English is significantly related to KS2 test scores with a systematic increase in KS2 score as stage of fluency increases; (ii) fully fluent pupils score significantly higher than monolingual English pupils on all tests, and (iii) stage of fluency in English has a much smaller, though still significant, impact on mathematics score compared to English and science.
**TABLE 2: Associations between stage of fluency in English and end of KS2 test scores in three analytic models**

<table>
<thead>
<tr>
<th>Model</th>
<th>KS2 average points score</th>
<th>KS2 English test</th>
<th>KS2 Maths test</th>
<th>KS2 Science test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coeff.</td>
<td>SE</td>
<td>Coeff.</td>
<td>SE</td>
</tr>
<tr>
<td><strong>Simple Association</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F1 - beginner</td>
<td>-0.91 (0.16) **</td>
<td>-0.95 (0.14) **</td>
<td>-0.48 (0.15) **</td>
<td>-0.94 (0.14) **</td>
</tr>
<tr>
<td>F2 - becoming familiar</td>
<td>-0.86 (0.08) **</td>
<td>-0.84 (0.07) **</td>
<td>-0.56 (0.07) **</td>
<td>-0.70 (0.07) **</td>
</tr>
<tr>
<td>F3 - becoming confident</td>
<td>-0.19 (0.05) **</td>
<td>-0.19 (0.05) **</td>
<td>-0.09 (0.05)</td>
<td>-0.17 (0.05) **</td>
</tr>
<tr>
<td>F4 - fully fluent</td>
<td>0.40 (0.05) **</td>
<td>0.31 (0.04) **</td>
<td>0.40 (0.05) **</td>
<td>0.25 (0.04) **</td>
</tr>
<tr>
<td><strong>Contextualised</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F1 - beginner</td>
<td>-0.95 (0.15) **</td>
<td>-0.99 (0.13) **</td>
<td>-0.48 (0.14) **</td>
<td>-1.012 (0.14) **</td>
</tr>
<tr>
<td>F2 - becoming familiar</td>
<td>-0.74 (0.09) **</td>
<td>-0.73 (0.08) **</td>
<td>-0.43 (0.08) **</td>
<td>-0.678 (0.08) **</td>
</tr>
<tr>
<td>F3 - becoming confident</td>
<td>-0.28 (0.07) **</td>
<td>-0.28 (0.06) **</td>
<td>-0.14 (0.07)</td>
<td>-0.282 (0.07) **</td>
</tr>
<tr>
<td>F4 - fully fluent</td>
<td>0.08 (0.07)</td>
<td>0.01 (0.06)</td>
<td>0.16 (0.07) *</td>
<td>-0.023 (0.07) **</td>
</tr>
<tr>
<td><strong>Pupil Progress</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F1/2- beginner / becoming familiar</td>
<td>-0.23 (0.09) **</td>
<td>-0.33 (0.08) **</td>
<td>0.00 (0.09)</td>
<td>-0.30 (0.09) **</td>
</tr>
<tr>
<td>F3- becoming confident</td>
<td>-0.01 (0.06)</td>
<td>-0.04 (0.06)</td>
<td>0.10 (0.07)</td>
<td>-0.12 (0.07)</td>
</tr>
<tr>
<td>F4- fully fluent</td>
<td>0.14 (0.06) *</td>
<td>0.06 (0.06)</td>
<td>0.22 (0.06) **</td>
<td>0.00 (0.06)</td>
</tr>
</tbody>
</table>

** indicates coefficient is statistically significant at p<.01, * indicates significant at p<.05. Coeff=regression coefficient for the variable in normal score units. SE=standard error.

Contextualising the influence of Stage of fluency in English

Pupils learning English differ significantly from monolingual speakers on a number of other important background variables linked with attainment:

- Pupils at stage 1-3 are more likely to be entitled to FSM (44%), and pupils at stage 4 less likely to be entitled to FSM (36%), than monolingual English speakers (41%) (x²=5.5, df=2, p<.065).
- Pupils at stage 1-3 are substantially more likely to be mobile (48%), and pupils at stage 4 less likely to be mobile (27%), than monolingual English speakers (31%) (x²=51.5, df=2, p<.0001).
- Pupils at stage 4 are less likely to have an identified SEN (15%) than either pupils at stage 1-3 (39%) or monolingual English speakers (36%) (x²=70.9, df=8, p<.001).
- Pupils at stage 1-3 are more likely to be summer born (38%) compared to both pupils at stage 4 (31%) and monolingual English speakers (32%) (x²=11.7, df=4, p<.02).
• Pupils at stage 1-3 account for a high proportion of the Vietnamese (92%), Portuguese (72%), Bangladeshi (56%), Chinese (52%), African (49%), Indian (49%) and Other White (48%) ethnic groups.

Given these associations, is stage of fluency in English independently related to attainment? The other pupil background factors were added to the multivariate multiple regression analysis to determine the impact of stage of fluency in English net of age, sex, stage of Special Educational Need (SEN), free school meal entitlement, mobility and ethnic group. The results are summarised in the second section of Table 2 headed “contextualized”.

The impact of the early stages (1-3) of fluency is generally unchanged, remaining negative even after the controls. However the positive coefficients associated with pupils who are fully fluent in English are substantially reduced and no longer statistically significant. The higher attainment of the ‘fully fluent’ EAL pupils can be accounted for by differences in age, gender, free school meal entitlement, stage of special educational need and ethnic group. The differential impact of fluency across KS2 tests remains clear, with the impact of stage 1-2 fluency on maths score about half the size of it’s impact on English and science score.

Figure 4 shows the strength of association of each pupil background variable, net of all other variables, with KS2 average points score. The variable with the strongest association with KS2 average points score is SEN stage 4/5 (pupils with statements or undergoing full assessment) which has a coefficient of around 1.25 standard deviations (SD). SEN Stage 3 (external intervention) and Stage 1 of Fluency in English (beginner) are the next biggest factors, with negative coefficients of just under a whole standard deviation. SEN stage 2 (in-school support) and Stage 2 of Fluency in English (becoming familiar) also have negative associations of around 0.75 SD. After this a number of factors have roughly equal negative associations, including Caribbean heritage (0.35), Stage 3 of Fluency is English (0.28), Free School Meals (0.25) mobility (0.25) and Portuguese heritage (0.27). The only substantial positive coefficients were for pupils of Chinese (0.44) and Vietnamese (0.35) ethnic groups. These results are described more fully in Demie & Strand (2004).
FIGURE 4: Associations between pupil background factors and KS2 average point score

Note: Significant interaction terms, particularly between FSM and ethnic groups, have been suppressed here. Refer to Demie & Strand (2004) for further details.

Associations between stage of fluency in English and pupil progress age 7 to age 11

We can also look at the effect of stage of fluency in English on pupil progress over the four year period between completing the national end of KS1 tests (age 7) and the end of KS2 tests (age 11). These results are presented in the bottom section of Table 2 headed “pupil progress”. Pupils at stage 1-3 of fluency had significantly lower KS1 scores at age 7 than their monolingual peers. Taking this into account, the association between stage 1/2 fluency¹ and KS2 average points score is substantially reduced to 0.23 SD, and the negative association between attainment and stage 3 fluency (becoming confident) disappears. However the impact of stage1/2 fluency is still statistically significant, indicating that these pupils made significantly less progress during KS2 than their peers. The analysis of KS2 average points score conceals important differences by subject. Thus the negative association with progress for stage

¹ Fluency stages 1 and 2 have been combined because of the small number of pupils in the beginners group (n=10).
1/2 fluency is significant for both English and science (around -0.30) but non-existent for maths (0.00). In fact stage 4 (fully fluent) pupils made significantly more progress in mathematics than expected from their KS1 scores.

Figure 5 presents the results for all pupil background factors. The factor having the strongest association with pupil progress is SEN, with large and negative coefficients for all four SEN stages. Stage 1/2 fluency was the next biggest factor, and the only other factor to exceed 0.2 SD. Pupils entitled to free school meals and pupils of Caribbean heritage also made less progress than expected from their KS1 scores. Again these results are discussed in more detail in Demie & Strand (2004).

Figure 5: Associations between pupil background factors and pupil progress (average point score at age 7 against average points score at age 11)

Note: Significant interaction terms, particularly between FSM and ethnic groups, have been suppressed here. Refer to Demie & Strand (2004) for further details.

However some caution needs to exercised in interpreting the association between fluency and pupil progress. An analysis of progress will necessarily only include pupils with a prior attainment score. Table 3 shows the number of pupils included in the progress analysis by each stage of fluency in English. This shows that while 90% of
monolingual English speakers are included in the analysis of pupil progress, less than half of those who were at fluency stage 2, and fewer than one-third of those who were at stage 1, are included. This reflects the fact that the majority of pupils at stage 1/2 of fluency in English entered Lambeth schools from outside the UK during the course of KS2, and consequently do not have prior KS1 test scores (Demie & Strand, 2004).

TABLE 3: Number and percentage of pupils included in the analysis of pupil progress by stage of fluency in English

<table>
<thead>
<tr>
<th>Stage of Fluency</th>
<th>number of pupils with a KS2 score</th>
<th>number of pupils with a KS2 and a KS1 score</th>
<th>% included in the analysis of pupil progress</th>
</tr>
</thead>
<tbody>
<tr>
<td>stage 1 - beginner</td>
<td>33</td>
<td>10</td>
<td>30%</td>
</tr>
<tr>
<td>stage 2 - becoming familiar</td>
<td>130</td>
<td>68</td>
<td>52%</td>
</tr>
<tr>
<td>stage 3 - becoming confident</td>
<td>327</td>
<td>278</td>
<td>85%</td>
</tr>
<tr>
<td>stage 4 - fully fluent</td>
<td>347</td>
<td>319</td>
<td>92%</td>
</tr>
<tr>
<td>monolingual English speakers</td>
<td>1442</td>
<td>1298</td>
<td>90%</td>
</tr>
<tr>
<td>All pupils</td>
<td>2279</td>
<td>1973</td>
<td>87%</td>
</tr>
</tbody>
</table>

It is possible that pupils who have attended school in the UK for at least four years, but are still rated as ‘beginners’ or ‘becoming familiar’ with English at age 11, may not be representative of the wider population of EAL pupils. For example they may have additional educational needs, and indeed 67% of the stage 1/2 pupils included in the analysis of pupil progress were at one of the four stages of SEN, mostly for ‘learning difficulties’, compared to 55% of all stage1/2 pupils. Cline & Shamsi (2000) have also noted that the wider SEN of EAL pupils may be overlooked because it is assumed that any problems in learning will be overcome as fluency in English improves. However an adjustment for SEN is included in the multiple regression analyses, and we conclude that being a beginner/becoming familiar with English has a moderate negative association with pupil progress \((p<.01)\), and being fully fluent has a small positive impact on pupil progress \((p<.05)\), when account is also been taken of all pupil background factors including age, sex, mobility, level of SEN, free school meals and ethnic group.
Discussion

The main findings of this study are:

- stage of fluency in English is significantly related to age 11 test score, with a systematic increase in KS2 test score as stage of fluency increases. The association is significant for all three national tests, although it is less marked for maths than for English or science;
- The association between the early stages of fluency and KS2 test scores remain significant after adjustment for a wide range of other pupil background factors including age, sex, mobility, entitlement to FSM and stage of SEN;
- EAL pupils rated as ‘fully fluent’ in English have higher KS2 attainment than their monolingual English peers. However this may have nothing to do with bilingual fluency per se, since the differential disappears when the other pupil background factors mentioned above are also taken into account.
- Pupils at stage 1/2 fluency make less progress during KS2 than monolingual English speakers, while fully fluent speakers make slightly more than expected progress, particularly in mathematics.

This study has focused on primary schools, but a companion analysis of secondary data reaches much the same conclusions (Demie & Strand, under review). The results show clearly that stage of fluency in English is a significant predictor of differential attainment among EAL pupils. In the absence of a measure of fluency, pupils learning EAL are too easily assumed to be an homogeneous group with a consistent association with attainment. However in the present study a total of 42% of EAL pupils were rated as ‘fully fluent’ in English (Stage 4), and the average attainment of these pupils significantly exceeded that of their monolingual English speaking peers. It is clear that any analysis that reports results simply by EAL status, such as those of the DfES (2003, 2004c) may be misleading. OFSTED (2004) recognise this when they state “Inspection evidence suggests that relatively low attainment correlates strongly with levels of fluency in English, rather than the extent to which pupils speak languages other than English” (OFSTED 2004, P16, emphasis added).
For example the DfES analysis of the national KS1 to KS2 data reports that “pupils with EAL have better value-added scores (and thus make more progress) than those whose first language is other than English”\(^2\) (2004a, p3). To simulate the DfES analysis we repeated our analysis of pupil progress entering only prior KS1 score and whether the pupil had EAL as explanatory variables. The result for KS2 average points score was a positive coefficient for EAL of 0.12 \((t=3.76, p<.001)\), indicating that pupils with EAL made more than expected progress during KS2. Similar results have been reported for progress during KS1 (Strand, 1997, 1999). However this paper shows the aggregate outcome for ‘EAL’ masks strong differential progress between pupils developing fluency (stage 1-3) and those who are fully fluent (stage 4) and reflects the fact that ‘fully fluent’ pupils predominate in the EAL sample included in a ‘value-added’ analysis (see Table 3). The current results are supported by the only previous ‘value-added’ analysis of KS2 results to consider stage of fluency (Strand, 1998) which also reports lower than expected KS2 ‘value-added’ outcomes for pupil at fluency stage 1-3.

It is possible that the pupil progress results are influenced by stage of fluency in English being measured at the end rather than the start of the key stage. Among those pupils who have attended school in the UK since age 7, those rated at age 11 as ‘beginners/becoming familiar’ may differ from those rated as ‘fully fluent’ on some other measures which themselves contribute to the differential progress. For example, we saw that fully fluent pupils were less likely to be summer born, mobile, have identified SEN, or entitled to a FSM than pupils at stage 1-3. While these factors are accounted for in the statistical analysis presented here, other data has reported ‘stage 1-3’ pupils score around 8 standard age score points lower on tests of non-verbal reasoning at age 11 than their fully fluent peers (Strand, 1998). In sum, to measure the association with pupil progress it would be ideal if stage of Fluency in English was assessed at age 7 alongside the relevant KS1 tests. Unfortunately this data was not available in the present study. It is possible that such baseline data could reveal pupils at stages 1-3 making as good if not better progress than their monolingual peers, so long as adequate resources are provided to support their significant language learning needs.

\(^2\). The KS1-KS2 ‘value-added’ score for monolingual English speakers was 99.9 compared to 100.4 for EAL pupils, but no confidence bands or significance levels are reported to aid interpretation of these results.
The position of a school in KS2 attainment and achievement tables will be strongly related to the proportion of EAL pupils and their stage of fluency in English. We know that pupils with EAL are extremely unevenly distributed across the country, as summarised in the introduction, and inner city LEAs and schools will be disproportionately disadvantaged. In a welcome move, primary schools can now disapply from the KS2 performance tables pupils with EAL who joined the school directly from abroad in Y5 or Y6. However many pupils move quickly after arriving, changing school in the process, and are therefore not eligible for disapplication. Therefore to be effective the 'contextual value added' measures proposed by the DfES for inclusion in the 2006 primary school performance tables will need to take account of fluency in English, rather than just EAL status.

In contrast to the above conclusions, the DfES appear to be discouraging the collection of data on stage of Fluency in English, as revealed in the following statement:

“a common national approach to assessment … does not entail development of a separate assessment scale for bilingual learners ... ‘Aiming High’ (2004) states that summative assessment for bilingual pupils, as for all pupils, should be based on national curriculum measures, where applicable using the QCA EAL steps as an extension of the National Curriculum English scale.” www.standards.dfes.gov.uk/ethnicminorities/raising_achievement/763697/?section=4

The QCA steps for assessing EAL pupils are described in ‘A language in common’ (QCA, 2000). In relation to the National Curriculum (NC) W-8 scale, the model provides two sub-divisions of ‘Working towards Level 1’ (Step 1 and Step 2) and two sub-divisions of ‘Level 1’ (Threshold and Secure) for English. Subsequent attainment is reported as per the current levels 2-8. This is positive in so far as the statements give clear criteria to identify achievement at Level 1 or below in English, and so can hopefully support improved assessment and measurement of progression for EAL pupils in the early stages of learning English. We agree that “summative assessment for bilingual pupils, as for all pupils, should be based on national curriculum measures” However the immediately following (unquoted) sentence from ‘Aiming High’ reads “Other school assessment data, where it exists, can be useful in identifying language support needs” (DfES, Aiming High, 2004d, p6) and stage of fluency in English is just such data.
There are several weaknesses to an exclusive reliance on the QCA steps compared to a measure such as stage of fluency in learning English. First, the QCA steps are specific statement of attainment in relation to English, and there is the potential that EAL issues will be seen as confined to English, whereas the evidence presented in this paper shows they are implications for performance in maths and science, as well as all other subjects of the National Curriculum. Second, while the QCA steps may more accurately chart the attainment in English of pupils who are beginner learners of English, they will not recognise the importance of stage of fluency for the majority of EAL pupils who are achieving NC level 1 or above, but where lack English fluency still places a considerable limit on their attainment. Third, the QCA steps do not recognise in anyway the achievement of bilingual pupils fully fluent in English, who clearly outperform their monolingual peers. Finally, the QCA steps will not help in allocating resources to schools on the basis of need, since they would only identify the small subset of EAL pupils who are beginners in learning English and would not assess the full range of fluency across the entire EAL population of a school or LEA.

In conclusion, EAL pupils bring to their learning a range of skills, knowledge and understanding in their first language which impacts on their acquisition of English. Stage of fluency in English scales are at least an attempt to meet the needs of EAL pupils based on their experience. The LEA in this study considers the early assessment profiles of emerging bilingual learners are quite different from those pupils whose first language is English, especially in terms of what they can write and what they know or can understand. For this reasons the LEA’s schools have continued using the four stage fluency scale for identifying the needs of bilingual learners and for monitoring the performance of EAL pupils. With training and appropriate moderation procedures, the scales can assess the attainment and progress of bilingual pupils with appropriate rigor. Government agencies have recently provided high quality guidance for supporting pupils with EAL (QCA, 2000; OFSTED, 2001b; NLS, 2002). OFSTED conclude that successful outcomes with EAL learners are seen where there is “good use of attainment data and other assessment information for diagnosis of need, targeting support and monitoring the progress of individuals and groups” (OFSTED, 2003, p31). Such analyses will be supported, not inhibited, by good data on stage of fluency in English.
References

Cameron, L. (2003). *Writing in English as an additional language at Key Stage 4 and post-16*. London: OFSTED.


Demie, F., & Strand, S. (under review). *English language acquisition and educational attainment in secondary schools*.


Figure Captions

Figure 1: Percentage of pupils at fluency stage 1-3 by primary school.

Figure 2: KS2 average points score by stage of fluency in English.

Figure 3: Percentage of pupils achieving level 4 or above in English, maths and science in KS2 tests by stage of fluency.

Figure 4: Associations between pupil background factors and ks2 average point score.

Figure 5: Associations between pupil background factors and pupil progress (average point score at age 7 against average points score at age 11)