Proficiency in English is a better predictor of educational achievement than English as an Additional Language (EAL)

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Abstract

We compared two tools that have been used to capture the linguistic heterogeneity and achievement of students in England: the exposure-based distinction between English as an additional language (EAL) and monolingual learners, and the 2017–2018 five level teacher rating of proficiency in English (from 'New to English' to 'Fluent'). Based on a nationally representative sample of 140,000 students aged 5 to 16 years, we assessed the explanatory power of the proficiency in English rating in relation to educational achievement and compared it directly to EAL status. Our results demonstrate that proficiency in English is a significantly better predictor of student achievement than EAL status and that it accounts for up to six times more variance than other student background variables (ethnicity, gender and socio-economic disadvantage) combined. Proficiency in English was particularly (but certainly not solely) predictive for student performance in subjects such as English and reading vis-à-vis mathematics. Our findings are clear in demonstrating the value of a proficiency in English rating for assessing linguistic heterogeneity and student achievement, in contrast to the exposure-based EAL measure. We recommend the (re)introduction of proficiency in English ratings to monitor and support student progress and discuss the value of classroom-based language assessments.

Key words: bilingualism, English as an additional language (EAL), educational attainment, achievement, proficiency in English, classroom assessment

Introduction

Imagine you are looking around a busy classroom, trying to predict which of the students you see will whizz through future exams, and which students will need some extra support to show their full potential. What are the questions you would ask? One key question in the English school system is whether a student has been and continues to be exposed to a language other than English at home or in the community, regardless of their English proficiency (Department for Education, 2017). Based on the answer, students are classified as either learning English as an additional language (EAL) or as speaking only English at home, hereafter referred to as monolingual students. EAL learners can be considered bilingual[1] in that they acquire English simultaneously to one or more other family languages, or sequentially, when entering the English educational system at nursery age (Murphy, 2014). The EAL status is discussed frequently: more and more students are growing up bilingually, with about one-in-five students in England learning EAL (Department of Education, 2016, p.47) As EAL students are seen as a vulnerable group, funding is targeted towards schools with higher proportions of EAL students (Hutchinson, 2018). However, EAL learners are also highly heterogeneous and have various ethnicities, home languages and migration histories (Authors). Importantly, this heterogeneity is directly linked to differences in educational performance, making generalised statements about EAL learners' attainment as a whole untenable (Authors). A key mediating variable – and one that is currently missing in England's national school records – appears to be proficiency in English. Both for teachers and policy-makers, the lack of knowledge about students' English proficiency limits their ability to identify and support vulnerable students effectively. A strong evidence base is needed to support the development and adoption of appropriate language support measures (Murphy, 2021). In recognition of this gap, a teacher rating of proficiency in English was briefly introduced into the school census between 2017–2018 but quickly dropped again, without its potential having been fully explored. It is still unclear how the proficiency in English rating would fare in a direct comparison to EAL status in terms of predicting student achievement. Based on a nationally representative sample, we provide the first direct comparison of the proficiency in English rating and EAL status to see whether there is evidence in favour of the teacher rating as a better predictor of linguistic heterogeneity in English schools.

Growing evidence supports the view that proficiency in the language of instruction is a key predictor for bilingual students' performance and well-being at school. [The authors] showed

[1] *As the discussed findings and issues apply equally to EAL learners with more than one non-English home language, the term ‚bilingual' is meant to include multilinguals as well (Paradis, 2007).*

that English proficiency, as tapped by a teacher rating, was the most important predictor for EAL students' performance in national assessments at age 11 (Authors; Demie, 2018) and 16 (Authors). Similarly, Whiteside and colleagues (2017) linked EAL and monolingual students' English proficiency at age 4–5 years to their school grades and cognitive and emotional well-being at age 6–7 years. While EAL students varied greatly across measures, those with high English proficiency either matched or outperformed their monolingual peers in both attainment and well-being (Whiteside et al., 2017). Similarly, Spencer and colleagues found strong associations between 13–14-year-olds' language skills (in particular vocabulary) and their achievement in English and mathematics two years later (Spencer et al., 2017). Language matters not only in schools in England; the same relationship between skills in the language of instruction and student achievement has been reported for other countries, including Germany (Rjosk et al., 2017) and the US (Guglielmi, 2008; Lutz, 2004). Importantly, the research does not show that bilingualism gets in the way of education– on the contrary: bilingual students with high English proficiency may outperform monolingual peers (Whiteside et al., 2017), as may those who are literate in both their home and the school language (Lutz, 2004). All these studies suggest that bilingualism or EAL status *per se* are less relevant than English proficiency as a mediating variable predicting attainment and well-being at school.

There is a simple reason why English proficiency would be crucial in an English-language school system: language is the prime medium for learning, be it through texts or classroom conversations. As such, classroom language – which differs from everyday language in containing more academic language such as technical vocabulary, complex sentences, and ellipses (Cummins, 2008; Fang, 2006) – is a central learning tool. Without support, however, students who lack those language skills struggle to learn new content and perform worse in exams. Previous evidence suggests that the mastery of the school language weighs in particularly strongly in subjects where language is a prominent topic of instruction, such as in English and reading, vis-à-vis mathematics, where both linguistic and numerical abilities play a role (Authors; Rjosk et al., 2017). Note, however, that such comparisons are always relative. Language proficiency plays a key role in mathematics attainment, too – a subject that comes with its own linguistic challenges (Monaghan, 1999). EAL learners are more likely to experience these linguistic challenges as it can take them more than six years in an English-language school to develop the same English proficiency as their monolingual peers (Cummins, 1981), especially for academic language (Cameron & Besser, 2004; Demie, 2013; Hakuta et al., 2000; Paradis & Jia, 2017). To be clear, such gaps between EAL and monolingual learners' language skills are not a given but the result of dynamic differences in the environment: rich and

extensive exposure to EAL learners' first language and English (both within and out-of-school) can allow EAL learners to catch up with monolingual peers (Jia & Paradis, 2015; Paradis & Jia, 2017). High proficiency in the home language may support EAL learners in their use and learning of the school language as well (Serratrice, 2013) and, when combined with home language literacy, is also believed to support school language literacy (Murphy et al., 2016). Furthermore, the same environmental factors that impact bilinguals also impact monolingual learners' language proficiency, for whom academic language can be equally challenging (Heinze et al., 2007; Prediger et al., 2015; Stanat et al., 2017). This is especially true for students from lower socio-economic status groups (Spencer et al., 2012) who, due to less rich language input at home (Hart & Risley, 2003), grow their vocabularies more slowly than peers with richer language input (Huttenlocher et al., 2010). For all these students, targeted support is both necessary and beneficial: without intervention, language gaps only increase (Cain & Oakhill, 2011) while linguistic support promotes language and content learning alike, especially for struggling and bilingual learners (McNamara, 2017; Meltzer & Hamann, 2015; Moschkovich, 1999; Nagy et al., 2012; Zwiers, 2006).

The first step towards targeted language support is to assess and recognise language learning needs amongst students. In many countries, language assessments for bilingual students are an institutionalised means to identify learning needs and target funding. National assessments rely on either language tests (as in the US) or teacher ratings (as in New Zealand, Scotland and Wales, or parts of Australia and Canada) and form the basis of decisions on how to allocate additional materials and training for specialised EAL staff (Authors; Hutchinson, 2018). Note that these assessments typically tap English proficiency on a more general level rather than differentiating general or discipline-specific academic language skills (Uccelli et al., 2015). While such holistic assessments necessarily fall short of addressing variations in specific lexis and lexicogrammatic patterns across school subjects (Mohan & Beckett, 2001; Monaghan, 1999) , they provide a useful overall estimation of school language proficiency that can inform educational decisions. In England, a comparable holistic national teacher rating was introduced for a period of two years in the January 2017 and the January 2018 school census. Teachers were asked to assign each EAL student to one of five levels of proficiency in English (from 'New to English' to 'Fluent', Department for Education, 2016, p. 63). While its implementation was not perfect – guidance and stage descriptors were scant and later supplemented through an unofficial framework (The Bell Foundation, 2016) – the new scale promised to be a valuable assessment of linguistic heterogeneity for teachers and policy-makers alike, beyond the purely exposure-based EAL status. Its potential for contribution to the English school system is

supported by the only two existing analyses of the proficiency rating (Authors; Department for Education, 2020): a first analysis based on a nationally representative sample reported that EAL students' English proficiency varied considerably, with younger students being rated as less proficient than older students, and educational attainment linked to English proficiency (Authors). A year later, a national report confirmed these associations between English proficiency and student attainment and further showed that a later age of arrival in the UK was strongly linked to lower English proficiency (Department for Education, 2020). Taken together, these data are promising: the proficiency rating seems to tap a meaningful (since varied) student characteristic associated with attainment. However, several limitations could be raised regarding the rating's lack of specificity (e.g., there being no particular focus on core or discipline-specific academic language skills) or its implementation (i.e., done by teachers with little training). As such, it is worth asking whether the value added by the 2017–2018 teacher rating was worth its effort. No existing analysis has, however, directly and systematically probed whether the ratings were better suited to explain student attainment than the (arguably more easily determined) EAL status, and whether the amount of additional information gained justifies the effort of collecting the proficiency rating. Given the difficulties with its implementation, the proficiency in English rating could turn out to be too imprecise to significantly and strongly predict educational attainment compared to EAL status – especially if the latter is already combined with other existing background measures (Hutchinson, 2018). If, however, our analyses revealed the English proficiency rating as the stronger predictor of attainment, this would indicate its greater value in assessing the linguistic heterogeneity in English schools, in contrast to the EAL status.

The present study

This paper presents the first direct comparison of the exposure-based EAL status and the 2017–2018 teacher rating of proficiency in English in order to assess the proficiency rating's value added when identifying vulnerable students. Analyses are based on a nationally representative sample of students aged 5–16 years, covering all major national assessments. Using hierarchical mixed models, we asked how much additional variance the proficiency in English rating predicts in EAL students' achievement after controlling for other key background variables (ethnicity, gender and socio-economic status), and whether the proficiency rating is a better predictor of all students' attainment than the EAL status. We predicted that English proficiency would explain a considerable proportion of EAL students' achievement across all age groups, particularly in subjects where overall school language proficiency has previously been found to weigh in strongly, such as English and reading. We further expected that the proficiency in English rating would be a significantly better predictor of all students' attainment vis-à-vis the EAL status.

Methods

Data collation from local authorities

After our request for the national 2017–2018 proficiency in English data had been rejected by the Department for Education, we collected student data by contacting local authorities through research meetings and personal contacts. We asked local authorities to provide anonymised attainment and background data from the 2017 end-of-year-assessments for all their students (from Reception or age five, Key Stage 1 or age seven, Key Stage 2 or age 11, and Key Stage 4 or age 16[2]). We received data for 140,964 students from 1,568 schools in six local authorities. A quarter of all students (24.8%) were recorded as EAL (n = 35,074). The most frequent family languages amongst the EAL students in our sample were Polish, Punjabi, Urdu, Arabic, Somali, and Bengali, similar to the national average (Department for Education, 2020). Since we contacted primarily local authorities with large proportions of EAL pupils, there are slightly more EAL students in our sample than in the national average. For all other relevant background variables, the averages for our sample are close to the national average (see Table 1).

The six local authorities in our sample represent a good spread of Inner and Outer London boroughs, a large southern shire county, a West Midlands conurbation and a large northern city. Collectively, they cover schools with a high proportion of EAL students as they are typical of the linguistically diverse capital London (see local authorities 1, 3 and 4; Authors), schools with few EAL students as typical of many shires and similar regions (see local authority 2) and two local authorities (5 and 6) with numbers of EAL students close to the national average.

Measures of educational attainment

As indicators of educational attainment, we chose national examinations where scores reflect different levels of achievement (i.e., continuous measures) since these provide most information on student performance. These measures were Reception point scores at age 5, student's average English and mathematics assessment at age 7, reading and mathematics scores at age 11 as well as English, mathematics, science and Attainment 8 scores at age 16.

Reception point score ranges from 17–51 and summarise 5-year-olds' performance in the Early Years Foundation Stage Profile at the end of their time in nursery and Reception.

[2] *Note that England has no national assessments at Key Stage 3, which is why we did not ask for data from this age group.*

Scores from students' reading and mathematics assessment at the end of Key Stage 1 (at the age 7 years) were averaged across subjects (range 0-4).

Reading and mathematics scores at age 11 range from 80–120 and are based on examinations that students sit at the end of Key Stage 2 (year 6 in English primary school). Students who – due to a lack of a sufficient number of marks or a below-threshold test performance – had been given no reading or mathematics scores were assigned a score of 79, just below the valid grades (this concerned 1.9% of students).

We decided to recode instead of remove missing scores in both the Key Stage 2 and 4 assessments because EAL students were slightly overrepresented amongst students missing scores (accounting for 25% and 21% in the sample but for 27% and 22% of those students with missing scores in Key Stage 2 and 4, respectively). This means that when thinking about the relationship of English proficiency and attainment, part of the story is hidden in the missing scores. For this reason, it was important to recode missing to valid scores in both instances.

Finally, at age 16 or the end of Key Stage 4, we collected students' scores from their school-leaving examinations (from the General Certificate of Secondary Education, or GCSE) in English, mathematics and the summary score Attainment 8. English and mathematics scores at GCSE range from 1–9. Students who received the score 'Ungraded' or who did not sit the relevant exam were assigned the value '0', a score that again is just below the valid grades (this concerned 3.2% of students). Attainment 8 scores range from 0–90 and summarise a student's scores across eight qualifications: mathematics (double weighted), English (double weighted), three qualifications that count in the English Baccalaureate and three further approved qualifications from the GCSE or vocational training (as outlined in England's assessment standards; Department for Education, 2018).

Student background measures

For each student, we also collected five background measures: EAL status, proficiency in English rating, gender, ethnicity, and free-school meals entitlement.

EAL status records whether a student is classified as either a monolingual or EAL learner based on whether parents report early and continued exposure to another language (Department for Education, 2016, p. 63). Students for whom such an EAL status was missing were excluded from further analyses (this concerned 0.2% of all students).

EAL students' proficiency in English rating was based on teachers' best fit judgement according

to a scale from A ('New to English'), to B ('Early acquisition'), C ('Developing competence'), or D ('Competent'), to E ("Fluent'). The full proficiency in English proficiency scale is included as Appendix 1, including the full descriptors for each proficiency stage. For our analyses, we recoded the proficiency in English ratings as a continuous variable ranging from 1 (A or 'New to English') to 5 (E or 'Fluent'). Additionally, we assigned all monolingual students an English proficiency of '5' or 'Fluent' as this level is defined as 'equivalent to that of a pupil who uses English as his/her first language' (Department for Education, 2020)[3]. Doing so allowed us to directly compare the predictive power of the proficiency in English rating and EAL status across all students. EAL students without a proficiency in English rating were recorded as having missing values (this concerned 2.8% of students, which is below the national average; Department for Education, 2019).

We also collected information on students' gender, ethnicity, and their current entitlement to free-school meals, with the latter being an indicator of socio-economic disadvantage. Both gender (boy or girl) and free-school meal entitlement ('yes' or 'no') were dichotomous variables. Students' ethnicity was recorded following the major ethnic categories in the school census, which are 'Asian', 'Black', 'Chinese', 'Mixed' 'White British', and 'White Other'.

Results

Analytical strategy

We set out to assess how strongly the proficiency in English rating predicts EAL students' attainment and how well it fares in comparison to the EAL status.

Since student data was nested within schools and local authorities that are known to account for around 10–15% of the variance in student achievement in England (Sammons, 2007), we chose to analyse our data using hierarchical mixed effect models. Mixed effect models can account for both fixed and random effects, with fixed effects being usual predictor variables, and random effects accounting for non-independence within data, such as when student data is nested within schools or local authorities. Mixed effect models were fitted in the lme4 package (Bates et al., 2015) in R (R Core Team, 2016) and significance of the fixed effects was tested using the Wald's test (Lüdecke, 2020).

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[3]. *Recoding the proficiency in English ratings only served to make the ratings analysable as continuous predictors for all students by turning letters into numericals and imputing monolingual students' scores. All values stayed the same, with students achieving the highest ratings in the original scale keeping the highest rating after recoding, and so forth.*

To quantify the predictive power of the proficiency in English rating for EAL students' performance, we followed a step-wise model building procedure with separate models run for each outcome measure, first with student background variables (gender, ethnicity and FSM) as fixed effects and then with the proficiency in English rating added as a fourth predictor. To quantify the additional variance explained by the proficiency in English rating, we then compared the variance explained by the two models using their marginal R^2 (i.e., the variance explained by the fixed effects alone; Nakagawa, Johnson, & Schielzeth, 2017).

We then directly compared EAL status to the proficiency in English rating in the prediction of all students' attainment. To do so, we again relied on step-wise model building for each outcome measure where we first entered background variables and then entered once EAL status and once proficiency in English ratings as a fourth predictor. We compared these latter two models using $\chi 2$ Log-likelihood tests and by assessing their respective predictive power, again using the marginal R^2. Remember that we assigned all monolingual students the highest rating 'Fluent' for these analyses, as this stage is defined as equivalent to monolingual language skills.

Prior to being added to the models, predictor variables were prepared as follows: the continuous proficiency in English rating was centred. All categorical predictors were treatment-coded, with the reference category always being the most numerous sub-group (which were monolingual students for the EAL status, boys for gender, White British for ethnicity, children not entitled to free-school meals, and local authority 6[4]).

To account for nesting in schools and local authorities, we checked which random effects to include based on the distribution of observations in our data (Gelman & Hill, 2007). Schools were entered as random intercepts as they were sufficiently numerous, while local authorities were entered as a fixed effect since they were too few in number to allow reliable estimate of a random effect. We also checked whether we could estimate random slopes for schools (that is, adjustments for varying effects of our predictors between schools). However, random slopes proved inestimable as some schools did not have students that varied sufficiently across predictors (e.g., they had less than two EAL students, or less than three unique scores in the proficiency in English rating). The final models thus contained random intercepts for school and local authorities as fixed effects.

[4] *We chose local authority as the reference point of our coding because it was not only one of the largest authorities in our sample, but also most representative of the national population in proportion of EAL students.*

Predicting EAL students' achievement from the proficiency in English rating

We asked how much additional variance the proficiency in English rating could explain in EAL students' performance across years and subjects. The data are summarised in Table 2 and the models are summarised in Tables 3–4. Figure 1 depicts the relationship between English proficiency and EAL students' reading scores at Key Stage 2 and overall performance (Attainment 8) at Key Stage 4. We found that the proficiency in English rating was positively related to attainment, with EAL learners rated as less than fluent learners performing at or below the national average and fluent learners performing above it (see Figure 1). The proficiency in English rating explained 18–27% of students' educational attainment beyond other background variables, as was reflected in the increase in marginal R^2, as shown in Figure 2. Note that this is up to 6 times the variance explained by all other background variables taken together. Differences in R^2 also showed that the predictive power of the proficiency in English rating was particularly large in subjects where school language proficiency has previously been found to weigh in relatively more strongly, such as English and reading as opposed to mathematics (see again Tables 3–4).

Insert Figure 1 and Figure 2 about here

Comparison between EAL status and proficiency in English

We then asked how the proficiency in English rating would fare in a direct comparison against the EAL status in predicting all student's achievement. As expected, the proficiency in English rating was significantly better in explaining student achievement than the EAL status (see Tables 5–7). This was reflected in significantly better fit for all models predicting achievement from proficiency in English ratings rather than EAL status, from Reception point scores ($\chi2$ (0) = 1398, $p < .0001$), to Key Stage 1 averages ($\chi2$ (0) = 1372, $p < .0001$), to Key Stage 2 reading and mathematics scores ($\chi2$ (0) = 1478 and $\chi2$ (0) = 872, respectively, both $p < .0001$), to Key Stage 4 English, mathematics and Attainment 8 scores ($\chi2$ (0) = 529, $\chi2$ (0) = 294, and $\chi2$ (0) = 414, respectively, all $p < .0001$). Note that the difference in predictive power between the EAL status and the proficiency in English ratings was particularly noticeable in later vis-à-vis earlier age groups (e.g., b = -1.76 (0.13) for the EAL status vis-à-vis b = 1.81 (0.05) for the English proficiency rating at reception but b = 1.39 (0.41) for the EAL status vis-à-vis b = 6.39 (0.31) for the English proficiency rating for Attainment 8 at Key Stage 4).

Discussion

We compared two measures that capture the linguistic heterogeneity of English students: the exposure-based distinction between EAL and monolingual students, and the 2017–2018 teacher rating of proficiency in English. Based on a large and nationally representative sample of students aged 5–16 years, we used hierarchical mixed models to probe the proficiency in English rating in two ways: first, we quantified how much variance it explains in EAL students' attainment and second, we compared its predictive power to that of the EAL status. Our results are clear in supporting the proficiency in English rating as the better predictor of student attainment vis-à-vis the EAL status. As also reported previously (Whiteside et al., 2017), stronger English language skills were undeniably linked to higher attainment, with EAL learners rated as less than fluent speakers performing at or below the national average, and fluent EAL learners performing above average. We also found evidence for differential predictability across subjects, with more variance being explained in subjects such as English and reading than in mathematics. The following discusses these results in more detail.

We found that the proficiency in English rating predicted an additional 18–27% of EAL students' achievement, beyond other background variables. Note that this a considerable increase compared to the 2–7% of variance explained by ethnicity, gender and socio-economic disadvantage combined (see Figure 2). These results chime with other (inter)national evidence that achievement is closely linked to English proficiency as measured through standardised language tests (Spencer et al., 2012; Whiteside et al., 2017) or teacher and student self-ratings of English proficiency (Authors; Demie, 2018; Guglielmi, 2008; Lutz, 2004; Sammons et al., 1983). Our findings add to the existing evidence by, for the first time, showing how much variance in EAL student's achievement can be explained through England's 2017–2018 proficiency ratings (Department for Education, 2020) – thus providing a new insight into a much discussed national educational policy.

We also found evidence for differential predictability by subjects. Proficiency in English ratings better explained students' performance in subjects such as English and reading (28% and 17% additional variance explained in reading at age 11 and English at age 16) as opposed to mathematics (17% and 13% at age 11 and 16). Our findings chime with previous evidence from Germany and England: English proficiency ratings predicted 11- and 16-year-olds' achievement more strongly in English or science than in mathematics (Authors). More exposure to German predicted 10-year-old German as an additional language learners' reading, spelling and listening more strongly than their mathematics abilities (Rjosk et al., 2017). Together, our and others'

results demonstrate a closer link between students' school language proficiency – at least when assessed holistically –in subjects that have language as a prominent topic of instruction, such as English and reading, compared to mathematics. It is important to note, however, that this finding is a relative one, as language proficiency was linked to attainment across the curriculum. In line with previous evidence, school language skills explained a considerable variance in mathematics scores as well (Heinze et al., 2007; Prediger et al., 2015; Spencer et al., 2017). Two practical implications arise from this finding that are relevant to both researchers and policy-makers: first, school language proficiency is worth supporting across the curriculum. Second, lower language proficiency appears particularly detrimental to students' performance in some learning situation (such as when reading comprehension is graded) than in others (such as when answering mathematics questions), a finding that highlights the additional need for support in those subjects.

Given the strong theoretical and empirical basis for using language proficiency ratings to assess linguistic heterogeneity, we further asked whether the proficiency in English rating would trump the exposure-based EAL status in predicting attainment. To directly compare the two, we assigned every monolingual student a 'Fluent' rating on the five-stage proficiency in English scale (as this level is defined as equivalent to monolingual language abilities). Arguably, this estimation could have weakened the predictive power of the proficiency in English rating vis-à-vis the EAL status, particularly when the latter is combined with other background measures (Hutchinson, 2018). However, our results are clear in demonstrating that the proficiency in English rating was the better predictor for all national assessments, as demonstrated by significantly and notably better model fit particularly for older students. In defence of the EAL status, one could argue that assessing bilingual exposure isolated from proficiency is a valid approach, and that what is needed is more precision than what is provided by the current two levels (some vs. no exposure to a non-English language). Currently, the EAL status only speaks to the general presence of a home language other than English (Department for Education, 2017) but gives no information on their exposure to or ability in this language. Arguably, a multi-step EAL status (based on either exposure, for example by recording no other language vs. some other language vs. purely non-English language use at home; as used in Rjosk et al., 2017; or alternatively, on ability in the home language, which may be a key driver of learning; Murphy et al., 2016; Serratrice, 2013) might predict achievement equally well as a teacher rating of proficiency in English. This argument does not sit well, however, with the body of evidence that demonstrates complex relationships between bilingual language exposure and proficiency on the one hand and academic achievement on the other hand due to intervening factors such as input

quality, socio-economic background, interactions between first and second language acquisition, and aptitude (Blom et al., 2012; De Cat, 2020; Jia & Paradis, 2015; Paradis & Jia, 2017; Paradis & Navarro, 2003). If bilingual exposure by itself is not an unequivocal predictor of proficiency in the language of schooling, and if that language proficiency ultimately influences achievement (Guglielmi, 2008; Lutz, 2004; Spencer et al., 2017; Whiteside et al., 2017), one cannot expect more than an indirect relationship between EAL status and student performance. This does not mean to say that the bilingual experience were unimportant, as it is an undeniable personal and social resource for EAL learners and societies alike (Callahan & Gandara, 2014; García & Baetens Beardsmore, 2009; Pearson, 2007; Whiteside et al., 2017) – only that English language proficiency appears to be a key mediator between exposure and academic achievement, and that its assessment is pivotal. Further research will be needed to determine whether and how home language ability should be assessed alongside English proficiency.

There are three considerations in interpreting our results. First, we compared English proficiency to three other student background characteristics (gender, ethnicity and free-school meals). As important as the three chosen background variables are in explaining variability in attainment (Authors), future national analyses could further contextualise the predictive power of the proficiency in English rating by adding additional measures (such as special educational needs or attendance). Furthermore, we cannot be certain that either the EAL status or the proficiency in English ratings were assigned the same way across schools and local authorities since guidance on implementation had been scarce. Necessarily, this will introduce unknown variability to our data, including the caveat that teacher ratings of language proficiency may have been coloured by their general impression of a student's abilities. Additionally, the 2017-2018 rating was based on a holistic judgement of English language skills rather than targeted assessments of general or discipline-specific academic language. This simplicity can be seen as a shortcoming given the various ways in which language is used across school subjects (Mohan & Beckett, 2001; Monaghan, 1999) and may indeed have biaised results towards showing stronger relationships in some subjects than others. While more targeted assessments would certainly provide additional insights on the role of language in the classroom (Uccelli et al., 2015), it is noteworthy that already in its current form, England's national proficiency rating was clearly linked to attainment across the curriculum.

Our findings add to the literature in three distinctive ways. For the first time, we quantified how much of EAL students' achievement is explained by the 2017–2018 proficiency in English rating, showing its strong predictive power across all national assessments. We also found evidence for differential predictability, with the influence of language proficiency being

particularly in subjects such as English and reading. Finally, we directly compared the proficiency in English rating to the exposure-based EAL status, a comparison from which the English proficiency rating emerged as the stronger predictor of achievement. In the following, we discuss the educational implications of these findings.

Although schools are no longer required to collect proficiency in English ratings for the national census, we recommend that they continue to do so in order to identify learning needs and monitor their EAL students' progress. This has been and continues to be done in a number of London-based schools that use a bespoke four-stage fluency rating (Authors; Demie, 2018) as well as in other local authorities that continue to use the Bell Foundation's or NASSEA framework to track their EAL students (NASSEA, 2015; The Bell Foundation, 2016). Such assessments provide a clear picture of students' linguistic challenges and as such, are the first step towards targeted support. Once vulnerable learners have been identified, teachers can leverage the beneficial effects of increased and richer language exposure (Jia & Paradis, 2015; Paradis & Jia, 2017) and targeted interventions (McNamara, 2017; Meltzer & Hamann, 2015; Nagy et al., 2012) to support struggling learners. Furthermore, we recommend that a language proficiency assessment be re-introduced in the national census in order to systematically assess EAL students' language skills, identify students at risk of under-achievement, and target funding and language support to where it is needed, much as it is done in other countries such as the US, Canada or Wales (Authors; Hutchinson, 2018).

Two considerations are important for schools, local authorities, and national policy-makers who wish to (re-)introduce an English proficiency assessment: first, how to define proficiency stages and second, how to use and integrate assessments in the classroom. Let us first consider how proficiency stages can – and, when insights from language testing and classroom assessment research are considered – likely should be defined in order to for them to be both reliable and useful to teachers. A stage like 'Fluent' can either be defined in relation to another social group, most often monolingual peers (as it was done in England's 2017–2018 ratings; Department for Education, 2020) or in relation to specific linguistic activities that students are able to perform at this stage (as done for instance in a prominent unofficial supplement to the 2017–2018 rating; The Bell Foundation, 2016). Social comparisons to monolingual peers may help to clearly distinguish the assessment of language skills from that of content knowledge (especially since the two are frequently interwoven in assessments of classroom language; Spencer et al., 2012). However, bilingualism researchers have grown increasingly sceptical of monolingual standards as a reference point. A theoretical reason is that monolingual norms are misleading as they imply that bilingual learners were developing towards becoming monolinguals in either

language – a position that has long been falsified (Grosjean, 1989). Second, and in practical terms, monolinguals' language abilities are far from monolithic and vary particularly regarding more academic classroom activities, such as reading lexically demanding texts for meaning (Nation, 2019). With social comparisons to monolingual peers as reference points, it is therefore unclear whether an EAL student is considered fully 'Fluent' as soon as they are on par with lower-performing monolingual peers or only when they can fully take part in all classroom activities, including those that are challenging to some monolinguals. Yet, assessing the ability to read mathematics and science texts for comprehension is particularly important to teachers since it is instrumental in content learning and test performance (McNamara, 2017; Prediger et al., 2015) and takes particularly long for EAL students to master (Hakuta et al., 2000). A valuable alternative are specific descriptors of observable behaviour. These are typically favoured by language testing researchers and teachers alike: McKay's review of different EAL assessment frameworks concludes with the call for precise and theory-based descriptors. These descriptors should detail specific linguistic skills that teachers can expect to observe in classroom activities at a certain age and proficiency level (McKay, 2000), such as specific descriptors both for recent arrivals and advanced learners. The sentiment is echoed by teachers in Australia who found EAL assessments beneficial only when proficiency levels were precisely defined (Breen et al., 1997: 212). A further advantage of a description-based scale is that it is equally applicable to monolingual students for whom targeted language support can reduce the language-mediated impact of socio-economic disadvantages on attainment (Hart & Risley, 2003; Huttenlocher et al., 2010; Spencer et al., 2012) which is not entirely captured in the clinical ranges of special educational needs assessments (Nation, 2019).

Second, teachers need practical guidance on how they can integrate language assessments into their classrooms. This point is particularly relevant so that proficiency assessments inform not only national records but also classroom practice. Adequate guidance is not only necessary for reliable and valid assessments but can also serve to advance teachers' professional development (McKay, 2000). Informative training and resources are also valued by teachers: when asked about the usefulness of their respective EAL assessment frameworks, Australian teachers highlighted the value of background information on language learning and stage-specific teaching practices (Breen et al., 1997: 212) and teachers in England found using the framework supported their teaching, planning and communication with other staff and parents (Rea-Dickins et al., 1998, as cited in McKay, 2000). Accessible guidance on classroom-based language assessments are provided, for instance, in Genesee and Hamayan's hands-on advice on integrating assessment into teaching or Rea-Dickins workbook style introduction to classroom

assessment (Genesee & Hamayan, 1994; Rea-Dickins, 2000). It is worth highlighting that the Bell Foundation's assessment framework offers not only empirically tested, precise and age-related descriptors for each proficiency stage alongside guidance for assessment and planning but also contains useful background information on bilingual language learning and assessment (The Bell Foundation, 2016), making it an ideal resource to support classroom assessment and teaching. Beyond these considerations around the construction of existing EAL assessment frameworks (NASSEA, 2015; The Bell Foundation, 2016), future research would be needed to assess their respective reliability and validity based on statistical evidence, as we have done here for the national assessment. The current study thus provides a first step in that direction by demonstrating the concurrent validity of the Five Point Proficiency in English scale as used in England 2017/18, replicating evidence from its original use in Wales (Authors).

In conclusion, we have presented a new, data-driven perspective on the tools that are available to teachers, schools, and national policy-makers to assess students' linguistic heterogeneity and achievement. We demonstrate that England's 2017–2018 proficiency in English rating not only strongly predicts EAL students' achievement but also trumps EAL status in a direct comparison. Our findings tell a clear story: to really predict a student's strengths and difficulties, teachers should ask about their English language proficiency. Using this information, we could for example show how EAL learners with weaker English language skills also performed less strongly overall, while EAL learners with solid English language skills outperformed their monolingual peers across subjects – a finding that highlights the pivotal role of English language skills in attainment. Such data is fundamental in identifying students at risk of underachievement and to target specific interventions to support them. We encourage teachers, schools and policy-makers to make use of existing resources and evidence on classroom-based language assessment in order to adequately assess and support all students, beyond their linguistic background.

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Appendices

Appendix A: DFE Proficiency in English Scale

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

- **New to English [Code 'A']:** May use first language for learning and other purposes. May remain completely silent in the classroom. May be copying / repeating some words or phrases. May understand some everyday expressions in English but may have minimal or no literacy in English. Needs a considerable amount of EAL support.
- **Early acquisition [Code 'B']:** May follow day-to-day social communication in English and participate in learning activities with support. Beginning to use spoken English for social purposes. May understand simple instructions and can follow narrative / accounts with visual support. May have developed some skills in reading and writing. May have become familiar with some subject specific vocabulary. Still needs a significant amount of EAL support to access the curriculum.
- **Developing competence [Code 'C']:** May participate in learning activities with increasing independence. Able to express self orally in English, but structural inaccuracies are still apparent. Literacy will require ongoing support, particularly for understanding text and writing. May be able to follow abstract concepts and more complex written English. Requires ongoing EAL support to access the curriculum fully.

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

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

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

Source: Department for Education. (2016). *School census 2016 to 2017*, p. 63. https://doi.org/https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/609375/School_census_2016_to_2017_guide_v1_6.pdf

Tables

Table 1: Overview of local authorities (LA) in comparison to the national average.

LA	Description	N	% EAL	% Entitled to free school meals	% None White British	% Girls
1	Inner London borough	5,777	58.7	26.7	38.7	50.9
2	Large southern shire	58,093	6.4	6.3	13.0	48.7
3	Outer London borough	12,548	61.6	13.7	80.2	47.6
4	Outer London borough	15,755	63.4	14.0	85.3	48.5
5	West Midlands Met. Borough	12,691	27.3	22.5	53.3	49.0
6	Northern City Council	36,100	19.2	17.4	19.9	48.6
	National average [a]		*19.4*	*14.3*	*32.0*	*48.8*

[a] *National average calculated from 2017 data from the national pupil database for students at the end of Reception and Key Stages 1–4.*

Table 2: Student attainment across all Key Stages by EAL status, gender, ethnicity, and free school meals entitlement.

	EAL status		**Gender**		**Free school meals**		**Ethnicity**					
	Monolingual	*EAL*	*Female*	*Male*	*Yes*	*No*	*White British*	*White Other*	*Mixed*	*Asian*	*Black*	*Chinese*
Reception point scores	35.0 (7.2)	33.3 (7.6)	35.7(6.9)	33.6 (7.5)	31.4 (7.2)	35.1 (7.2)	34.9 (7.2)	33.3 (7.1)	35.0 (7.3)	34.3 (7.9)	33.0 (7.6)	35.7 (8.0)
Key Stage 1 average	1.0 (0.6)	0.9 (0.6)	1.0 (0.6)	1.0 (0.7)	0.7 (0.6)	1.1 (0.6)	1.0 (0.6)	1.0 (0.6)	1.0 (0.6)	1.0 (0.6)	0.9 (0.6)	1.3 (0.6)
Key Stage 2 reading	104.2 (9.0)	102.7 (8.8)	104.8 (8.7)	103.0 (9.2)	99.6 (9.4)	104.6 (8.7)	104.2 (9.0)	103.0 (9.6)	104.0 (9.0)	103.8 (8.6)	102.1 (8.7)	107.9 (8.8)
Key Stage 2 mathematics	103.7 (8.1)	105.1 (8.2)	104.0 (7.8)	104.1 (8.5)	100.0 (8.9)	104.7 (7.8)	103.7 (8.0)	104.5 (8.5)	103.5 (8.4)	106.2 (8.1)	102.9 (8.2)	111.5 (7.3)
Key Stage 4 English	5.0 (2.1)	5.1 (2.1)	5.5 (2.0)	4.6 (2.1)	4.1 (2.2)	5.1 (2.1)	4.9 (2.1)	5.1 (2.2)	5.0 (2.1)	5.5 (1.9)	5.0 (2.1)	5.8 (2.1)
Key Stage 4 mathematics	4.5 (2.2)	4.7 (2.2)	4.6 (2.1)	4.5 (2.2)	3.4 (2.1)	4.7 (2.2)	4.5 (2.2)	4.7 (2.2)	4.3 (2.2)	5.1 (2.2)	4.1 (2.1)	6.2 (2.2)
Key Stage 4 Attainment 8	6.7 (19.4)	47.92(19.2)	49.7 (18.8)	44.1 (19.6)	37.0 (19.6)	48.0 (19.1)	46.4 (19.4)	48.8 (20.7)	45.7 (20.1)	51.2 (18.4)	443 (18.5)	59.5 (18.7)

Table 3: Models predicting EAL students' Reception point scores, Key Stage 1 averages, and Key Stage 2 reading and mathematics scores from background measures (Step 1) and with English proficiency (Step 2).

	Reception point score		**Key Stage 1 average**		**Key Stage 2 reading**		**Key Stage 2 mathematics**	
	Step 1	*Step 2*	*Step 1*	*Step 2*	*Step 1*	*Step 2*	*Step 1*	*Step 2*
English proficiency		3.48 *** (0.07)		0.34 *** (0.01)		5.73 *** (0.11)		4.52 *** (0.11)
Gender	-1.23 *** (0.08)	-0.86 *** (0.07)	0.07 *** (0.01)	0.01 (0.01)	1.39 *** (0.20)	0.80 *** (0.17)	-0.57 ** (0.19)	-1.03 *** (0.17)
Free school meals	0.77 *** (0.13)	0.60 *** (0.11)	-0.13 *** (0.02)	-0.10 *** (0.02)	-1.64 *** (0.29)	-1.25 *** (0.24)	-2.05 *** (0.27)	-1.75 *** (0.24)
Ethnicity, White Other	-1.02 ** (0.34)	0.64 * (0.30)	-0.07 ** (0.03)	0.01 (0.02)	-1.55 *** (0.44)	-0.38 (0.38)	-1.61 *** (0.41)	-0.68 (0.37)
Ethnicity, Mixed	1.24 ** (0.44)	0.26 (0.38)	0.03 (0.03)	-0.00 (0.03)	0.56 (0.56)	-0.51 (0.48)	-0.53 (0.52)	-1.38 ** (0.46)
Ethnicity, Asian	0.68 * (0.30)	0.52 * (0.26)	0.05 * (0.02)	0.05 * (0.02)	0.82 * (0.37)	0.23 (0.32)	1.28 *** (0.34)	0.80 ** (0.31)
Ethnicity, Black	-0.02 (0.34)	-0.52 (0.29)	-0.08 ** (0.03)	-0.10 *** (0.02)	-0.39 (0.42)	-0.98 ** (0.36)	-1.42 *** (0.39)	-1.89 *** (0.35)
Ethnicity, Chinese	1.68 * (0.67)	2.50 *** (0.59)	0.34 *** (0.06)	0.28 *** (0.05)	3.28 *** (0.94)	2.52 ** (0.81)	5.73 *** (0.87)	5.13 *** (0.78)
Local authority 1	-0.15 (0.61)	-1.26 (0.71)	0.15 *** (0.04)	-0.04 (0.05)	3.24 *** (0.70)	1.64 * (0.81)	2.04 ** (0.68)	0.68 (0.77)
Local authority 2	0.49 (0.67)	0.12 (0.82)	0.29 *** (0.04)	-0.01 (0.04)	3.25 *** (0.60)	0.71 (0.62)	2.04 *** (0.57)	-0.04 (0.59)
Local authority 3	-0.12 (0.63)	0.48 (0.77)	0.33 *** (0.04)	0.20 *** (0.05)	3.49 *** (0.68)	2.51 ** (0.77)	3.87 *** (0.66)	3.03 *** (0.74)
Local authority 4	-1.96 ** (0.75)	-1.73 (0.88)	0.15 *** (0.04)	-0.02 (0.04)	1.63 ** (0.61)	0.14 (0.68)	1.68 ** (0.59)	0.44 (0.65)
Local authority 5	-1.28 * (0.59)	0.34 (0.71)	0.11 * (0.05)	-0.03 (0.05)	-0.22 (0.74)	-0.07 (0.81)	-0.47 (0.72)	-0.42 (0.77)
Marginal R^2	0.047	0.294	0.057	0.338	0.047	0.323	0.067	0.264

*Estimates are b estimates with standard error in brackets. * p<0.05 ** p<0.01 *** p<0.001*

Table 4: Models predicting EAL students' English, mathematics and Attainment 8 scores at Key Stage 4 from background measures (Step 1) and with English proficiency (Step 2).

	Key Stage 4 English		**Key Stage 4 mathematics**		**Key Stage 4 Attainment 8**	
	Step 1	*Step 2*	*Step 1*	*Step 2*	*Step 1*	*Step 2*
English proficiency		1.16 *** (0.04)		1.05 *** (0.04)		10.69 *** (0.35)
Gender	0.85 *** (0.06)	0.70 *** (0.06)	-0.01 (0.07)	-0.15 * (0.07)	5.25 *** (0.59)	3.89 *** (0.53)
Free school meals	-0.26 ** (0.08)	-0.27 *** (0.07)	-0.54 *** (0.09)	-0.55 *** (0.08)	-4.21 *** (0.75)	-4.31 *** (0.68)
Ethnicity, White Other	-0.30 * (0.13)	-0.04 (0.11)	-0.43 ** (0.14)	-0.19 (0.13)	-2.28 (1.18)	0.13 (1.07)
Ethnicity, Mixed	-0.23 (0.16)	-0.27 (0.15)	-0.31 (0.18)	-0.34 * (0.17)	-1.70 (1.54)	-2.03 (1.39)
Ethnicity, Asian	0.23 * (0.10)	0.15 (0.09)	0.10 (0.11)	0.03 (0.11)	1.59 (0.96)	0.91 (0.87)
Ethnicity, Black	0.02 (0.11)	-0.03 (0.10)	-0.32 * (0.13)	-0.36 ** (0.12)	-1.70 (1.08)	-2.13 * (0.98)
Ethnicity, Chinese	0.66 * (0.30)	0.72 ** (0.27)	1.77 *** (0.34)	1.81 *** (0.31)	12.98 *** (2.86)	13.53 *** (2.59)
Local authority 1	0.86 (0.53)	0.37 (0.45)	0.75 (0.48)	0.32 (0.40)	5.23 (5.26)	0.75 (4.36)
Local authority 2	0.20 (0.39)	-0.01 (0.33)	0.46 (0.36)	0.26 (0.31)	0.67 (3.77)	-1.13 (3.17)
Local authority 3	0.41 (0.46)	0.21 (0.38)	0.47 (0.41)	0.28 (0.35)	1.43 (4.47)	-0.24 (3.73)
Local authority 4	0.12 (0.44)	0.17 (0.37)	0.44 (0.40)	0.50 (0.34)	-1.00 (4.34)	-0.56 (3.61)
Local authority 5	-1.13 (0.64)	-0.44 (0.54)	-1.00 (0.59)	-0.34 (0.51)	-12.18 (6.26)	-5.76 (5.27)
Marginal R^2	0.070	0.243	0.044	0.174	0.049	0.215

*Estimates are b estimates with standard error in brackets. * p<0.05 ** p<0.01 *** p<0.001*

Table 5: Models predicting Reception point scores and Key Stage 1 averages from background measures alone (Step 1) and with either EAL status (Step 2) or English proficiency (Step 3).

	Reception point score			**Key Stage 1 average**		
	Step 1	*Step 2*	*Step 3*	*Step 1*	*Step 2*	*Step 3*
English proficiency			1.81 *** (0.05)			0.18 *** (0.00)
EAL		-1.76 *** (0.13)			-0.05 *** (0.01)	
Gender	2.11 *** (0.07)	2.12 *** (0.07)	2.04 *** (0.07)	0.06 *** (0.01)	0.06 *** (0.01)	0.05 *** (0.01)
Free school meals	-2.84 *** (0.11)	-2.92 *** (0.11)	-3.02 *** (0.11)	-0.28 *** (0.01)	-0.28 *** (0.01)	-0.29 *** (0.01)
Ethnicity, White Other	-2.28 *** (0.17)	-1.22 *** (0.18)	0.32 (0.18)	-0.08 *** (0.01)	-0.05 ** (0.02)	0.05 *** (0.01)
Ethnicity, Mixed	0.35 * (0.14)	0.41 ** (0.14)	0.31 * (0.14)	0.04 ** (0.01)	0.04 ** (0.01)	0.04 ** (0.01)
Ethnicity, Asian	-0.57 *** (0.15)	0.38 * (0.16)	1.14 *** (0.15)	0.05 *** (0.01)	0.07 *** (0.01)	0.15 *** (0.01)
Ethnicity, Black	-0.92 *** (0.17)	-0.43 * (0.17)	-0.08 (0.17)	-0.06 *** (0.02)	-0.04 ** (0.02)	0.00 (0.01)
Ethnicity, Chinese	0.36 (0.52)	1.47 ** (0.52)	2.87 *** (0.51)	0.25 *** (0.05)	0.28 *** (0.05)	0.36 *** (0.05)
Local authority 1	0.09 (0.58)	0.65 (0.58)	0.99 (0.58)	0.10 ** (0.04)	0.12 *** (0.04)	0.16 *** (0.03)
Local authority 2	0.17 (0.28)	-0.02 (0.28)	-0.46 (0.28)	0.17 *** (0.02)	0.17 *** (0.02)	0.12 *** (0.02)
Local authority 3	0.54 (0.51)	0.73 (0.51)	0.68 (0.52)	0.21 *** (0.03)	0.22 *** (0.03)	0.25 *** (0.03)
Local authority 4	0.43 (0.46)	0.62 (0.45)	0.91 * (0.46)	0.07 * (0.03)	0.08 ** (0.03)	0.10 *** (0.03)
Local authority 5	-1.76 *** (0.45)	-1.94 *** (0.44)	-2.25 *** (0.45)	0.06 * (0.03)	0.06 * (0.03)	0.03 (0.03)
Marginal R^2	0.049	0.055	0.095	0.046	0.047	0.091

Estimates are b estimates with standard error in brackets. * p<0.05 ** p<0.01 *** p<0.001*

Table 6: Models predicting Key Stage 2 reading and mathematics scores from background measures (Step 1) and with either EAL status (Step 2) or English proficiency (Step 3).

	Key Stage 2 reading			**Key Stage 2 mathematics**		
	Step 1	*Step 2*	*Step 3*	*Step 1*	*Step 2*	*Step 3*
English proficiency			4.18 *** (0.11)			2.85 *** (0.10)
EAL		-1.22 *** (0.17)			0.56 *** (0.15)	
Gender	1.67 *** (0.09)	1.67 *** (0.09)	1.58 *** (0.09)	-0.31 *** (0.08)	-0.31 *** (0.08)	-0.38 *** (0.08)
Free school meals	-3.62 *** (0.14)	-3.66 *** (0.14)	-3.71 *** (0.14)	-3.63 *** (0.12)	-3.61 *** (0.12)	-3.70 *** (0.12)
Ethnicity, White Other	-1.97 *** (0.23)	-1.30 *** (0.25)	0.25 (0.23)	-0.27 (0.21)	-0.58 * (0.22)	1.25 *** (0.21)
Ethnicity, Mixed	0.27 (0.20)	0.31 (0.20)	0.17 (0.19)	-0.14 (0.18)	-0.15 (0.18)	-0.21 (0.17)
Ethnicity, Asian	0.12 (0.19)	0.78 *** (0.21)	1.48 *** (0.19)	2.46 *** (0.17)	2.16 *** (0.19)	3.37 *** (0.17)
Ethnicity, Black	-0.94 *** (0.22)	-0.56 * (0.22)	-0.26 (0.21)	-0.41 * (0.19)	-0.58 ** (0.20)	0.06 (0.19)
Ethnicity, Chinese	2.75 *** (0.78)	3.53 *** (0.79)	4.29 *** (0.76)	6.48 *** (0.69)	6.12 *** (0.70)	7.52 *** (0.69)
Local authority 1	1.82 * (0.77)	2.24 ** (0.77)	2.61 *** (0.77)	1.73 * (0.79)	1.54 (0.80)	2.27 ** (0.80)
Local authority 2	0.56 (0.39)	0.45 (0.39)	-0.00 (0.38)	-0.39 (0.40)	-0.33 (0.40)	-0.78 (0.40)
Local authority 3	1.59 * (0.71)	1.75 * (0.70)	1.97 ** (0.70)	1.59 * (0.73)	1.52 * (0.73)	1.85 * (0.73)
Local authority 4	0.05 (0.62)	0.24 (0.62)	0.52 (0.61)	-0.01 (0.64)	-0.09 (0.64)	0.31 (0.64)
Local authority 5	-1.91 ** (0.59)	-1.99 *** (0.59)	-2.01 *** (0.59)	-2.21 *** (0.61)	-2.17 *** (0.61)	-2.28 *** (0.61)
Marginal R^2	0.039	0.041	0.087	0.047	0.047	0.070

*Estimates are b estimates with standard error in brackets. * p<0.05 ** p<0.01 *** p<0.001*

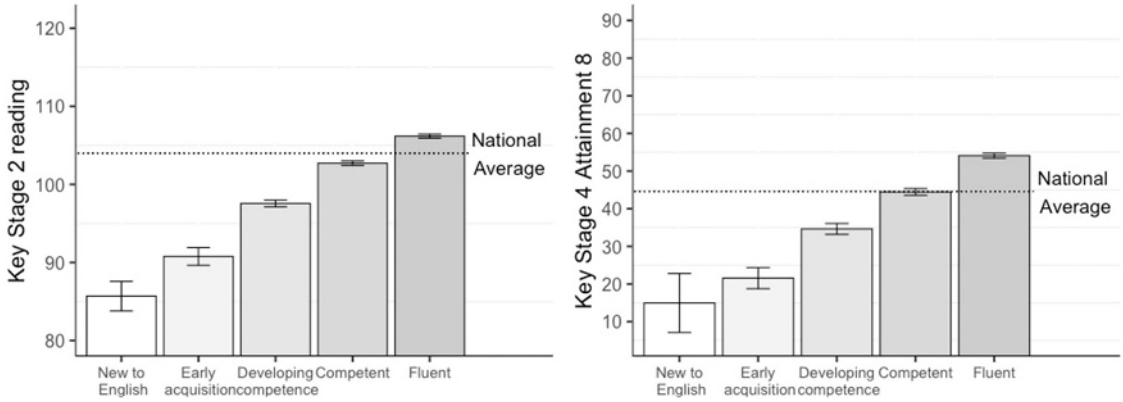
Table 7: Models predicting Key Stage 4 English, mathematics and Attainment 8 from background measures (Step 1) and either EAL (Step 2) or English proficiency (Step 3).

	Key Stage 4 English			**Key Stage 4 mathematics**			**Key Stage 4 Attainment 8**		
	Step 1	*Step 2*	*Step 3*	*Step 1*	*Step 2*	*Step 3*	*Step 1*	*Step 2*	*Step 3*
English proficiency			0.76 *** (0.03)			0.63 *** (0.04)			6.39 *** (0.31)
EAL		-0.03 (0.04)			0.16 *** (0.05)			1.39 *** (0.41)	
Gender	0.83 *** (0.02)	0.83 *** (0.02)	0.82 *** (0.02)	-0.02 (0.02)	-0.02 (0.02)	-0.03 (0.02)	4.77 *** (0.21)	4.78 *** (0.21)	4.64 *** (0.21)
Free school meals	-0.81 *** (0.04)	-0.81 *** (0.04)	-0.83 *** (0.04)	-0.95 *** (0.05)	-0.95 *** (0.04)	-0.97 *** (0.04)	-8.66 *** (0.39)	-8.67 *** (0.39)	-8.80 *** (0.39)
Ethnicity, White Other	-0.05 (0.06)	-0.03 (0.07)	0.27 *** (0.06)	0.04 (0.07)	-0.04 (0.07)	0.30 *** (0.07)	1.36 * (0.59)	0.70 (0.62)	3.99 *** (0.60)
Ethnicity, Mixed	0.04 (0.05)	0.04 (0.05)	0.03 (0.05)	-0.16 ** (0.06)	-0.16 ** (0.06)	-0.16 ** (0.06)	-0.41 (0.48)	-0.40 (0.48)	-0.50 (0.48)
Ethnicity, Asian	0.45 *** (0.05)	0.46 *** (0.05)	0.59 *** (0.05)	0.52 *** (0.05)	0.46 *** (0.06)	0.65 *** (0.05)	5.10 *** (0.46)	4.53 *** (0.49)	6.34 *** (0.46)
Ethnicity, Black	-0.01 (0.05)	-0.00 (0.05)	0.10 (0.05)	-0.26 *** (0.06)	-0.30 *** (0.06)	-0.17 ** (0.06)	-1.00 * (0.50)	-1.33 ** (0.51)	-0.10 (0.50)
Ethnicity, Chinese	0.63 ** (0.21)	0.64 ** (0.21)	0.84 *** (0.21)	1.63 *** (0.23)	1.55 *** (0.23)	1.80 *** (0.23)	12.05 *** (1.99)	11.38 *** (2.00)	13.84 *** (1.98)
Local authority 1	1.02 (0.62)	1.03 (0.62)	1.03 (0.61)	0.81 (0.57)	0.76 (0.58)	0.82 (0.56)	9.16 (6.05)	8.71 (6.06)	9.25 (5.92)
Local authority 2	-0.09 (0.32)	-0.09 (0.32)	-0.15 (0.31)	-0.04 (0.30)	-0.02 (0.30)	-0.09 (0.29)	-2.26 (3.06)	-2.15 (3.07)	-2.79 (3.00)
Local authority 3	0.37 (0.47)	0.37 (0.47)	0.39 (0.46)	0.24 (0.43)	0.23 (0.43)	0.26 (0.43)	0.16 (4.47)	0.08 (4.47)	0.37 (4.37)
Local authority 4	0.11 (0.50)	0.12 (0.50)	0.25 (0.49)	0.13 (0.46)	0.10 (0.46)	0.25 (0.45)	-1.54 (4.77)	-1.81 (4.78)	-0.37 (4.67)
Local authority 5	-0.46 (0.43)	-0.46 (0.43)	-0.50 (0.42)	-0.47 (0.40)	-0.45 (0.40)	-0.50 (0.39)	-5.01 (4.09)	-4.85 (4.10)	-5.34 (4.00)
Marginal R^2	0.049	0.049	0.063	0.025	0.026	0.035	0.035	0.036	0.046

Estimates are b estimates with standard error in brackets. p<0.05 ** p<0.01 *** p<0.001*

List of Figure and Figure Captions

Figure 1: EAL students' reading scores at Key Stage 2 (age 11) and Attainment 8 scores at Key Stage 4 (age 16) by English proficiency, compared to national average.



Error bars show 95% confidence intervals.

Figure 2: Predictive power of gender, free school meals (FSM) and ethnicity alone and when combined with English proficiency for predicting EAL students' performance in reception and Key Stages 1–4.