Language Skills and Identity in Bilingual Education: A case study of a bilingual primary school in England [*]

NAPOLEON KATSOS[1]
JENNY GIBSON[1]
ISABELLE LORGE[1]
LISA-MARIA MÜLLER[1,2]
ÖZGE ÖZTÜRK[1,3]
JULIE REYNOLDS[1]
ELSPETH WILSON[1]
KAREN FORBES[1]

[1]UNIVERSITY OF CAMBRIDGE
[2]CHARTERED COLLEGE OF TEACHING
[3]UNIVERSITY OF SHEFFIELD

ABSTRACT A common concern for bilingual education is that while it supports additional language learning, it detracts from students' progress with the society's dominant language. Several studies in this flourishing area of research have focused on bilingual educational settings using the dominant societal language and a language of that is the native one of the students. Findings are hard to generalise to other educational settings, due to the inherent heterogeneity of bilingual education, including not only the choice of languages used but also the amount and type of exposure to each of them. Here we report on the first stage of a longitudinal study of students in a bilingual primary school in England which uses English, the dominant societal language, and French, a foreign language which is not the home language of any sizeable group of students in the school. In the quantitative part of this research we report that primary school students were achieving progress with foundational language skills in English within the expected range, and that this was the case both for monolingual students as well as children who had an additional home language. In the qualitative part we report on the role which bilingual education can play in the construction of students' broader multilingual identities. The emerging picture is one where students in this type of bilingual setting are not negatively impacted in their progress with the dominant societal language, and in fact experience positive changes thanks to the formation of a multilingual identity.

1 Defining Bilingual Education

Bilingual education is a broad, umbrella term which 'refers to any school program in which more than one language is used in the curriculum to teach non-language academic subject matter' (Bialystok 2018: 667). Bialystok also makes an important distinction between bilingual education and the education of bilingual children (which often overlap). Within this broad term, as defined above, there are a range of 'types' of bilingual education.

One type of bilingual education is often defined more narrowly as involving 'the native language of the student and the dominant societal language' (Wright 2013: 598) which is often considered as a form of support for minority language students. This is particularly common in the USA (e.g. bilingual English-Spanish education programmes for Hispanic children). The most commonly reported partner language in bilingual education programmes in the USA is Spanish, which represented over 90% of the dual language programmes reported by schools in a survey completed by McGraw Hill Education (2017).

A broader definition of bilingual education is that it 'aims to promote bilingual (or multilingual) competence by using both (or all) languages as media of instruction for significant portions of the academic curriculum' (Genesee 2004: 548). This definition would include bilingual education or content and language integrated learning (CLIL) programmes which are common across various countries in Europe. In many such cases instruction is in the students' mother tongue / national language and a foreign language (most commonly, English). These programmes are often driven by economic arguments or ideologies of internationalisation, especially in non-Anglophone countries where English is involved.

There is another category of bilingual education programme which is often linked to the revitalisation of minority (often indigenous) languages through acquisition planning (Cooper 1989). The aim here is to increase the number of speakers of the minority language through education in order to help preserve and promote it. Some examples are Welsh, Catalan and Basque.

2 Effects of Bilingual Education

2.1 Language and literacy

The above contexts all differ widely in terms of the structure of bilingual education programmes (e.g. in terms of curriculum time spent in each language), the demographic profiles of the students (including their exposure to one/both languages outside of the classroom and socioeconomic status), students' attitudes towards the languages, and the political and linguistic ideologies underpinning bilingual education, so it is difficult to generalise findings. However, the below sections outline some of the existing evidence on the effects of bilingual education. It is important to note that the majority of these studies have been conducted in the USA context and therefore may refer to a particular 'type' of bilingual education programme.

In terms of language and literacy, Bialystok (2018) reviewed research evaluating the outcomes of bilingual education for language and literacy levels and academic

achievement and found 'no evidence for harmful effects of bilingual education and much evidence for net benefits in many domains' (p.666). A meta-analysis conducted in USA-based studies by Rolstad, Mahoney & Glass (2005) found that 'bilingual education is consistently superior to all-English approaches' and 'effective in promoting academic achievement' (p.572). Though the focus here seems to be on English language learners (or English as an additional language students) receiving bilingual education in English plus their home language. Lindholm-Leary & Block (2010) examined how 659 Hispanic students from low socioeconomic backgrounds in dual language programmes performed on standardised tests compared to students in mainstream English programmes. They found that students in the dual language programmes achieved at similar or higher levels to their mainstream peers in English, and above grade level in Spanish.

Genesee, Lindholm-Leary, Saunders & Donna (2006) conducted an analysis of over 200 studies on bilingual education in the USA and found that the maintenance and development of students' home languages did not detract from their English literacy development. While many of the studies in the USA context have been conducted with Spanish-speaking students, similar results have been found in other bilingual programmes such as English-Italian (e.g. Montanari 2013) and English-Mandarin (e.g. Padilla, Fan, Xu & Silva 2013). There is also a growing body of evidence from dual language programmes in the USA which shows that learning a second language not only helps students to develop problem-solving skills, but also helps them to tackle the 'nuances and complexities' of their first language (American Academy of Arts and Sciences 2017: 15). Such benefits are similarly acknowledged by Steele, Slater, Zamarro, Miller, Li, Burkhauser & Bacon (2017) who found that students randomly assigned to dual language programmes outperformed their peers in English reading by around 7 months in Grade 5 and 9 months in Grade 8.

European-based research often looks specifically at CLIL programmes; this is a widely adopted approach to dual-language-focused education where a target language and a subject are integrated in the teaching and learning process. The language and the content in CLIL are placed on a continuum 'without an implied preference for either' (Coyle 2007: 97). CLIL is generally based on using a foreign language (rather than a second language of the students) as the medium of instruction and it is usually implemented once learners have already acquired literacy skills in their first language. In CLIL programmes, typically less than 50% of the curriculum is taught in the target language (Dalton-Puffer 2011).

There is some evidence to suggest that CLIL leads to greater linguistic and cognitive gains than conventional language teaching (e.g. Coyle, Hood & Marsh 2010), although studies in CLIL tend to focus on linguistic gains in the target language. Generally, studies show that CLIL students' receptive and productive vocabulary is larger in the target language and they use more morpho-syntactic resources and complex structures (compared to non-CLIL peers who are learning the target language).

2.2 Beyond language: Executive functioning, metalinguistic awareness, well-being and identity

There is a large body of research that suggests a link between bilingualism and higher levels of executive functioning (e.g. Barac, Bialystok, Castro & Sanchez 2014). However, a lot of studies in this area tend to be based around comparisons between monolinguals and early bilinguals rather than necessarily exploring the effects of a bilingual education.

Bialystok & Barac (2012) explored the influence of bilingual education on executive function. They looked at children from monolingual English homes who attended immersion programmes where instruction was either in Hebrew or French and found that performance on the executive function task was related to the length of time the children had spent in the bilingual programme and their degree of bilingualism.

Ter Kulie, Veldhuis, van Veen & Wicherts (2010) conducted a study with Dutch high school students in monolingual and bilingual classes and found that the bilingual students scored significantly higher on the test of metalinguistic awareness. A comprehensive report on the effects of learning an additional language at school showed mixed evidence for advantages in executive functioning (Woll & Wei 2019). However, there was strong evidence for a positive effect of learning a language on creativity in language use. Fluency, originality and creative flexibility were improved in students' first language when learning a second language. This may be due to the cognitive practices involved in learning a new language, such as the willingness and adaptability to change required for language switching, or the rigorous practice and study involved in language learning, but the authors emphasized the need for more research to understand how this differs by age and gender, and the learning strategy.

Moreover, there is a flourishing literature on the effect of bilingualism on well-being. A recent scoping review by Müller, Howard, Wilson, Gibson & Katsos (2020) identified two main themes in the existing research, 'The effect of language proficiency on family relationships' and 'The acculturation of parents and children as mediated by language. Across studies, there was significant heterogeneity in definition of concepts of well-being and a diverse range of measures employed. Importantly, the studies identified suggest a positive link between minority language maintenance and family well-being, and a positive influence of *bilingualism*, rather than knowledge of only the home or only the majority language.

2.2.1 Identity

There is also increasing interest in exploring the complex links between language, identity and education. The inextricable relationship between language and identity, defined here as 'the way a person understands his or her relationship to the world, how that relationship is constructed across time and space, and how the person understands possibilities for the future' (Norton & Toohey 2011: 417), have

long been acknowledged. Language is, after all, the means through which we identify ourselves and are, in turn, identified by others.

It is similarly well-established that the process of education has a fundamental role to play in identity formation (e.g. Wenger 1998). Yet, it is important to recognise that schools are often incredibly linguistically diverse spaces. This is, in part, due to a global rise in migration and transnational mobility which can lead to a student body with a diverse range of home language backgrounds, but also due to the position of second or foreign language learning in the school curriculum. This has led to a growing interest in the influence of education and the school setting on the development of students' *multilingual* identity in particular (Forbes & Rutgers 2021). We use the term multilingual identity here as a broad, 'umbrella' term which encompasses individuals' explicit understandings of themselves as users of more than one language (Fisher, Evans, Forbes, Gayton & Liu 2020). This includes not only proficient bilinguals or multilinguals, but also 'monolingual' speakers who are beginning to learn a foreign language in school and who may have a relatively low level of proficiency in that language.

While this is a topic of relevance to all schools, bilingual schools constitute a particularly rich context in which to explore multilingual identity. Ceginskas (2010), for instance, considered the role of different school environments on students' negotiation of multilingual identity. She found that participants who attended local 'monolingual' schools were more likely to perceive their multilinguality as a 'problem', whereas participants who attended international schools, which had a more linguistically and culturally diverse community, experienced multilinguality as a positive phenomenon. Similar findings are reported by Howard, Katsos & Gibson (2019), for a different context, who found that bilingual autistic students felt more positively about their bilingualism in schools with a high population of EAL students. Focusing on younger learners, Dressler (2014) explored the linguistic identity of children aged 6-8 attending a German bilingual programme in Canada. She found that the children expressed their linguistic identity in terms of their expertise (i.e. their linguistic skills), affiliation (i.e. their identification or attachment to a language) and/or inheritance (i.e. their familial connection to a language). Her findings suggest that young children's emotional, social and educational development can be supported if schools and teachers understand and validate their linguistic identity. A series of studies based on a longitudinal project in secondary schools in England similarly highlight schools as key sites for the development of learners' linguistic and multilingual identities and suggest a link between students' multilingual identity and academic attainment more broadly (Fisher et al. 2020, Forbes, Evans, Fisher, Gayton, Liu & Rutgers 2021, Rutgers, Evans, Fisher, Forbes, Gayton & Liu under review).

3 Research Aims

There is a need for more research on bilingual education in different contexts given that much existing research involves students who have a certain amount of exposure to both languages outside of the classroom; for example, in the home (e.g.

Hispanic students in English-Spanish schools in the USA), in the wider community (e.g. road signs in Welsh), or via the media or internet (e.g. exposure to films, songs and websites in English). Less is known about the influence of bilingual education in contexts where students have little or no exposure to one language of instruction outside of the school setting. The dearth of studies in the context of England compared to the USA is also particularly striking (Woll & Wei 2019). In this paper we attempt to shed some light on this gap by researching a primary school in London which uses both the dominant societal language (English) and a modern foreign language (French) in everyday teaching. Bilingual schools such as this in England are very rare and so this represents a particularly rich context to research. Many of the students come from a monolingual English background but a third of the students are also recorded as speaking English as an additional language (EAL), i.e. they are 'exposed to a language at home that is known or believed to be other than English' (Department of Education 2020). However, there is no particularly sizeable group of students who use French as the home language. Moreover, we investigate whether the effect of bilingual education on English is similar for students from a monolingual or bilingual background, given a lack of research unto this question and widespread concerns that EAL students in particular may be affected negatively by being taught additional languages (Tinsley 2019, Murphy & Unthiah 2017).

To investigate any gains due to bilingual education that are not usually discussed, nor easily quantified, we also investigated student's formation of a multilingual identity, which has been shown to correlate with educational achievement in a wide range of topics. Specifically, we looked at how the school's bilingual environment fosters the development of such an identity.

Before we proceed to discuss the specific research questions and measures we used and the results, we report briefly the linguistic environment in the school.

3.1 The school's language environment and student profile

This study was conducted in a state-funded, bilingual English-French primary school in England. While the school is bilingual, most pupils are drawn from the local area and therefore have not necessarily had any prior exposure to French. In fact, the pupils come from a wide range of language backgrounds, with over half of the students who took part in this study recorded as speaking a language other than English in the home. The students who were classified as EAL were exposed to one of the following languages, Arabic, Catalan, Czech, Dari Persian, French, German, Gujarati, Hindi, Italian, Kannada, Malayalam, Marathi, Nepali, Romanian, Romani, Russian, Sindhi, Sinhala, Swedish, Tamil, Telugu, and Urdu. The most common home languages other than English represented in the school were Gujarati and Hindi. This linguistic profile of the students is representative of state-funded schools in large urban centres in England. The proportion of pupils recorded as having special educational needs or receiving free school meals were both below the national average.

One of the key aims of the school is to develop pupils' broad communication skills in both English and French through a multilingual and multicultural education. The curriculum is structured in such a way that children are exposed to French from Reception (i.e. their first year of schooling, age 4-5) and are gradually exposed to more teaching in French as they move through the school (for example, learning subjects such as art or physical education through the medium of French).

Specifically, in Reception French is taught in a communicative approach only, without any exposure to written form (reading or writing). This is in line with CLIL approaches where literacy in the non-dominant language is introduced after literacy in the dominant one. In Reception oral use of French is mainly for stories, games, and especially songs. There are three French-intensive types of activity. Every day, there is a half-hour session in a whole-class settings (up to 30 students), in a teacher-led activity with emphasis on learning through songs, games and stories, acted out or presented by audio-visual means, via students' imitation and repetition.

Once a week there is also an approximately 20 minutes session with a native speaker of French in groups of 6-7 students. This starts as 10 mins session a day at the beginning of the year in Reception and grows to 20 and then up to 30 mins a day by the end of the academic year. This is again a games-oriented activity, but the children actively produce and understand French in order to communicate and they receive individualised feedback on their production and understanding of all aspects of language, including grammar and pronunciation. The games are topic-based, e.g. on colours, shapes, numbers, but also on culture, such as Armistice Day, Christmas and other traditions. The vocabulary used builds upon the songs and stories used in the whole-class session.

Finally, there is an approx. 3-hour session once a week where students are directed and supported while doing activities in Art, Design and Technology using in French. The language environment in these sessions is in French (for example children are guided and supported by staff speaking French), but the children use whichever language comes to them naturally to ask questions or interact with their peers. Beyond these three targeted activities, school staff who are native speakers or highly proficient in French also use French within the wider school environment, such as at assemblies and at school lunch-time.

In Year 1 (age 5-6) there are three types of French-intensive sessions within the week. There is a half-hour session in a whole-class settings (up to 30 students), which is still song- and story-based as in Reception, but students are now are exposed to written form (for example there are words and formulaic sentences presented on a PowerPoint with additional visual support). Pronunciation, grammar, phonics and vocabulary are taught. As in Reception there is also an approx. 3-hour session once a week where students are directed and supported while doing activities in Art, Design and Technology using in French. The language environment in these sessions is in French. Finally, students are introduced into immersion-style learning via the Content and Language Integrated approach, in Geography, Physical Education and Music. The whole school environment also makes use of French by staff who are native or highly proficient speakers of French.

To summarize, in the early years this school has a combination of an immersion approach to language learning, where students are exposed to French via songs, stories and games, and increasingly a CLIL approach, where some subjects are taught in French.

3.2 Research questions

Given widespread concerns that the teaching of an additional language at bilingual schools detracts from progress with the dominant societal language (Tinsley 2019), especially when this language is not one that students are systematically exposed to outside the school setting, our first research question was whether students at this English-French primary school in England achieve progress with English that is commensurate to that of their peers in non-bilingual education settings. To explore this in a way that minimizes interference by subjective judgement, we used widely employed psychometric tests that have been standardised at a national level. These tests do not report if the students that have taken part in the standardisation process were attending monolingual or bilingual schools. However, given the almost complete absence of bilingual primary schools in England, it is safe to assume that the norms of these tests represent a student-population that is educated monolingually in English. An additional research question was whether progress in the dominant societal language was equally robust for students who were already exposed to another language as their home language, as for monolingual students. This was motivated by considerations that language learning might be an exceptional challenge for students who were already exposed to an additional language outside school (Tinsley 2019, Murphy & Unthiah 2017).

Students were assessed in two time-points, one towards the beginning of the academic year and one towards the end. This allowed us to estimate not only the students' level of proficiency at a given time, but also the progress achieved after one academic year.

Moving beyond the impact of bilingual education on language, we also investigated how the bilingual environment of the school was contributing to the formation of the students' multilingual identity. A multilingual identity has recently been associated with wider gains in academic achievement, and is potentially an important advantage that students in a bilingual school may enjoy (Fisher et al. 2020, Forbes et al. 2021, Rutgers et al. under review). As with the research question above, we explored this hypothesis with reference to both monolingual-English and EAL students.

Below we report the quantitative and qualitative parts of our research, corresponding to the progress with English and the student's multilingual identity, in separate sections.

4 English Skills

4.1 Participants

120 students, 60 in Reception and 60 in Year-1 took part in this study. 57 of the students were female (two missing values for gender) and 66 had English as an Additional Language. The Reception students were on average 55 months old (range 49–61 months) at the first time of testing and 63 months old (range 57-69 months) at the second time of testing. The Year-1 students were on average 68 months old (range 61–73 months) at the first time of testing and 75 months old (range 68-81 months) at the second time of testing.

4.2 Methods

To focus on the question of student progress with the dominant language, and whether teaching in an additional language detracts from it, we administered three widely used standardised tests for English language skills, the CELF-2 Preschool Word Structures subcomponent, four components of the Phonological Awareness Battery, and the British Picture Vocabulary Scales. Each of these tests relate to key abilities that are important for linguistic development (such as grammar and vocabulary) as well as for across-the-board educational skills such as reading and writing. Specifically, the British Picture Vocabulary Scale-3 (BPVS; Dunn, Dunn, Sewell, Styles, Brzyska, Shamsan & Burge 2009) was used to test receptive vocabulary at single word level. The participant is shown four pictures and required to select one that matches a word spoken by the tester. Standard scores are calculated with a mean of 100 and a standard deviation of 15. Participants scoring between 86 and 114 are considered typical for their age. It is recommended for use with children aged from 3;0-16;0. BPVS scores are known to correlate highly with across-the-board educational achievement in UK schools (Spencer, Clegg, Stackhouse & Rush 2017).

The Clinical Evaluation of Language Fundamentals-2 Preschool (Wiig, Secord & Semel 2006), Word Structures sub-component was used to evaluate the student's ability to (a) apply word structure rules (morphology) to mark inflections, derivations, and to make superlative and comparative comparisons; (b) to derive new words from base forms, and (c) to select and use appropriate pronouns to refer to people, objects, time, and to express possessive relationships. Students are asked to complete a sentence that pertains to an illustration using the targeted word structures. This subtest has mean of 10 and a standard deviation of 3. Participants scoring between 7 and 13 are considered to be typical for their chronological age. Knowledge and use of morphology to modify or extend word meanings are important as these skills relate directly to the early and later acquisition of literacy (Larsen & Nippold 2007).

The Phonological Awareness Battery-2 (Gibbs & Dodman 2014) comprises of a number of standardised tests, of which the following were selected: Alliteration Test – isolating the initial sounds in single syllable words, Rhyme Test – identifying the rhyme in single syllable words and the Phoneme Segmentation Tests - seg-

menting single syllable words and then synthesizing the segments to provide new words or word combinations. These tests are strongly correlated with later reading ability. The test has an average of 100 with a standard deviation of 15. Participants scoring between 86 and 114 are considered to be typical for their chronological age.

A language and background questionnaire was filled in by students' parents and guardians, with information about socioeconomic status and the languages used at home.

4.3 Procedure

Ethical Approval was granted from the School of Arts Humanities and the Faculty of Education of the University of Cambridge. Students were tested individually in a quiet space at the school. The order of administration of the tests was counterbalanced. Students were tested at two time points. The first, T1, was within 3 months of the beginning of the academic year. The second, T2, was within 2 months before the end of the academic year.

4.4 Results

In Appendices A and B we report the raw score and the standardised score (SS) for the various assessments of English skills at T1 and T2, by monolingual or EAL status and by year group (Reception or Year-1). For ease of exposition, in the main text of this article we present and discuss the data in simpler steps. Starting with T1, Table 1 below presents the raw score and the standardised score (SS) for the various assessments of English skills at T1 for all students that took part in the study.

	N	Mean	Min.	Max.	Std. Dev.
T1_CELF_WS	114	17.0	2	24	5.2
T1_CELF_WS_SS	102	10.6	2	19	4.0
T1_PhAB_Allit	117	5.4	0	10	3.4
T1_PhAB_Allit_SS	116	98.9	75	110	10.2
T1_PhAB_Phone_Seg	117	5.2	0	12	4.7
T1_PhAB_Phone_Seg_SS	116	97.4	84	110	9.2
T1_PhAB_Rhyme	117	6.4	0	10	2.8
T1_PhAB_Rhyme_SS	116	97.7	69	110	11.8
T1_BPVS	108	67.2	12	117	18.6
T1_BPVS_SS	106	95.0	9	121	15.5

Table 1   Raw score and the standardised score (SS) for the various assessments of English skills at T1 for all students at T1.

Looking at the standard scores for each test, children performed within 1 standard deviation. In fact, they scored exceptionally close to the standardised average score of each test (10 for CELF_WS, 100 for the PhAB subtests and the BPVS). This was also the case for the standard scores for each year group and language stats separately (see Appendix A).

Table 2 below presents the raw score and the standardised score (SS) for the various assessments of English skills at T1 for the monolingual and EAL students separately.

T1 - Descriptive Statistics						
Lang_Status_Binary		**N**	**Mean**	**Min.**	**Max.**	**Std. Dev.**
Monolingual	T1_CELF_WS	54	17.2	5	24	5.3
	T1_CELF_WS_SS	50	11.1	3	19	3.9
	T1_PhAB_Allit	54	5.4	0	10	3.3
	T1_PhAB_Allit_SS	54	98.4	78	110	10.2
	T1_PhAB_Phone_Seg	54	4.9	0	12	4.2
	T1_PhAB_Phone_Seg_SS	54	96.3	84	110	8.7
	T1_PhAB_Rhyme	54	6.6	0	10	2.9
	T1_PhAB_Rhyme_SS	54	97.9	69	110	12.1
	T1_BPVS	54	17.2	5	24	5.3
	T1_BPVS_SS	50	11.1	3	19	3.9
EAL	T1_CELF_WS	60	16.8	2	24	5.2
	T1_CELF_WS_SS	52	10.1	2	19	4.1
	T1_PhAB_Allit	63	5.4	0	10	3.6
	T1_PhAB_Allit_SS	62	99.3	75	110	10.2
	T1_PhAB_Phone_Seg	63	5.5	0	12	5.0
	T1_PhAB_Phone_Seg_SS	62	98.3	84	110	9.5
	T1_PhAB_Rhyme	63	6.2	0	10	2.8
	T1_PhAB_Rhyme_SS	62	97.5	69	110	11.6
	T1_BPVS	60	16.8	2	24	5.2
	T1_BPVS_SS	52	10.1	2	19	4.1

Table 2 Raw score and the standardised score (SS) for the various assessments of English skills at T1 for all students by language status (monolingual vs EAL).

Again, we note that standard scores are well within the typical range for each test for both groups. Numerically, the monolingual students outperform the EAL ones in terms of standard scores in two tests (CELF_WS and PhAB_Rhyme) while the EAL students outperform the monolingual ones in the other three tests. These

differences are small, and independent-sample t-tests reveal no significant differences between the groups (all *t* scores lower than 1.19 and all *ps* > 0.2).

Appendix B reports raw score and the standardised score (SS) for the various assessments of English skills at T2, by language status (monolingual or EAL) and year group (Reception or Year-1). For ease of exposition, Table 3 below presents the raw score and the standardised score (SS) for the various assessments of English skills at T2 for all students, ignoring language status and year-group.

	N	Mean	Min.	Max.	Std. Dev.
T2_CELF_WS	115	19.2	6	24	3.9
T2_CELF_WS_SS	60	10.5	3	19	3.7
T2_PhAB_Allit	116	6.9	0	10	3.2
T2_PhAB_Allit_SS	110	101.3	70	196	14.4
T2_PhAB_Phone_Seg	116	7.6	0	12	4.3
T2_PhAB_Phone_Seg_SS	112	99.6	72	110	11.3
T2_PhaB_Rhyme	115	7.9	0	10	2.9
T2_PhaB_Rhyme_SS	109	101.3	69	110	12.2
T2_BPVS	115	83.4	25	130	17.8
T2_BPVS_SS	106	99.4	72	125	11.4

Table 3   Raw score and the standardised score (SS) for the various assessments of English skills for all students at T2.

First of all, we note that for one particular test, CELF_WS, it was not possible to convert the raw scores into standard scores because many students at T2 had exceeded the age-range for which the publishers make conversion tables available. Therefore, the standard score findings from this particular measure in T2 should be treated with caution. Nevertheless, in T2 as in T1, looking at the standard scores for each test, children performed well within 1 standard deviation and in fact exceptionally close to the standardised average score of each test. This was also the case for the standard scores for each year group separately (see Appendix B).

Table 4 below presents the raw score and the standardised score (SS) for the various assessments of English skills at T2 for the monolingual and EAL students separately.

We note that all standard scores are well within the typical range for each test for both groups. Numerically, in T2 the monolingual students outperform the EAL ones in terms of standard scores in one test (CELF_WS) while the EAL students outperform the monolingual ones in the other four tests. These differences are small, and independent-sample t-tests reveal no significant differences between the groups (all *t* scores lower than .71 and all *ps* > 0.4).

Finally, Table 5 below presents the difference in raw scores between T2 and T1 for each language group. Raw scores were used because of the lack of full data for all

T2 - Descriptive Statistics						
Lang_Status_Binary		**N**	**Mean**	**Min**	**Max**	**Std. Dev.**
Monolingual	T2_CELF_WS	53	19.4	6	24	3.8
	T2_CELF_WS_SS	27	10.8	3	19	4.0
	T2_PhAB_Allit	54	6.9	1	10	3.2
	T2_PhAB_Allit_SS	53	100.2	71	110	11.2
	T2_PhAB_Phone_Seg	54	7.5	0	12	4.5
	T2_PhAB_Phone_Seg_SS	54	99.0	72	110	11.9
	T2_PhaB_Rhyme	53	7.8	2	10	2.6
	T2_PhaB_Rhyme_SS	52	101.1	76	110	11.1
	T2_BPVS	54	83.4	25	115	17.6
	T2_BPVS_SS	51	99.0	77	120	10.5
EAL	T2_CELF_WS	62	19.0	8	24	4.0
	T2_CELF_WS_SS	33	10.3	3	17	3.5
	T2_PhAB_Allit	62	6.9	0	10	3.3
	T2_PhAB_Allit_SS	57	102.2	70	196	16.8
	T2_PhAB_Phone_Seg	62	7.7	0	12	4.2
	T2_PhAB_Phone_Seg_SS	58	100.1	73	110	10.8
	T2_PhaB_Rhyme	62	7.9	0	10	3.1
	T2_PhaB_Rhyme_SS	57	101.4	69	110	13.3
	T2_BPVS	61	83.5	38	130	18.1
	T2_BPVS_SS	55	99.8	72	125	12.3

Table 4   Raw score and the standardised score (SS) for the various assessments of English skills at T1 for students from both Years by language status (monolingual vs EAL) at T2.

tests in terms of standard scores, as mentioned above. The difference score is not an indication of a student's actual skills but of how much they have progressed within the period that has lapsed between T1 and T2. Due to age increase and the positive effect of schooling, it is expected that difference scores will be positive, with T2 higher than T1 overall. Of particular interest is the trajectory of the monolingual and EAL groups, for which it might be hypothesized that there would be differences in progress, esp if the bilingual curriculum is harder for the EAL students than the monolingual ones (Tinsley 2019, Murphy & Unthiah 2017).

We can see that all Difference scores have a positive sign, indicating that children achieved higher scores as the academic year unfolded and they grew older. The Difference scores between T2 and T1 were numerically higher for monolingual

Reception & Year-1						
Descriptive Statistics						
Lang_Status_Binary		N	Mean	Minimum	Maximum	Std. Dev.
Monolingual	Diff_CELF_WS	52	2.2	-3	10	3.3
	Diff_PhAB_Allit	53	1.5	-7	6	2.5
	Diff_PhAB_Phone_Segment	53	2.4	-11	11	5.5
	Diff_PhAB_Rhyme	52	1.3	-7	5	1.8
	Diff_BPVS	52	16.3	-18	42	10.8
EAL	Diff_CELF_WS	58	2.4	-3	10	3.1
	Diff_PhAB_Allit	61	1.6	-3	10	2.6
	Diff_PhAB_Phone_Segment	61	2.1	-10	11	4.6
	Diff_PhAB_Rhyme	61	1.8	-4	9	2.5
	Diff_BPVS	55	17.2	-73	63	20.7

Table 5 Difference in raw scores between T2 and T1 (T2 raw score average – T1 raw score average) for all students by language status (monolingual vs EAL).

students compared to EAL for one test (PhAB_Phone_Seg), and higher for EAL compared to monolingual for the other four tests. These differences were small, and independent-sample t-tests reveal no significant differences between the groups (all t scores lower than 1.27 and all $ps > 0.2$).

We now turn to the qualitative aspect of this study.

5 Multilingual Identity

5.1 Research design

Given the individual, socially-constructed nature of identity, a qualitative case study approach was adopted for this part of the study, where the overall case is the school and the participants are considered as individual, 'embedded' cases. A case study allows for exploration of 'a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident' (Yin 2003: 13) (Yin, 2003, p.13) which is particularly pertinent here given our interest in how the context of the bilingual primary school may influence students' multilingual identity negotiation.

5.2 Participants

To allow for an in-depth exploration of identity, six Year 1 students were selected for this part of the study using a purposive sampling strategy. Given our interest in multilingual identity we sought to identify students who had a diverse range of

experiences of and exposure to languages. While this diversity was important for providing insights into the research question at the heart of this part of the study, it is also important to acknowledge that the students selected remain representative of the wider student community. Two students were therefore selected to represent each of the following linguistic profiles (see Table 6[1]):

i. English at home: Students who speak English as their primary home language and who have little or no exposure to French outside of the school. This reflects the experiences of a large part of the student body.

ii. French at home: Students with familial connections to the French language and who therefore have some exposure to French outside of the school. While such students represent only a small number of students currently enrolled at the school, they nonetheless form a crucial group to consider in relation to identity.

iii. Other language at home: Students who speak a language other than English or French in the home. These students are recorded by the school as EAL and come from a wide range of first language backgrounds as outlined above. They represent a significant group of the student body.

Group	Pseudonym	Heritage	Home language(s)
English at home	William	Ugandan	English
	Emily	Irish, English	English
French at home	Chloe	French, British	French, English
	Jack	French, British	French, English
Other language at home	Ben	Indian	Punjabi, English
	Tanya	Egyptian, Slovakian	Arabic, Slovak, English

Table 6   Overview of participants.

5.3 Methods

It is also important to acknowledge that identity itself is an abstract concept and, as such, is complex to research, particularly with young students. It was therefore important to draw on a range of methods to better understand the children's perceptions of the different languages in their repertoire and their multilingual identity more broadly.

Visual tasks were used which consisted of a language portrait silhouette task (LPS) and a drawing task. The LPS, used by Dressler (2014), involves participants

---

[1]   In order to further preserve anonymity some specific details about the heritage and home language(s) of the students have been changed.

being given an outline of a person and asked to colour their languages and then to explain this. What is of interest here is not only the number of colours or languages represented, but also where these are placed on the body (e.g. children may associate a particular language more with their head or their heart). This can provide valuable insights into their (perhaps subconscious) connections to languages. In the drawing task, the students were asked to draw themselves in school when using French and when using English. Such methods have similarly been used successfully with younger learners to 'examine the skills, abilities or emotions of an individual' (Kalaja, Alanen & Dufva 2008: 187) and to 'help show how children make sense of the world' (Melo-Pfiefer 2015: 201).

These visual tasks were then followed by semi-structured interviews conducted individually with each of the participants lasting approximately 30 minutes. The interviews included some questions about the visual tasks and also more general questions about the students' exposure to language(s) in school and at home, their views about languages and how they felt in relation to each of the languages in their repertoire. These final questions were facilitated by a visual scale with stickers where the students were asked to indicate how 'English', 'French' etc. they felt. All questions were asked in an age-appropriate manner and students were given the option of using English or French during the interview (only Jack chose to use French). A qualitative thematic coding approach was employed (Robson & McCartan 2016) guided by the key themes of language expertise, affiliation and heritage employed by Dressler (2014).

5.4 Results

While we do not offer an in-depth reporting of all of the qualitative data on a case-by-case basis, this section will focus on identifying the key themes which emerged with a view to gaining insights into the potential role of the bilingual school in developing students' multilingual identities.

5.4.1 Expertise

The most prominent theme to emerge from the study was the role of language expertise; this played an important role in students' willingness to associate their language(s) with their identity. Expertise emerged particularly during the interviews in the references students made to 'knowing' or 'learning' a language. For example, in his LPS, William used three colours to represent English, Swahili and French (see Figure 1). Yet, when explaining this he was quick to distinguish between *knowing* English and *still learning* Swahili and French. It is also noteworthy that even though he had Ugandan heritage, French as a 'foreign' language learned in school was much more strongly represented in the LPS. This is just one indication of the potential for languages used in school to influence identity.

Interestingly, it was William and Emily, the two participants in the 'English at home' group, who made the strongest distinctions between 'learning' and 'knowing' and, in fact, none of the participants in the other groups made any reference to

Figure 1 William's Language Portrait Silhouette (LPS) task.

the process of 'learning' particular languages in their repertoire. This may represent a slight hesitance on the part of William and Emily to fully 'claim' an identity as a speaker or user of French until they acquire a higher level of proficiency. During the interviews, Ben, one of the students in the 'other language at home' group, similarly made an explicit connection between expertise and identity when he explained that he placed his sticker at the 'not very Indian' end of the scale 'because I don't speak loads'.

Yet, there was similarly recognition among the participants that identity is not static, but dynamic and subject to change. This was particularly evident in comments made by four of the participants (from all three groups) that they expected to feel more French as they became older and, by extension, as they acquired a greater level of proficiency in the language. This is reflected in the following extract from Emily:

> Interviewer: When you grow up, do you think you will feel a bit more French, or English, or Irish?
> Emily: I'll feel a bit more bilingual.

> Interviewer: Bilingual? In which languages?
> Emily: All of them.
> Interviewer: All of them? So even trilingual, with three languages?
> Emily: Sure.

What emerged strongly, therefore, is that the students clearly associated expertise with identity and there seemed to be an implicit expectation among the students (even those in the 'English at home' group) that they would become increasingly multilingual and more willing to claim a 'French' identity as they got older and learned more of the language. Given that the majority of the students were only exposed to learning French in school, the bilingual school context therefore emerged as an important facilitator of this change.

5.4.2 Affiliation

Students' affiliation to (or evaluations of) languages similarly emerged as an important part of their multilingual identity, albeit to a lesser extent than expertise. This mostly emerged in the interviews in relation to students' attitudes towards particular languages (i.e. their likes and dislikes) and, understandably, these attitudes varied more across individuals than across the three language background groups. In Jack's interview, for example, he mentioned liking French and not liking English eight times and used this as his explanation for identifying himself as more French than English. There was also evidence of fluctuation in views even within individual students. Tanya, for example, expressed liking French at the beginning of her interview, but later said that she did not like French. It subsequently transpired that her French teacher had recently told off her class because they hadn't been listening which may account for this shift. This highlights the importance not only of the school as a broader context, but also of the individuals, interactions and events which take place within that context in shaping students' attitudes.

The drawing tasks also provided useful insights into students' perceptions of and affiliations to the two languages of instruction used in school. They were each asked to draw themselves in school when using English and when using French. Interestingly, the two pictures were very similar for most of the students and for William and Tanya they were the same for both languages. However, there were some differences which provide useful insights into students' perceptions. Chloe, for example, depicted a more 'teacher-led' French class when the students are looking at the teacher who is standing by the whiteboard, while her depiction of English is sitting at a table with a friend, perhaps suggesting that she associates English more strongly with peer socialisation (see Figure 2).

Overall, affiliation and attitudes towards languages emerged as important in terms of identity and also strongly connected to expertise. Yet, there was substantial variation in responses highlighting the role of individual differences.

Draw yourself in school when using French

Dessine- toi à l'école en français
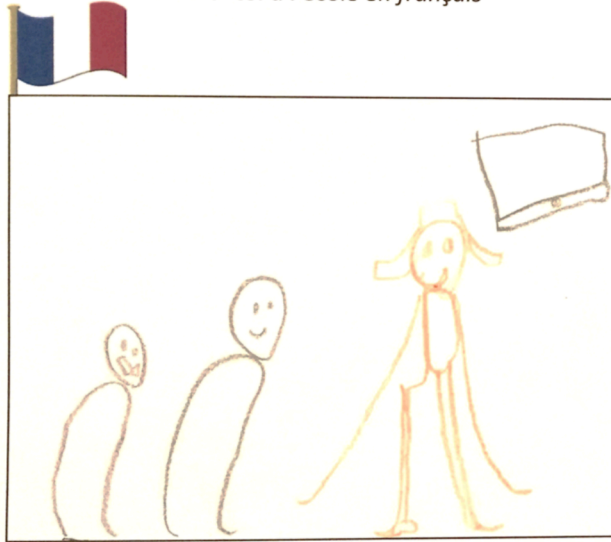
Draw yourself in school when using English

Dessine-toi à l'école en anglais

Figure 2 Chloe's drawing task.

5.4.3 Heritage

Heritage here refers to students' family background and their connections to wider linguistic communities outside of the school. This theme emerged most strongly in the interviews with the two students who spoke a language other than English or French at home. Both Ben and Tanya expressed strong connections with their home languages, yet, when it came to identifying with a particular nationality, they associated themselves more strongly with English due, in part, to this being considered by them as their dominant language. Interestingly, while William made it clear that Swahili was part of his heritage, as shown above, he considered himself to be more French than Ugandan as he felt he spoke French better. This shows the interconnection between heritage and expertise.

The two students in the 'French at home' group positioned themselves very differently in relation to their heritage. Both had one French-speaking and one English-speaking parent, but while Jack identified strongly as French, Chloe identified as very English. Based on the data collected we are unable to fully explain this difference, but what seemed to emerge was that heritage alone was not enough for the children to identify themselves in a particular way; expertise and affiliation or attitudes also played an important role. This further highlights the importance of the school context; it is not possible (nor would it be appropriate) for schools to attempt to 'shift' students' heritage or views about their heritage, but schools do have the potential to shift students' linguistic expertise and to influence their attitudes towards languages. This can be powerful in helping them to develop a stronger multilingual identity.

6 General Discussion

In this study we investigated the effects of attending a bilingual curriculum using the dominant societal language and a language which students are not widely exposed to outside of school. We focussed on specific state-funded primary school in an urban setting, which is a rarity in England in teaching both in English and in French from Reception onward. Motivated by concerns and the lack of data from bilingual education of this type in England (Woll & Wei 2019), we focussed on two issues. First, on language skills in the dominant societal language, given the reported concerns by parents and teachers that exposure to an additional language at school, for a substantial amount of time and from an early age, may negatively impact progress with English (Tinsley 2019, Murphy & Unthiah 2017). Second, we explored one dimension of positive effects from a bilingual education, namely the students' formation of a multilingual identity.

In the quantitative part we assessed Reception and Year-1 students' language skills in five foundational aspects of language, vocabulary, morphology and phonological awareness (three sub-tests) in two points in time, once at the beginning and once towards the end of the academic year. We found that for every assessment and at any point in time, students were performing well within the typical range for their age, compared to norms that have been standardised in England on

monolingual-education schools. This finding suggest no evidence, from this particular study, that bilingual educated students may not achieve adequate progress in English. A closer look at the results taking into account the students' language background at home (monolingual or EAL) revealed that both groups were always performing within the typical range. A series of independent-sample t-tests revealed that there was no difference in scores between monolingual and EAL students at any point. Interestingly, EAL students were numerically outperforming their monolingual peers in four out of five assessments, when it came to measuring the progress they have made during the academic year. However, none of these differences reached significance either. Overall, the conclusion from the quantitative aspect of this study is that there is no evidence that students' language skills in English have been negatively impacted in any way by virtue of attending a bilingual education.

Of course, in terms of language development, the main gain from bilingual education is the learning of an additional language, in this case French. Teacher reports suggest that by the end of Year-1 students have achieved some basic communicative competence in French and can recognised letters and accents and read simple words. The school's expectation is that by Years 5   6 children will have strong academic literacy and competence in both English and French. Numerous other studies have emphasized the gains for students from learning a foreign language, including in further education and professional development. Indicatively, there is evidence for a positive impact of language learning on academic achievement (Woll & Wei 2019). In their comprehensive review of the literature, around 90% of studies looking at the effect learning a language has on achievement in other subjects of the school curriculum reported a positive impact, across English language learning, literacy, maths and science. This seems to be the case for language learners from a variety of countries, with different language combinations, and from varied socio-economic backgrounds.

In the qualitative part of this study, we collected data from six Year 1 students with a range of linguistic profiles to explore the potential influence of the bilingual school environment on their construction of a multilingual identity. In line with Dressler (2014), findings suggested strong connections in particular between students' expertise in a particular language (or their perceptions of such expertise) and their willingness to claim a multilingual identity. Their affiliation and general attitude towards the languages within their wider linguistic repertoire similarly played an important role here. In line with findings from Ceginskas (2010), the school environment here emerged as key in creating a sense of multilinguality among students which not only influenced their current views, but also seemed to shape their future projections of themselves multilinguals. Developing a multilingual identity is not only important for influencing students' attitudes towards and overall engagement with language learning (Forbes et al. 2021), but there is also evidence of a further link between students' multilingual identity and academic attainment more broadly (Rutgers et al. under review). It seems, therefore, that the bilingual school environment may constitute a key site for the development of multilingual identity.

In conclusion, in this article we reported the first stage of a mixed-methods longitudinal study of the effects of a bilingual education in a UK primary school context. Our results do not support any concerns that a bilingual education may negatively hinder students' development in English, while it raised interesting possibilities for a positive impact in terms of multilingual identity.

REFERENCES

American Academy of Arts and Sciences. 2017. America's Languages: Investing in Language Education for the 21st Century. Tech. rep. American Academy of Arts and Sciences Cambridge, MA. Retrieved from: https://www.amacad.org/multimedia/pdfs/publications/researchpapers monographs/language/Commission-on-Language-Learning_Americas-Languages.pdf.

Barac, R., E. Bialystok, D. C. Castro & M. Sanchez. 2014. The Cognitive Development of Young Dual Language Learners. *Early Childhood Research Quarterly* 29. doi:10.1016/j.ecresq.2014.02.003.

Bialystok, E. 2018. Bilingual education for young children: review of the effects and consequences. *International Journal of Bilingual Education and Bilingualism* 21(6). doi:10.1080/13670050.2016.1203859.

Bialystok, E. & R. Barac. 2012. Emerging Bilingualism: Dissociating Advantages for Metalinguistic Awareness and Executive Control. *Cognition* 122. doi:10.1016/j.cognition.2011.08.003.

Ceginskas, V. 2010. Being the "strange one" or "like everybody else": school education and the negotiation of multilingual identity. *International Journal of Multilingualism* 7. doi:10.1080/14790711003660476.

Cooper, R. L. 1989. *Language Planning and Social Change.* Cambridge, UK: Cambridge University Press.

Coyle, D. 2007. Content and language integrated learning: towards a connected research agenda for CLIL pedagogies. *International Journal of Bilingual Education and Bilingualism* 46(4).

Coyle, D., P. Hood & D. Marsh. 2010. *Content and Language Integrated Learning.* Cambridge, UK: Cambridge University Press.

Dalton-Puffer, C. 2011. Content-and-language integrated learning: from practice to principles? *Annual Review of Applied Linguistics* 31.

Department of Education. 2020. Schools, pupils and their characteristics. Tech. rep. Department of Education London, UK. Retrieved from: https://explore-education-statistics.service.gov.uk/find-statistics/school-pupils-and-their-characteristics.

Dressler, R. 2014. In the classroom exploring linguistic identity in young multilingual learners. *TESL Canada Journal* 32(1).

Dunn, L., D. Dunn, J. Sewell, B. Styles, B. Brzyska, Y. Shamsan & B. Burge. 2009. *The British picture vocabulary scale.* London: GL Assessment 3rd edn.

Fisher, L., M. Evans, K. Forbes, A. Gayton & Y. Liu. 2020. Participative multilingual identity construction in the languages classroom: A multi-

theoretical conceptualisation. *International Journal of Multilingualism* 14(4). doi:10.1080/14790718.2018.1524896.

Forbes, K., M. Evans, L. Fisher, A. Gayton, Y. Liu & D. Rutgers. 2021. Developing a multilingual identity in the languages classroom: the influence of an identity-based pedagogical intervention. *The Language Learning Journal* doi:10.1080/09571736.2021.1906733.

Forbes, K. & D. Rutgers. 2021. Multilingual identity in education [Guest editorial]. *The Language Learning Journal* doi:10.1080/09571736.2021.1918850.

Genesee, F. 2004. What Do We Know About Bilingual Education for Majority Language Students. In T. K. Bhatia & W. Ritchie (eds.), *Handbook of Bilingualism and Multiculturalism*, 547–576. Malden, MA: Blackwell.

Genesee, F., K. Lindholm-Leary, W. M. Saunders & C. Donna. 2006. *Educating English Language Learners: A Synthesis of Research Evidence.* New York: Cambridge University Press.

Gibbs, S. & S. Dodman. 2014. *Phonological Assessment Battery (PhAB-2).* GL Education 2nd edn.

Howard, K., N. Katsos & J. Gibson. 2019. The School Experiences of Bilingual Children on the Autism Spectrum: An Interpretative Phenomenological Analysis. *Research in Developmental Disabilities* 87. 9–20.

Kalaja, P., R. Alanen & H. Dufva. 2008. Self-portraits of EFL learners: Finnish students draw and tell. In P. Kalaja, V. Menezes & A. M. F. Barcelos (eds.), *Narratives of learning and teaching EFL*, 186–198. Basingstoke: Palgrave Macmillan.

Larsen, J. & M. Nippold. 2007. Morphological analysis in school-age children: dynamic assessment of a word learning strategy. *Language, speech, and hearing services in schools* 38(3). 201–212.

Lindholm-Leary, K. & N. Block. 2010. Achievement in Predominantly Low SES/Hispanic Dual Language Schools. *International Journal of Bilingual Education and Bilingualism* 13. 43–60. doi:10.1080/13670050902777546.

McGraw Hill Education. 2017. English Learner Education Report. Tech. rep. McGraw Hill Education. See http://s3.amazonaws.com/ecommerce-prod.mheducation.com/unitas/school/explore/el-survey-results-2017.pdf.

Melo-Pfiefer, S. 2015. Multilingual awareness and heritage language education: Children's multimodal representations of their multilingualism. *Language Awareness* 24(3). 197–215. doi:10.1080/09658416.2015.1072208.

Montanari, S. 2013. A Case Study of Bi-literacy Development among Children Enrolled in an Italian-English Dual Language Program in Southern California. *International Journal of Bilingual Education and Bilingualism* 17. 509–525. doi:10.1080/13670050.2013.833892.

Müller, L. M., K. Howard, E. Wilson, J. Gibson & N. Katsos. 2020. Bilingualism in the family and child well-being: a scoping review. *International Journal of Bilingualism* 24(5–6). 1049–1070.

Murphy, V. & A. Unthiah. 2017. A systematic review of intervention research examining English language and literacy development in children with English as an Additional Language (EAL). Tech. rep. University of Oxford and Department of Education. Retrieved from

https://mk0bellfoundatiw1chu.kinstacdn.com/app/uploads/2017/05/EALachievementStrand-1.pdf.

Norton, B. & K. Toohey. 2011. Identity, language learning, and social change. *Language Teaching* 44(4). 412–446. doi:10.1017/S0261444811000309.

Padilla, A. M., L. Fan, X. Xu & D. Silva. 2013. A Mandarin/English Two-way Immersion Program: Language Proficiency and Academic Achievement. *Foreign Language Annals* 46. 661–679. doi:10.1111/flan.12060.

Robson, C. & K. McCartan. 2016. *Real world research: a resource for users of social research methods in applied settings*. Chichester: John Wiley & Sons 4th edn.

Rolstad, K., K. Mahoney & G. V. Glass. 2005. The big picture: A meta-analysis of program effectiveness research on English language learners. *Educational Policy* 19(4). 572–594. https://journals.sagepub.com/doi/abs/10.1177/0895904805278067.

Rutgers, D., M. Evans, L. Fisher, K. Forbes, A. Gayton & Y. Liu. under review.

Spencer, S., J. Clegg, J. Stackhouse & R. Rush. 2017. Contribution of spoken language and socio-economic background to adolescents' educational achievement at age 16 years. *International Journal of Language and Communication Disorders* 52(2). 184–196.

Steele, J. L., R. O. Slater, G. Zamarro, T. Miller, J. Li, S. Burkhauser & M. Bacon. 2017. Effects of dual-language immersion programs on student achievement: Evidence from lottery data. *American Educational Research Journal* 54(1S). 282S–306S. doi:10.3102/ 0002831216634463.

Ter Kulie, H., M. Veldhuis, S. C. van Veen & J. M. Wicherts. 2010. Bilingual education, metalinguistic awareness, and the understanding of an unknown language. *Bilingualism: Language and Cognition* 14(2). 233–242. https://www-cambridge-org.ezp.lib.cam.ac.uk/core/journals/bilingualism-language-and-cognition/article/bilingual-education-metalinguistic-awareness-and-the-understanding-of-an-unknown-language/D70C2F6A92EBB5855C8AA36B3C415E76.

Tinsley, T. 2019. British Council Language Trends 2019: Language Teaching in Primary and Secondary Schools in England Survey Report. Tech. rep. British Council. Retrieved from https://www.britishcouncil.org/sites/default/files/language-trends-2019.pdf.

Wenger, E. 1998. *Communities of practice: Learning, meaning, identity*. Cambridge: Cambridge University Press.

Wiig, E. H., W. Secord & E. Semel. 2006. Clinical evaluation of language fundamentals - preschool. Second UK Edition (CELF-PRESCHOOL:2). Pearson Assessment.

Woll, B. & L. Wei. 2019. The Cognitive Benefits of Language Learning: Broadening the perspectives. Tech. rep. British Academy. Retrieved from https://www.thebritishacademy.ac.uk/publications/cognitive-benefits-language-learning-perspectives-report/.

Wright, W. E. 2013. Bilingual education. In T. K. Bhatia & W. C. Ritchie (eds.), *The Handbook of Bilingualism and Multilingualism*, 598–623. Chichester: Blackwell Publishing Ltd.

Yin, R. K. 2003. *Case Study Research: Design and Methods.* London: Sage Publications.

Napoleon Katsos
The University of Cambridge
nk248@cam.ac.uk

Jenny Gibson
University of Cambridge
jlg53@cam.ac.uk

Isabelle Lorge
University of Cambridge
isabelle.lorge@outlook.com

Lisa-Maria Müller
University of Cambridge
Chartered College of Teaching
lmuller@chartered.college

Özge Öztürk
University of Cambridge
University of Sheffield
o.ozturk@sheffield.ac.uk

Julie Reynolds
University of Cambridge
jpjr3@cam.ac.uk

Elspeth Wilson
University of Cambridge
ep321@cam.ac.uk

Karen Forbes
University of Cambridge
kf289@cam.ac.uk

Appendix A

T1 - Descriptive Statistics							
Lang_Status_Binary	**Year**		**N**	**Mean**	**Min.**	**Max.**	**Std. Dev.**
Monolingual	0	T1_CELF_WS_strict	25	14.8	5	23	5.7
		T1_CELF_WS_strict_SS	25	10.1	3	17	3.8
		T1_PhAB_Allit	25	3.2	0	10	2.7
		T1_PhAB_Allit_SS	25	94.8	78	110	10.7
		T1_PhAB_Phone_Seg	25	2.0	0	10	2.9
		T1_PhAB_Phone_Seg_SS	25	93.5	84	110	7.6
		T1_PhAB_Rhyme	25	5.8	0	10	3.2
		T1_PhAB_Rhyme_SS	25	97.6	69	110	13.0
		T1_BPVS	24	60.4	30	86	13.7
		T1_BPVS_SS	24	99.8	77	121	11.1
	1	T1_CELF_WS_strict	29	19.2	9	24	4.1
		T1_CELF_WS_strict_SS	25	12.0	4	19	3.8
		T1_PhAB_Allit	29	7.3	2	10	2.4
		T1_PhAB_Allit_SS	29	101.6	81	110	8.9

Lang_Status_Binary	Year		N	Mean	Min.	Max.	Std. Dev.
		T1_PhAB_Phone_Seg	29	7.4	2	12	3.5
		T1_PhAB_Phone_Seg_SS	29	98.8	84	110	9.0
		T1_PhAB_Rhyme	29	7.2	2	10	2.5
		T1_PhAB_Rhyme_SS	29	98.1	71	110	11.5
		T1_BPVS	29	73.9	35	101	15.8
		T1_BPVS_SS	29	91.4	71	111	12.4
EAL	0	T1_CELF_WS_strict	29	13.9	2	22	4.9
		T1_CELF_WS_strict_SS	29	9.0	2	15	3.6
		T1_PhAB_Allit	32	2.9	0	9	2.1
		T1_PhAB_Allit_SS	32	95.3	78	110	8.2
		T1_PhAB_Phone_Seg	32	1.1	0	7	1.9
		T1_PhAB_Phone_Seg_SS	32	91.9	84	109	6.6
		T1_PhAB_Rhyme	32	4.7	0	9	2.5
		T1_PhAB_Rhyme_SS	32	93.9	69	110	11.5
		T1_BPVS	27	56.1	12	87	19.5
		T1_BPVS_SS	26	97.8	70	121	13.9
	1	T1_CELF_WS_strict	31	19.5	8	24	4.0
		T1_CELF_WS_strict_SS	23	11.5	3	19	4.3
		T1_PhAB_Allit	31	7.9	1	10	3.0
		T1_PhAB_Allit_SS	30	103.6	75	110	10.6
		T1_PhAB_Phone_Seg	31	10.0	3	12	2.5
		T1_PhAB_Phone_Seg_SS	30	105.2	87	110	7.0
		T1_PhAB_Rhyme	31	7.8	3	10	2.3
		T1_PhAB_Rhyme_SS	30	101.4	78	110	10.5
		T1_BPVS	28	77.0	44	117	16.7
		T1_BPVS_SS	27	92.0	9	121	21.5

Table 7 The raw score and the standardised score (SS) for the various assessments of English skills at T1 by monolingual or EAL status and by year group.

Appendix B

T2 - Descriptive Statistics

Lang_Status_Binary	Year		N	Mean	Min.	Max.	Std. Dev.
Monolingual	0	T2_CELF_WS	24	17.4	6	24	4.4
		T2_CELF_WS_SS	23	9.8	3	17	3.3
		T2_PhAB_Allit	25	5.6	1	10	3.3
		T2_PhAB_Allit_SS	24	98.6	79	110	11.0
		T2_PhAB_Phone_Seg	25	6.5	0	12	4.3
		T2_PhAB_Phone_Seg_SS	25	100.2	81	110	10.1
		T2_PhaB_Rhyme	24	6.6	2	10	3.0
		T2_PhaB_Rhyme_SS	23	97.6	76	110	12.8
		T2_BPVS	25	74.2	25	102	18.2
		T2_BPVS_SS	23	99.0	77	120	12.4
	1	T2_CELF_WS	29	21.0	16	24	2.2
		T2_CELF_WS_SS	4	16.5	13	19	2.5
		T2_PhAB_Allit	29	8.1	1	10	2.7
		T2_PhAB_Allit_SS	29	101.6	71	110	11.4
		T2_PhAB_Phone_Seg	29	8.3	0	12	4.5
		T2_PhAB_Phone_Seg_SS	29	97.9	72	110	13.3
		T2_PhaB_Rhyme	29	8.9	4	10	1.7
		T2_PhaB_Rhyme_SS	29	103.9	81	110	8.7
		T2_BPVS	29	91.2	62	115	12.6
		T2_BPVS_SS	28	98.9	86	115	8.9
Multilingual	0	T2_CELF_WS	31	16.9	8	24	4.2
		T2_CELF_WS_SS	27	9.7	3	17	3.4
		T2_PhAB_Allit	31	5.0	0	10	3.2
		T2_PhAB_Allit_SS	27	96.1	70	110	11.4
		T2_PhAB_Phone_Seg	31	5.8	0	12	3.9
		T2_PhAB_Phone_Seg_SS	27	98.1	81	110	9.8
		T2_PhaB_Rhyme	31	6.5	0	10	3.7
		T2_PhaB_Rhyme_SS	27	96.7	69	110	15.9
		T2_BPVS	30	73.4	38	101	12.9
		T2_BPVS_SS	26	98.3	79	121	10.1
	1	T2_CELF_WS	31	21.1	16	24	2.3

Lang_Status_Binary	Year		N	Mean	Min.	Max.	Std. Dev.
		T2_CELF_WS_SS	6	13.0	10	17	2.5
		T2_PhAB_Allit	31	8.7	2	10	2.1
		T2_PhAB_Allit_SS	30	107.7	76	196	19.1
		T2_PhAB_Phone_Seg	31	9.5	0	12	3.8
		T2_PhAB_Phone_Seg_SS	31	101.8	73	110	11.5
		T2_PhaB_Rhyme	31	9.2	4	10	1.5
		T2_PhaB_Rhyme_SS	30	105.7	78	110	8.7
		T2_BPVS	31	93.2	56	130	17.3
		T2_BPVS_SS	29	101.1	72	125	14.0

Table 8 The raw score and the standardised score (SS) for the various assessments of English skills at T2, by monolingual or EAL status and by year group.