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Investigating the impact of the Enduring Principles of Learning (EPL) on multilingual pupils' English language and literacy development

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Declaration of original authorship

I confirm that this is my own work and the use of all material from other sources has been properly and fully acknowledged.

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Abstract

The aim of this quasi-experimental study was to examine if a professional development intervention, known as the Enduring Principles of Learning (EPL), could improve primary-aged multilingual learners' English proficiency in England.

The EPL intervention was delivered to four experimental teachers, two of whom taught pupils in Year 1 (aged 5- 6) and two of which taught pupils in Year 4 (aged 8-9), over a period of six months. This meant that experimental pupils (n = 85) received EPL-oriented teaching whereas a control school with pupils in matched year groups (n = 70) continued with standard teaching practice. Bespoke pre- and post-tests, measuring pupils' English proficiency in speaking, listening, reading, writing and based on World-Class Instructional Design and Assessment (WIDA) materials were drawn upon to assess the efficacy of the EPL on pupil outcomes. These were complemented by the British Picture Vocabulary Scale (Dunn et al., 1997) to provide a control measure of pupils' English vocabulary. Interviews with pupils were also conducted, to gain an insight into pupils' perspectives regarding the use of EPL in their classrooms during the intervention period.

The findings suggest that across both year groups, multilingual learners in experimental classrooms made greater pre- and post-test progress in their listening skills than their control peers. This was also reflected in Year 1 speaking and Year 4 reading skills. However, the effects of the EPL intervention on pupils' writing were less in evidence. Contextual factors and qualitative data in this study are brought together to discuss these quantitative results in detail.

This study contributes meaningful insights into the type of classroom-oriented language proficiency tests which could be used in understanding how professional development for teachers directly impacts on multilingual learners developing their English language and literacy skills. Implications for multilingual pedagogy and practice are also considered, in addition to limitations and potential avenues for further research.

Dedication

This thesis is dedicated to my loving grandmother, **Sufia Khatun** (1949 - 2023),

who recognised the কষ্টঃ *(kostoh; difficulty, hardship)* of a PhD - and refused to let anyone forget it.

And to my beautiful daughter, **Sakeenah Noor Ahmad** (2024 -),

for fighting the odds and bringing so much peace, light and joy into our lives.

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Glossary of terms

EAL   English as an Additional Language

EPL   The Enduring Principles of Learning

PD   Professional development

ARE   Age-related expectations

SEND   Special Educational Needs and Disability

FSM   Free School Meals

PP   Pupil Premium

DfE   Department for Education

L1/L2   First Language/Second Language

SLA   Second Language Acquisition

Chapter 1 - Introduction

This study addresses two gaps in research for the teaching of multilingual learners: Firstly, that there is a paucity of meaningful measures which can accurately assess multilinguals' language and literacy skills within England's classroom context, and secondly, that not much is known about the impact of any design of professional development for teachers in relation to teaching multilingual learners. Crucially, there is very little known about how or whether teachers' changes to their practice following professional development can lead to measurable improvements in their multilingual learners' academic outcomes. Therefore, this study used quantitative and qualitative measures to assess the impact of one teacher professional development approach on the language and literacy outcomes of multilingual pupils.

This research was funded by an ESRC collaborative PhD studentship. Collaborators were a network of linguistically diverse schools in the south of England with whom the first supervisor had already established a research relationship. The first supervisor's research functioned as a sister study, which involved the delivery of a professional development programme designed for linguistically diverse classrooms (Flynn, 2022). The current study addressed the absence of assessment materials specifically available to track multilingual pupils' progress with their English language and literacy skills, with the use of bespoke tests to measure the impact of this professional development programme on such skills. The professional development programme is called the 'Enduring Principles of Learning' (EPL) (Teemant, 2014).

Serving as a background to this study, this chapter provides an overview of the context related to multilingual learners in England, which includes how they are perceived and assessed within the primary classroom context. Additionally, the challenges that multilinguals and their teachers face are outlined, followed by a statement of the problem and finally, how the overall thesis is structured.

1.1 The context

Accounting for nearly 20% of the pupil population across state-funded schools in England, multilingual learners are formally recognised by the national education system as pupils with English as an additional language (EAL) (DfE, 2023a). This translates to over 1.7 million pupils across the country with a label that provides no further information beyond the size of a group of heterogeneous pupils (Demie, 2018a; Strand et al., 2015). The limitations of the label are pertinent because of the broad spectrum of pupils' proficiency in English that the EAL label can represent: ranging from new arrivals who may know very little or no English, to pupils who may be fluent in the language, having been born and educated in England (Oxley & de Cat, 2019). Failure to take account of the breadth of experiences in language learning and language exposure for these pupils is problematic because there is no acknowledgment of how each of these learners' needs may be different (Demie & Lewis, 2018).

This study uses the term 'multilingual' over EAL where possible, to acknowledge that an individual learner's ability to communicate may be subject to wide variation in the reading, writing, speaking and listening domains for each of the languages in their repertoire (Baker, 2011; Datta, 2007). However, as multilingual learners are formally recognised by schools as 'EAL' this acronym is also referred to throughout this thesis to mirror the language used to describe this group of learners within the context of the education system in England. A detailed discussion of terminology can be found in the Chapter 2, although it is accepted that the usage of such terms still conceals the variation in pupils' language and literacy skills (McKendry & Murphy, 2011).

Historically, there was an attempt to introduce nationwide measurement of EAL pupils' proficiency. Schools had been required to assess and report pupils' English proficiency levels, but this was withdrawn soon after its announcement and as such, there is currently no systematic way of assessing English proficiency in schools across England (Hessel & Strand, 2021). Providing this proficiency data was mandatory in 2016-18 and it was collected nationally as part of school census data (DfE, 2020). During this time schools reported on EAL pupils' English language proficiency based on a five-point scale ranging from A: New to English to E: Fluent (see table 1.1 below). With this five-point proficiency scale, there was an implicit understanding that the EAL pupil population was a heterogeneous group with differing language backgrounds and that the necessary support for their needs in the classroom was also likely to be varied (Hessel & Strand, 2021). However, schools were at liberty to choose who assessed EAL pupils' proficiency and the scales were to be interpreted as a "best fit" (DfE, 2020, p. 4) related to pupils' literacy and language skills in English. This likely introduced an element of subjectivity to how schools made their assessments of EAL pupils' English proficiency. Furthermore, this statutory requirement to assess proficiency was removed less than two years after its introduction, despite its recognised significance as a criterion with substantial impact on multilingual pupils' progress (Strand & Hessel, 2021; Ullmann, 2018).

Table 1.1: Abridged version of the English proficiency scales (DfE, 2020)

Proficiency level	Description
A: New to English	May use first language for learning and other purposes […] Needs a considerable amount of EAL support.
B: Early acquisition	May follow day-to-day social communication in English and participate in learning activities with support […] Still needs a significant amount of EAL support to access the curriculum.
C: Developing competence	May participate in learning activities with increasing independence […] Requires ongoing EAL support to access the curriculum fully.
D: Competent	Oral English will be developing well, enabling successful engagement in activities across the curriculum […] Needs some/occasional EAL support to access complex curriculum material and tasks
E: Fluent	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.

Note. An additional level, 'N: Not yet assessed' could also be used by schools for pupils.

It is also important to understand the context that surrounds EAL learners and their English proficiency. Key contextual information such as at what age multilingual pupils enter and for how long they have been within the school system in England, might affect the development of pupils' English proficiency (Evans et al., 2016) For younger pupils, this can be particularly pertinent because the impact of less-developed proficiency can be most profound on reading and writing in the primary phase (pupils aged up to 11) (DfE, 2020). Furthermore, whilst pupils' attainment data suggest that the attainment gap between multilingual and monolingual pupils broadly tends to close towards the end of secondary education, an assumption that all multilingual pupils will make strong enough progress to follow this trend should be avoided, given the diverse nature of this pupil group (Strand et al., 2015).

There are several risk factors that can contribute to EAL pupils' underachievement. This might include a combination of their English language skills, ethnicity, time of entry to England (where this is applicable) and socioeconomic status (Demie & Lewis, 2018). However, when analysing pupils' achievement based on EAL status alone, many of these factors become concealed because multilingual pupils with strong English proficiency skills are conflated with learners at the earliest stages of developing their English (Demie, 2018a). Therefore, identifying multilingual pupils' language proficiency is crucial because this can help contribute towards our understanding of where support is most needed in order to reduce the risk of underachievement (Hessel & Strand, 2021).

This risk of EAL pupils' underachievement is coupled with a range of challenges surrounding teachers of multilingual learners. Currently, teachers in England are from overwhelmingly

monolingual, White British backgrounds, accounting for over 85% of the profession (DfE, 2022). Whilst these teachers serve classrooms that continue to grow in linguistic and ethnic diversity, it is clear that the teaching workforce does not reflect the rapidly changing demographic of classrooms in England (Demie & Huat See, 2023). Furthermore, pre-service teachers have repeatedly reported on their unpreparedness to fully support multilingual pupils in their classrooms (Cajkler & Hall, 2009; Ginnis et al., 2017; Safford & Drury, 2013). Similarly, in-service teachers continue to receive limited opportunity to develop their professional practice related to the needs of their multilingual pupils (Oxley & de Cat, 2019). Or, where specific EAL pedagogy and practice are available, they are often conflated with provision for pupils with Special Educational Needs and Disability (SEND), who have profoundly different needs to multilingual learners (Andrews, 2009).

In addition, in the past decade, there has been a gradual reduction in government guidance issued to teachers related to EAL pedagogy (Flynn & Curdt-Christiansen, 2018). This is illustrated by the limited or no reference to EAL learners in pre-service training and national curriculum documentation and inspection frameworks (Anderson et al., 2017; Flynn & Curdt-Christiansen, 2018; Foley et al., 2022). These issues are combined with the removal of protected funding to specifically support multilingual learners in schools, and this has further exacerbated the challenges teachers and pupils face across classrooms in England (Perera et al., 2017; Strand et al., 2015).

1.2 Statement of the problem

The landscape that schools, teachers and pupils in England must navigate in relation to EAL pedagogy is complex and multi-layered. The growth of linguistically diverse classrooms in England has come with an understanding that multilingual pupils' proficiency in English can be a particularly illuminating factor in predicting pupils' attainment (Hessel & Strand, 2021). Yet teachers remain ill-equipped in identifying and addressing the heterogeneous needs of these pupils, with limited pre-service training, or in-service professional development and funding (Oxley & de Cat, 2019).

The lack of reference to EAL learners in inspection frameworks also suggests the outcomes of this pupil group is not necessarily an area of priority and may indeed lead teacher training providers and schools to give more attention to other areas where they will face scrutiny (Cushing, 2023). Many of these issues can be traced back to national government policy, in which there is an absence of adequate guidance for schools in supporting the needs for multilingual learners, with scant reference to EAL pedagogy in both curriculum and assessment publications (Flynn & Curdt-Christiansen, 2018).

This limited recognition of differing needs for multilingual pupils means that, irrespective of their language background and needs, they are subject to the same delivery and examination of curriculum objectives as monolingual pupils (Costley, 2014). This is through English, the medium

of instruction across educational settings in England (Anderson et al., 2017). This can be challenging for some multilingual learners, as depending on their proficiency, they must simultaneously learn the English language whilst learning new curriculum content (Coady et al., 2016; Gorter & Cenoz, 2017; Lucas et al., 2008). Where there are delays in sufficiently developing multilingual learners' English language and literacy skills over time, this can then have long-term implications on their subsequent performance and attainment in national exams as they progress through the school system (Murphy & Unthiah, 2015).

It is therefore perhaps unsurprising that the link between EAL status and underachievement has been well-documented. Where multilingual pupils were still developing their English proficiency, they have been found to be less likely to achieve expected outcomes at the end of primary and secondary school in comparison to their monolingual peers in England (Strand & Lindorff, 2020). However, other multilingual pupils with strong English proficiency were often able to outperform their monolingual peers (Demie, 2013, 2018b; Strand & Demie, 2005; Von Ahn et al., 2011). Pupils' English proficiency can, therefore, be particularly illuminating in understanding and predicting their pupils' subsequent outcomes (Hessel & Strand, 2021).

Yet teachers' assessment of multilingual pupils' language and literacy skills in England is subject to wide variation (Evans et al., 2016), because there is no nationally agreed framework for schools to assess pupils' proficiency (Demie, 2018a). Limited opportunities to assess multilingual learners appropriately are worsened by a gap in teachers' knowledge in how to effectively support multilingual learners through their classroom practice (Murphy & Unthiah, 2015). Moreover, there is limited provision specifically for EAL learners within the mainstream curriculum (Leung, 2016). There have therefore been multiple calls for teachers' professional development (PD) to include explicit guidance related to EAL pedagogy (Murphy & Unthiah, 2015; Strand & Hessel, 2018; Teemant, 2014; Wei et al., 2010) particularly as there are large disparities in how this is addressed in pre-service teaching training programmes in England (Murphy, 2017).

In summary, there are several problematic issues surrounding multilingual learners and their teachers. Schools in England continue to grow in linguistic diversity, yet there remains a persistent lack of attention to EAL pedagogy and practice, with its absence felt in national policy (Flynn & Curdt-Christiansen, 2018). Limited references to the needs of multilingual learners persist in the training of pre-service teachers and in the professional development of in-service teachers (Ginnis et al., 2017; Murphy & Unthiah, 2015). This is further exacerbated by a dearth of assessment materials that are designed to provide schools with an understanding of their EAL learners' language and literacy progress. Furthermore, with no coherent assessment framework currently available in England, pupils' proficiency levels are not routinely assessed despite their value in predicting attainment (Hessel & Strand, 2021).

1.3 Why is this study needed?

This study, in conjunction with its supervisor-led sister study, aimed to address two central issues: first, an absence of materials that adequately assess multilingual pupils' English proficiency within England's classroom context and second, a paucity of professional development specifically for teachers in linguistically diverse classrooms. Whilst the sister study focussed on delivering a professional development intervention based on critical sociocultural pedagogy for teachers of multilingual pupils, the current study focussed on measuring the efficacy of this professional learning approach, by developing assessment tools to track multilingual pupils' progress with their English language and literacy skills. Taking a twin approach was important because so little is known about the efficacy of any one approach to teaching multilingual learners, and in developing teachers' classroom practice, there is a need to ensure that any such intervention has a positive impact on pupils. Much of this echoes the 'what works' agenda in which educational policy in England is geared towards evidence-informed interventions that can demonstrate measurable impact (Auld & Morris, 2013).

In the case of the current study, the assessment tools developed play an important role in our understanding of how far a specific teaching approach impacts progress, in ways that account for the language and literacy development of EAL learners. This is particularly pertinent because there is currently a lack of tools suited to developing English language learners in this country. Consequently, teachers are often left with little choice but to draw upon informal sources to assess their pupils' language and literacy skills (Oxley et al., 2019). What is currently available to schools are commercially produced materials that are typically designed for English-speaking pupils only, with age-standardised scores also often compared against monolingual samples (Grxter & Paradis, 2014). However, to avoid putting multilingual pupils at a disadvantage with such materials (Grüter & Paradis, 2014; Hutchinson et al., 2003; Murphy, 2017) this study therefore aimed to ensure multilingual learners' proficiency was measured meaningfully and accurately. By doing so, an evaluation of the professional development intervention on pupils' outcomes could be made with greater confidence. The study's aims are summarised below:

- To develop reliable, teacher-oriented test materials for measuring the English language proficiency of pupils with EAL.
- To measure the English proficiency of EAL pupils in Years 1 and 4 before and after their teachers have experienced professional development intervention.
- To interview pupils with a view to harnessing their responses to their teachers' classroom practice resulting from the professional development.

The aims are related to the research questions as follows:

RQ1: Does Teacher Professional Development in the pedagogical approaches related to the Enduring Principles of Learning (EPL) have an impact on the English proficiency of pupils with English as an additional language?

1a) what is the impact of this approach on pupils' speaking skills?

1b) what is the impact of this approach on pupils' listening skills?

1c) what is the impact of this approach on pupils' reading skills?

1d) what is the impact of this approach on pupils' writing skills?

RQ2: What are pupils' responses to the teaching approaches related to the Enduring Principles of Learning (EPL) as part of their classroom experiences?

2a) what is their response to EPL in the classroom?

2b) to which aspects of this approach do they respond positively?

2c) to which aspects of this approach do they find more challenging?

1.4 Thesis outline

There are a total of seven chapters to this thesis. The introductory chapter outlined the context and rationale of this study, which centres around the impact of a professional development intervention on multilingual learners' language and literacy development.

Chapter two, the literature review, begins by providing a conceptual framework in which key terminology used in this thesis is discussed. The chapter is then divided into several sections, the first of which provides detailed context and history related to multilingual learners. The chapter goes on to consider the development of multilingual learners' language and literacy skills, in which oral language, the environment, input and the development of reading and writing are explored. Features of effective practice in multilingual classrooms are then examined, before considering how multilingual pupils' language proficiency is measured and assessed from several perspectives. This chapter finishes with a summary and presentation of research questions and aims.

Chapter three establishes the methodology for this study. A discussion of the research paradigm, design and participants are first presented. The intervention is introduced, followed by the quantitative and qualitative aspects of data collection that were undertaken in this research. Thereafter, the pilot study is presented, with its findings and implications for the design of the present study discussed. Issues surrounding reliability and validity are also considered in this chapter, before moving on to procedures related to data analysis and ethics.

The findings of this mixed methods study are presented in two chapters. First, Chapter Four presents the reliability of the research tools used in this study, before considering issues such as

normality and assumptions for the statistical tests that feature in this research. The quantitative findings of this study are then presented in this chapter, with pupils' listening, speaking, reading and writing progress explained in detail. Chapter Five presents the qualitative findings of this study, that were derived from focus group interviews. This includes presenting key themes that emerged and illustrating these with interview excerpts.

Implications of both the quantitative and qualitative findings are considered in Chapter Six. The research questions are addressed and mapped to the findings in relation to the empirical background underpinning this thesis. In Chapter Seven, the thesis concludes with an outline of how the present study has contributed to the field of new knowledge, methodology and classroom practice. Limitations, implications and directions for future research are also summarised.

<u>Chapter 2</u> - Literature Review

This chapter presents literature related to the current study, which assessed pupils' reading, writing, speaking and listening skills before and after their teachers participated in a professional development intervention. As such, this chapter: (1) clarifies terminology and presents the context in which this thesis is situated; (2) examines models of multilingual language and literacy development; (3) reviews what current research says about pedagogy, practice and professional development to support multilingual pupils in the classroom; and (4) critiques research related to the assessment of multilingual learners. Finally, the research questions and aims for this study are presented.

<u>2.1 Conceptual framework</u>

There are a number of terms that are central to discussion in this thesis. This section clarifies the research underpinning their definition within the context of this study.

EAL/Multilingual learners

Framed within the context of England's schools, 'English as Additional Language' (EAL) refers to a pupil who is recognised by their school as having exposure to languages other than English at home (DfE, 2020). A multilingual can be defined as someone "who can communicate in more than one language, be it active (through speaking and writing) or passive (through listening and reading)" (Li, 2008, p. 4). It can also be useful to consider multilingualism on a continuum, which can be subject to wide variation in the reading, writing, speaking and listening domains for each of the languages in an individual learner's repertoire (Baker, 2011; Datta, 2007).

On the one hand, referring to learners as multilingual rather than EAL can avoid the potential deficit framing of a learners' relationship with English, which can then instead focus on multilingualism as an asset (Baker, 2011). Viewing multilingualism in this way not only recognises the number of languages known by an individual, but also acknowledges that each of these languages are likely to be accompanied by a set of differing skills, knowledge and understanding of how each operates (Bono & Stratilaki, 2009). Moreover, it is important to consider the connection between the home language and identity, which can play an integral role in maintaining links with family, culture, ethnicity and/or heritage (Curdt-Christiansen & Huang, 2020).

On the other hand, the widespread usage of the EAL acronym across educational settings in England cannot be ignored. This term refers, in policy, to pupils who have very little English in their repertoire, as well as pupils who may be fluent in English, and means that such pupils are essentially considered the same (Oxley & de Cat, 2019). Labelling pupils in this way is not limited to schools in England, but can be found in other majority English-speaking contexts, such as the United States, where multilingual pupils are commonly referred to as 'English Language Learners'

(ELL) (McKendry & Murphy, 2011). Therefore, when considering that policy and practice related to multilingual pupils are central to this thesis, and that EAL as a term is so heavily wedded to these areas in England, the interchangeable use of the EAL acronym with 'multilingual' is inevitable throughout.

L1 and L2

In addition to multilingual pedagogy and practice, this thesis also draws upon literature related to Second Language Acquisition (SLA). The field typically recognises multilingual learners' languages within their repertoire using terms such as first language (L1) assumed from birth and subsequent languages (L2, L3 etc) to acknowledge the chronological order of languages attained over time (Hammarberg, 2014). In the context of this thesis, it is assumed multilingual pupils' L2 is English, although for many learners, English may not be their L2, and may indeed be only one of many languages they are able to communicate in (Baker, 2011). However, the use of L1/L2 is helpful, particularly in making a distinction between the languages in pupils' repertoires. However, it is accepted that such terms do not indicate to what extent multilinguals can communicate in each language and it is therefore important to recognise that such terminology may be limited in capturing multilinguals' true linguistic diversity (Franson, 2011).

Professional development

Whilst the nature of professional development (PD) is explored in section 2.5, it broadly refers to the engagement in activities that aim to improve teaching performance, which can range from formally structured events to informal learning communities between colleagues (Desimone, 2009). PD can sometimes be referred to in the literature as 'professional learning'. The 'learning' aspect of this term incorporates the plethora of interactions, behaviours, dynamics and contexts teachers are situated in, that may impact change in teachers' classroom practice (Opfer & Pedder, 2011). What unites professional development and professional learning is that both concepts share the intention of building skills and knowledge to affect changes in teaching practice that ultimately lead to raising pupil outcomes (King, 2014). The term PD is adopted in this thesis to reflect the terminology largely recognised and used by schools and teachers in England (DfE, 2011; Evans, 2011)

Language proficiency

Language proficiency can be interpreted through several perspectives (Halle et al., 2012) that are discussed in greater detail later in this chapter (see section 2.6). Broadly, proficiency in a language can be understood through an individual's general communicative ability, specific task performance or through interactions with others (Bachman, 2007). However, in this thesis, language proficiency is conceptualised as an individual's purposeful use and application of reading, writing and oral communication in the target language (Bachman & Palmer, 2010) which in the context of this study, is English. In addition to this definition, when considering the development of language

proficiency, it is acknowledged that there may be a difference between how the target language is used for social and academic purposes, and that a considerable amount of time is often needed for multilinguals to develop sufficient proficiency in the latter (Cummins, 2016; Hakuta et al., 2000; Lucas et al., 2008).

2.2 Context for multilingual learners

It can be challenging for schools to meet the needs of multilingual learners, particularly because there is huge variation in pupils' language backgrounds and proficiencies in England (Arnot et al., 2014; Strand et al., 2015). This is further exacerbated by difficulties in encouraging equitable teaching practice for "culturally inexperienced" (Teemant et al., 2014, p. 136) teachers working in increasingly diverse settings, who may not necessarily understand the challenge of learning a new language. This section therefore explores the context for educational policy in England related to EAL learners.

2.2.1 History of policy and provision related to multilingual learners in England

Educational policy in England has undergone considerable change over time, and the stance taken by each ruling government, in relation to multilingual learners, has also been subjected to several iterations. Reviewing the landscape over the last six decades, Costley (2014) surmised that the history of multilingual learners in England's education system has meant pupils have been expected to assimilate, withdraw or be included as part of mainstream classroom practice depending on the time, context and direction of policy. This is explored in further detail below.

National policy guidance related to EAL learners

The appearance of EAL learners in policy can be traced back to the 1950s, when migration from British commonwealth nations began to change the demographic of classrooms, and there was an expectation that new arrivals needed to integrate as quickly as possible (Leung, 2016). Government policy began to make explicit reference to the needs of EAL learners in the classroom through the 1960-70s, providing guidance that included the withdrawal of EAL pupils to engage in English language classes until they were proficient enough to return to the mainstream classroom (Costley, 2014). From the 1970s-80s, England's socio-political landscape became increasingly volatile because of fundamental issues surrounding race and equality in wider society, that eventually led to another shift in policy related to EAL learners – this resulted in their eventual return to mainstream classrooms in order to access the National Curriculum alongside their English-speaking peers (Leung, 2016). This was largely because mainstreaming was considered more equitable to all pupils in England and continues as standard practice in schools today (Anderson et al., 2017).

The Office for Standards in Education (Ofsted), which serves as the inspectorate for educational settings and services across England, observed that the lack of accountability for EAL learners' progress meant that schools provided overly variable levels of effective support for these learners (Ofsted, 1999). This was worsened by the fact that EAL is not formally recognised as a distinct subject area in England, but rather a "diffused curriculum concern" (Leung, 2001, p. 34) that largely places the onus on teachers to navigate EAL practice within their own school contexts. Whilst in previous versions of the National Curriculum there were several pages dedicated to EAL

learners, in its most recent iteration, the National Curriculum mentions EAL learners in a few paragraphs (Anderson et al., 2017; Flynn & Curdt-Christiansen, 2018). Therefore, the very limited recognition EAL learners receive in the National Curriculum means that there is little national guidance in supporting pupils' language learning needs to access and engage with the curriculum. Furthermore, given its non-subject status, policy related to EAL learners has often run the risk of being conflated with the needs of other pupil groups that may find difficulty accessing the curriculum fully, such as those with Special Educational Needs and Disability (SEND) (Andrews, 2009). However, conflating EAL and SEND in this way is problematic because the needs within and between these two pupil groups are profoundly different (Andrews, 2009; Foley et al., 2013).

Having considered the support afforded to EAL learners from a policy perspective, let us now turn to policy related to pre- and in-service teachers in England. Firstly, there is an absence of national guidance for pre-service teachers in relation to supporting the needs of multilingual learners (Cajkler & Hall, 2012). However, pre-service teachers in England work towards demonstrating their ability in fulfilling the Teachers' Standards, which is a set of requirements that assess their professional practice and conduct (DfE, 2011). There is a singular mention of EAL learners alongside pupils with SEND in the Teachers' Standards (Wilkins, 2014). Towards both groups of learners, pre-service teachers must demonstrate an understanding of "the needs of all pupils […] and be able to use and evaluate distinctive teaching approaches to engage and support them" (DfE, 2011, p. 12). Whilst EAL learners are explicitly mentioned as a pupil group that are entitled to some degree of support, there is little guarantee that pre-service teachers will receive adequate training nor opportunity to develop their practice with such learners in mind (Cajkler & Hall, 2012).

Teacher training providers use national documentation such as the Teachers' Standards in conjunction with the Core Content Framework (CCF) (DfE, 2019a), which outlines what pre-service teachers are entitled to receive as part of their formal training period. The CCF is also used by Ofsted to assess the effectiveness of teacher training programmes and can arguably place pressure on providers to change programme content in order to receive favourable judgement (Cushing, 2023). There is, however, no explicit reference made to EAL learners, or terms related to multilingualism in the CCF (Smith, 2021) which may mean providers are less inclined to prioritise including multilingual pedagogy as part of their teacher training programmes (Anderson et al., 2017; Foley et al., 2022).

Let us now turn to in-service teachers and state schools in England. These settings are broadly structured to provide mainstream provision, which means EAL learners are integrated into the classroom with all other pupils and entitled to access the national curriculum from the outset, as is their legal right (Roberts, 2021). Whilst teachers may be encouraged to view the linguistic diversity of their classrooms as a strength, there is, however, very limited practical guidance to develop their teaching in order to meet the heterogeneous needs of multilingual pupils in such classrooms

(Costley, 2014; Safford & Drury, 2013). As such, EAL-orientated practice is often determined by the local communities that schools are positioned to serve which results in "consistently inconsistent" (Costley, 2014, p. 289) classroom practice.

Furthermore, Ofsted provides a framework for all inspectors to use as part of their judgements in school settings across England, though this has been subject to change over time and is not always immune to wider socio-political influences (Wilkins, 2014). This has meant that school leaders and teachers have felt considerable pressure to ensure they are always 'ready' for inspections which can come with very limited or no notice (Perryman et al., 2018). Additionally, there is now no explicit reference to EAL learners in the most recent iteration of the inspection framework for schools, and no formal leadership role within the national inspectorate that has oversight related to EAL provision (NALDIC, 2021). This is problematic because at a local level, there is no expectation that schools will be challenged or held accountable for EAL learners' underachievement during inspections and at a national level, there is no voice calling for targeted support in reducing the potential risk of EAL pupils' under-attainment (Demie, 2023).

To summarise, policy documents such as the national curriculum, the CCF and the Teachers' Standards frame multilingualism as a deficit which is at odds with the 'typical' monolingual learner which may explain why EAL-specific pedagogy remains absent (Smith, 2021). It is therefore perhaps unsurprising that pre-service teachers often feel under-prepared in teaching multilingual learners within their own classrooms as newly qualified, in-service teachers (Ginnis et al., 2017). Furthermore, with scant resources and guidance for in-service teachers, in addition to little accountability for the EAL learners' outcomes in schools (Demie, 2023; Smith, 2021), supporting the varying needs of this diverse pupil group is likely to be challenging area for teachers to prioritise (Leung, 2022a).

School-based provision for EAL learners' language learning needs

Over the years, EAL learners have had differing levels of funding to support their needs in the classroom. In practice, this meant schools across England received varying amounts of funding each year (Davies, 2021) and this provision was largely dependent on the geographical area the school was serving, the availability of resources, and size of the multilingual pupil population in question (Costley, 2014). For instance, the introduction of 'Section 11' funding in the 1960s brought specific provision for multilingual learners in England, who were at the time perceived as newly arrived immigrants from the Commonwealth (Tikly et al., 2005). Much of this funding was left to be implemented at a local level, whereby schools often directed funds towards specialist, out-of-classroom English language learning (Leung & Franson, 2001).

Section 11 funding was superseded by the Ethnic Minority Achievement Grant (EMAG) in the late 1990s, which until 2011 provided ringfenced funding to specifically address the needs of

multilingual pupils at risk of under-achievement. The intention was to encourage equitable outcomes with their peers (DfES, 2004). This still resulted in a mixed picture related to EAL provision, with schools implementing funding depending on the contexts and communities in which they were situated (Costley, 2014). With the end of EMAG, however, protected funding specifically for multilingual learners in England ceased to exist and instead became part of wider national funding for schools to use as part of their provision for all pupils (Hutchinson, 2018). Whilst this national funding formula accounts for and allocates up to three years' worth of additional funding for EAL pupils upon entering the school system, this equates to 1.1% of the total funds available (DfE, 2023b). It can be argued that the funding available does not go far enough in supporting the needs of multilingual pupils in schools as they need considerably more time than this to develop their language proficiency (Schneider et al., 2017; Strand & Lindorff, 2020).

Taken together, it is clear that pedagogy and provision related to multilingual pupils in England has endured a number of changes. There have been disparities in how support for multilingual learners in England has been implemented, with considerable differences at a local level. At present, specific provision for EAL learners is calculated through national funding formulae in which schools can receive a finite amount of additional funding per EAL pupil on roll (DfE, 2023b). However, this has often resulted in schools receiving less funding specifically to support the needs of multilingual learners over time (Perera et al., 2017). It is also important to recognise that there is currently no formally recognised pedagogy or provision specifically for EAL learners' support in classrooms across England and therefore, a need to assess and develop pupils' English language and literacy skills remains.

2.2.2 Super-diverse Britain

The history of migration in this country has meant that a plethora of diverse communities have formed and continue to form in England. Vertovec (2007) suggested that England is 'super-diverse,' in that other variables such as ethnic origin, gender, age, legal rights and socio-economic status have created an innately complex picture of multilingual communities in this country.

Whilst less is known about the detailed composition of such multilingual communities, the number of languages represented in this country can be drawn upon from national census data, collected every ten years. The most recent data suggest there continues to be a range of languages represented nationally, with figure 2.1 demonstrating the top ten languages spoken across England and Wales, other than English (Office for National Statistics, 2022). Whilst there has been little movement over the decade in relation to some languages, such as well-established Polish, Panjabi and Urdu-speaking communities, other languages such as Romanian have grown considerably, going from the 19th to the 2nd most spoken language in England and Wales over a ten-year period. This is likely related to an increase in the population of European-born residents in England over

time (Cuibus, 2023) and is perhaps indicative of the changing landscape of multilingualism experienced by schools and teachers.

2011		2021
Polish (546,000) **1**	——————————	**1** Polish (612,000)
Panjabi (273,000) **2**		**2** Romanian (472,000)
Urdu (269,000) **3**		**3** Panjabi (291,000)
Bengali (221,000) **4**		**4** Urdu (270,000)
Gujarati (213,000) **5**		**5** Portuguese (225,000)
Arabic (159,000) **6**		**6** Spanish (215,000)
French (147,000) **7**		**7** Arabic (204,000)
All other Chinese (141,000) **8**		**8** Bengali (199,000)
Portuguese (133,000) **9**		**9** Gujarati (189,000)
Spanish (120,000) **10**		**10** Italian (160,000)
	Top 10	
		12 French (120,000)
Italian (92,000) **13**		
		14 All other Chinese (118,000)
Romanian (68,000) **19**		

Figure 2.1: National census data of languages other than English spoken over a decade (retrieved from Office for National Statistics, 2022)

Framed within England's school context, there are currently over 1.7 million pupils in state-funded educational settings who are considered as EAL learners and this continues to grow, following a steady trend of increasing numbers of EAL pupils (DfE, 2023a). Mirroring national census data to an extent, the limited data available for EAL pupils masks their language backgrounds and experiences, because there is no indication of whether these learners have newly arrived as part of refugee, asylum seeker or migrant worker communities, were born and raised within established

multilingual communities in England, or received substantial or disrupted schooling in their country of origin (Arnot et al., 2014). This means that multilingual learners in England are only identifiable today by the EAL label, but little else beyond this (Sharples, 2023). The following section therefore examines in greater detail what is known and what is needed in supporting multilingual learners' language and literacy development.

2.3 Multilingual learners' language and literacy development

As discussed previously, multilingual pupils are recognised as EAL learners in England, and this label represents a heterogeneous pupil group with a myriad of identities and proficiencies (Arnot et al., 2014; Strand et al., 2015). This means that multilingual pupils are likely to have differing needs in the classroom (Halle et al., 2012). A challenge that multilinguals are likely to share, albeit to differing degrees, is the requirement to simultaneously learn English at the same time as new curriculum content (Lucas et al., 2008). These growing academic demands may then begin to come at odds with learners' use and maintenance of their L1 abilities, particularly in contexts outside of school (Scheele et al., 2010).

Therefore, this section considers what multilingual pupils need in order to access the curriculum and maximise their attainment in language and literacy. Theoretical models of reading and writing development, that align with the detailed programmes of study for the teaching of English in the National Curriculum are presented to illustrate the development of pupils' reading and writing skills. However, the National Curriculum considers the development of pupils' speaking and listening skills broadly as "across the whole curriculum – cognitively, socially and linguistically" (DfE, 2014, p. 14), but not with sufficient detail that maps readily onto a theoretical model. Therefore, a discussion on how oral language develops, and how this may be influenced by factors such as the environment, input and vocabulary are explored in detail. Moreover, discussion of theories related to socio-cultural learning and critical socio-cultural pedagogy, later in the chapter, provide a broad theoretical framework for considering language development in ways that align with the focus of this study.

2.3.1 L1 oral language development

Typically developing infants across cultural contexts tend to follow similar milestones within the domain of their first language (L1) development (Kuhl, 2004). It is important for children to develop their oral language skills because they play a vital role in the subsequent development of literacy skills (Bowyer-Crane et al., 2017; Dockrell & Connelly, 2009; Kirkland & Patterson, 2005; Lervåg et al., 2018). Whilst exploring *how* language develops goes beyond the scope of this thesis (see Ambridge & Lieven, 2011) this section presents different domains of oral language (phonology, syntax, morphology, pragmatics and vocabulary) that children must develop to successfully communicate with others (Honig, 2007).

The development of phonology, or the production of different sounds that form speech, first emerges among typically developing infants from around six months (Kuhl, 2004). They continue to distinguish human speech from other sounds in their environment (Rowland, 2013) in addition to producing and combining phonemes as they attempt to communicate meaningfully with others (Bergelson & Swingley, 2012; Honig, 2007). As children's phonology develops, this progresses into the production of single- and multi-word utterances, and the order of words to construct

acceptable phrases, referred to as syntax, becomes increasingly pertinent to children's oral language development (Thornton, 2016).

Furthermore, children must learn that not only can the sequencing of words affect meaning, but in developing morphological awareness, they must understand that units of language such as suffixes and prefixes can be manipulated to affect semantics at both word and sentence level (Rowland, 2013). Lastly, the development of pragmatic language use broadly relates to children's construction of socially and culturally acceptable approaches when interacting with others (Budwig, 2014). For instance, depending on the culture in which the language is framed, children's understanding of pragmatics may lead them to shift quickly from informal to formal language use, applying honorifics to address their interlocutor (Honig, 2007). Taken together, these domains present oral language as part of a network of complex skills that typically developing children can master at relative speed (Honig, 2007; Rowland, 2013).

2.3.2 The language learning environment for multilinguals

Whilst the development of oral language skills for L1 learners has been presented as a complex and multi-faceted process (Honig, 2007; Rowland, 2013), it is important to recognise the different experiences multilingual learners may have in developing their L2 (assumed to be English in the context of this thesis). The environment in which English is acquired can be different for monolingual and multilingual learners and is reflective of the vast heterogeneity among multilingual learners in England (Strand et al., 2015). As such, some learners may have had exposure to more than one language simultaneously from birth or they may be sequentially learning an additional language, such as English, upon entry to school (Baker, 2011). The acquisition of an additional language for multilingual learners can be further affected by exposure to television and books at home (Espinosa et al., 2006), through online videos and blogs (Arndt & Woore, 2018) as well as engagement with digital games (Sundqvist & Wikström, 2015). Therefore, as the language used at home or within the wider community may be different to the language of instruction in schools, this may mean that learners enter classrooms with considerably diverse language experiences (Shorbagi et al., 2022).

The difference in school and home language environments was explored through a large-scale study involving over 1700 monolingual and multilingual children aged 3 to 10 (Bialystok et al., 2010). The multilingual group were subject to a strict selection criterion, in that these children were reported as fluent in English and their home language, being educated in the former and using the latter daily. All children were tested through the Peabody Picture Vocabulary Test (Dunn & Dunn, 1997). Whilst initial analyses confirmed the vocabulary size of multilinguals to be typically smaller than monolinguals', further analyses indicated that these differences were largely attributed to vocabulary related to the home as opposed to school (Bialystok et al., 2010). Therefore, this study is useful in highlighting the difference in multilinguals' nuanced language development across the

home/school environment, but the methodological constraint of using a single measure of language limits this study somewhat. However, it is clear that the environment can play a considerable role in building elements of multilingual learners' language and literacy development.

A further distinction can be made in how language is used specifically within the school environment. It is important to acknowledge the aspect of time and the demands placed on multilingual learners as they develop their language skills, particularly in relation to how these demands change based on social and academic contexts (Cummins, 2000). The concept of Basic Interpersonal Communication Skills (BICS) and Cognitive Academic Language Proficiency (CALP) acknowledges the difference in language use within school environments, and that sufficient time is needed for multilinguals to fully develop their skills. In practice, this means that BICS, or functional and conversation-like fluency using basic vocabulary, pronunciation, and grammar to communicate with others, can typically take around two years to achieve (Cummins, 1981). This is typically powered by a 'common underlying proficiency' in which it is theorised that multilingual learners draw upon their first language to assist in the development of each additional language in their repertoire (Cummins, 2000). However, achieving CALP can take around five to seven years, as this requires the manipulation of complex language and literacy skills that go beyond the domain of BICS, often in typically decontextualised and cognitively demanding academic settings (Cummins, 1981, 2016). Whilst it could be argued this is a simplification, this distinction is largely understood by teachers and researchers when considering the heterogeneous needs of multilingual pupils in English-speaking schools (Cummins, 2016; Hakuta et al., 2000; Halle et al., 2012). Furthermore, the additional time taken for multilingual learners to develop their L2 to meet the academic language demands of the classroom is reflected in studies conducted internationally (see Collier & Thomas, 2017).

2.3.3 Input and interaction

The languages used by multilingual pupils at home are likely to be different from the language of instruction in schools (Shorbagi et al., 2022). It is therefore important to consider the input, or language that learners are exposed to at home, as they develop interactions with others (Gass & Mackey, 2015). For all learners, parental input plays an influential role on their children's oral language development (Unsworth et al., 2019). This is because a continuous cycle can form in which consistent language input can help build a child's increased proficiency, which in turn can encourage them to use the language more and invite further opportunity for language input from their interlocutors (Pearson, 2007). However, for multilinguals, external factors such as the perceived status of languages involved can lead to the L2 (such as English) potentially causing complications to this cycle, particularly when the L2 may be considered more desirable to use (Shohamy, 2007).

Furthermore, the variation in multilinguals' ability in each of their languages within their repertoire is more likely to be impacted by the quality of input they receive, particularly if they are in an environment with non-native speakers (Place & Hoff, 2016). Multilingual children are more likely to receive different levels of language input from a range of sources, and as a result, may receive less overall input per language, in comparison to their monolingual peers (Grüter & Paradis, 2014; Unsworth, 2016). These interactions, or conversations that children engage in, are important because they provide opportunities for learners to navigate and build upon their skills through the responses received (Gass & Mackey, 2015). This is especially important for multilingual learners, who are likely to have varied opportunities to receive, produce and interact with English in comparison to their monolingual peers, which in turn can have an impact on their English language development (Unsworth et al., 2019).

It is important to acknowledge the difference between quantity and quality of language input. On the one hand, quantity of L2 input typically measures the length of L2 exposure, in which there are often inevitable differences in language exposure depending on the multilinguals' home, school or broader community environment (Paradis, 2011). On the other hand, quality of L2 input considers the type of exposures observed, which may include experiences to communicate with native speakers and opportunities to engage with the L2 through activities such as shared reading or group discussions in class (Paradis, 2011; Unsworth, 2016). Both the quality and quantity of language input is important because learners must actively process and formulate responses that require considering the different domains of oral language, which may in turn, help them identify where they may be gaps in their L2 knowledge (Gass & Mackey, 2015; Swain, 2000).

Variation in language inputs across school, home and other environments can potentially result in the uneven distribution of language skills for multilingual learners (Bialystok et al., 2010; Paradis & Kirova, 2014). This may have implications for their development of more complex, typically academic vocabulary in the target language (Cummins, 1979; Unsworth et al., 2019). This can be particularly challenging for multilingual learners who are still developing their English through exposure to the classroom environment alone, as these spaces typically provide limited opportunities for learners to build their proficiency through sustained quality inputs (De Wilde et al., 2020). Therefore, it is likely important for teachers to consider how they can build meaningful input and conversation for multilingual pupils in their classrooms which takes account of their differing language skills and demands that academic language may place on them.

2.3.4 The role of oral language in L2 acquisition

Vocabulary is a key domain within oral language development that plays an important role in children's communicative and literacy skills (Brabham & Villaume, 2002). It is a given that much of children's L1 vocabulary is incidentally learnt, which refers to the process in which the knowledge of words is naturally built upon through everyday encounters (P. Nation, 2001; Webb, 2008).

However, as discussed in the previous subsection, there can be considerable variation in these encounters that can influence vocabulary growth, stemming from individual differences in children's maturation, linguistic exposure at home and environmental changes such as entry to educational settings (Fenson et al., 1994; Rowe, 2012). For multilingual learners, there is an added layer of complexity as the vocabulary size for each language within their linguistic repertoire is likely to be inherently different (Scheele et al., 2010). For example, learners may find that within their language environment there may be an asymmetry in the languages they are exposed to, in that home language/s may (or may not) take precedent in certain locations and contexts, and non-native caregivers may affect the quality of input multilinguals receive in the L2 (Unsworth et al., 2019).

There can be specific implications for multilingual learners' rate of L2 acquisition as they progress through school because oral language and vocabulary skills are known to play a pivotal role in the development of literacy, often emerging as a key predictor in multilinguals' reading and writing skills in English (Bialystok, 2007; Conteh et al., 2008; Miller et al., 2006; Murphy, 2017; K. Nation & Snowling, 1998). This is important because studies have repeatedly reported on multilinguals' L2 vocabulary as being considerably smaller in size relative to native monolingual learners' vocabulary size (Bialystok et al., 2010; Cattani et al., 2014; Murphy, 2017). However, less is known about multilinguals' L2 development related to listening, despite its central role in communicating and understanding the target language (Vandergrift, 2007). It is also apparent that in the classroom, pupils' listening skills are often drawn upon as part of assessing their comprehension but less so as an explicit skill that needs to be developed (S. Graham, 2017).

Limited attention to developing listening as a skill of itself is problematic for multilingual learners because the ability to listen has been shown to play an important role in building L2 vocabulary (Rost, 2014). For instance, a study conducted by Zhang and Graham (2020) involved 137 Chinese students (aged 15-16) learning English and considered the effectiveness of teaching vocabulary in different ways (such as with explanations in English, in Chinese and a purposeful combination of both languages). Pupils who received explicit instruction in the latter were able to retain the most vocabulary knowledge in the short and long-term in comparison to the other pupil groups. However, it is interesting that pupils in the control group (who listened to new vocabulary without receiving additional explanations) still made pre- and post-test gains, with performance strongest in listening comprehension. The authors therefore demonstrated that listening could facilitate incidental learning of new vocabulary and that this can be further built upon by teachers providing explicit, meaningful explanations to aid multilingual learners' L2 acquisition (Zhang & Graham, 2020).

It is perhaps unsurprising then, that irrespective of language profiles, learners' L2 vocabulary continues to be central to their literacy development (Peets et al., 2022). The importance of vocabulary for developing literacy is also reflected in systematic reviews examining intervention

studies specifically designed for multilingual pupil populations, in which vocabulary consistently remains an area of focus in language-oriented interventions (Murphy & Unthiah, 2015; Oxley & de Cat, 2019). In their systematic review of 29 studies, Murphy and Unthiah (2015) found that most interventions that demonstrated measurable effectiveness specifically for multilingual learners were related to building pupils' vocabulary knowledge. This included the evaluation of interventions such as 'Word Generation,' (Lawrence et al., 2012; Mancilla-Martinez, 2010; Snow et al., 2009) and 'Academic Language Instruction for All Students' (Kieffer & Lesaux, 2012; Lesaux et al., 2010). These mostly US-based studies focused on the explicit teaching and application of academic vocabulary specifically for multilingual learners, with respective results indicating beneficial effects for those who participated in comparison to their control peers. However, in concluding their review, the authors stressed that intervention studies that support multilingual pupils' language and literacy skills, as well as interventions to develop teachers' practice in England, remained missing from the literature (Murphy & Unthiah, 2015).

Oxley and de Cat (2019) built upon this and observed in their more recent systematic review of 26 studies that a lack of UK-based intervention studies designed for multilingual learners persisted, and that studies continued to be overwhelmingly framed in American contexts. Oxley and de Cat (2019) added that interventions related to building pupils' vocabularies and oral language skills were most effective, benefiting pupils with the smaller-sized vocabularies the most in the relatively short periods of time these studies were conducted in. Overall, the studies in this review highlighted the importance of incorporating vocabulary learning into classroom practice and the potential impact it can have on multilingual learners' oral language development. Like Murphy and Unthiah (2015), the authors reiterated the need for more intervention studies designed for EAL learners in the UK but expressed that the transfer of US-designed interventions to the UK may not necessarily replicate findings, because classrooms are likely to be more linguistically diverse in the UK. Oxley and de Cat (2019) also noted the paucity of research involving older multilingual learners, who may have joined the school system in England beyond primary school. Taken together, these systematic reviews are useful in highlighting where multilingual research has built an evidence base, as well as where future research efforts should be directed towards.

2.3.5 Reading development for typically developing L1 readers

Theories such as the 'Simple View of Reading' (SVoR) first developed by Gough and Tunmer (1986) are drawn upon to explain the components of L1 reading. This framework is referenced because it has both an empirical basis and has influenced the design of the curriculum for the teaching of reading in England (K. Nation, 2019; Rose, 2006; Stuart & Stainthorp, 2015). Thus, it informs and guides the practice of teachers in England who have both monolingual and EAL learners in their classrooms. The SVoR suggests reading requires development in two key skills: decoding, or the ability to apply their knowledge of print and map this to corresponding sounds,

and comprehension, the ability to derive meaning from language (Hoover & Gough, 1990). Whilst both skills are required for successful reading, they also remain independent, in that individuals may be stronger at decoding than comprehension, or vice versa (Cain et al., 2004). Figure 2.2 therefore presents quadrants of these two skills to illustrate four distinct profiles of readers. Quadrants A, C and D describe readers with differing skills in decoding and comprehension that would indicate difficulty in their overall reading ability, whilst quadrant B describes readers that have well-developed skills in both aspects of reading, indicating fluent and accurate understanding (Stuart & Stainthorp, 2015).
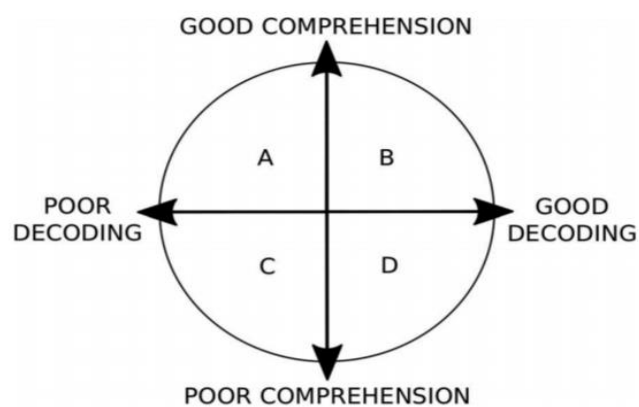
Figure 2.2: The Simple View of Reading (K. Nation, 2019, p. 51)

It is important to note that there has been debate surrounding the SVoR, in that it reduces the multi-faceted nature of reading by excluding other aspects such as vocabulary, working memory, motivation and inference-making skills (Kirby & Savage, 2008; Pressley et al., 2008). Inference-making is the ability to process information from a text to generate additional information that is implicit (Kispal, 2008). Whilst there are several ways to categorise types of inference, (see Kispal, 2008 for a review) a distinction can be made between 'local' and 'global' inferences. Local inferences enable pupils to make interpretations about a text that go beyond the literal text, whereas global inferences expect pupils to consider broader elements related to a text, such as considering a character's motivation or goal (Language and Reading Research Consortium et al., 2019). It is perhaps unsurprising then, that making inferences can be a difficult skill for pupils to develop, in relation to retrieving information directly from a text (Castles et al., 2018). Whilst working memory can contribute to pupils' inference-making skills, vocabulary is particularly important in building pupils' ability to make inferences over time (Language and Reading Research Consortium et al., 2019).

Studies have examined the crucial role vocabulary can play in pupils' reading skills. For instance, Ouellette and Beers (2010) recruited a sample of monolingual Canadian pupils in Grade 1 ($N = 67$) and Grade 6 ($N = 56$) measuring their phonological awareness, decoding skills, vocabulary, reading and linguistic comprehension in English. It was found that oral vocabulary contributed to explaining variance in reading more than decoding did for pupils in Grade 6, although this was not the case for Grade 1 pupils who were still developing their word recognition skills that, in turn, limited their comprehension skills (Ouellette & Beers, 2010). However, Braze et al. (2016) were critical of the measures that form the basis of these findings, as elements of the linguistic and reading comprehension tests were not parallel in design or accuracy when considering the measures used for vocabulary in the study.

By contrast, Tunmer and Chapman (2012) adopted three data analysis procedures (hierarchical regression, exploratory factor and structural equation modelling) to explore the role of vocabulary within the SVoR. Based in New Zealand, a sample of 7-year-old monolingual pupils ($N = 122$) were given a battery of assessments covering vocabulary, decoding and comprehension that considered inconsistencies from previous research. The findings of the Ouellette and Beers (2010) study was reflected in this study's hierarchal regression analysis, in that vocabulary also played a statistically significant role in contributing to overall reading ability. However, the exploratory factor analysis suggested that vocabulary is not a distinct and separable aspect, but rather a component within the broader linguistic comprehension aspect of the SVoR. Finally, the use of structural equation modelling led Tunmer and Chapman (2012) to conclude that whilst the fundamental elements of the SVoR are sound, researchers should be aware of the indirect role linguistic comprehension can have on influencing the development of children's reading ability.

Nevertheless, Braze et al. (2016) suggested a limitation with the Tunmer and Chapman (2012) study can be found in the lack of measures used to capture the linguistic comprehension aspect of the model, such as pupils' oral language skills. Failure to measure such skills may have had an impact on the findings of the hierarchal regression undertaken in the study, in which it may have been easier to detect the role vocabulary plays in reading comprehension in comparison to other important skills such as oral language (Braze et al., 2016). Both Ouellette and Beers (2010) and Tunmer and Chapman (2012) support the use of the SVoR in explaining differences in reading development among L1 learners, demonstrating that both decoding and comprehension skills are required for successful reading. Such studies also highlight the inherent complexities surrounding these skills, which can be difficult to capture accurately in research (Braze et al., 2016).

There is also the relationship between pupils' listening and reading skills to consider as K. Nation and Snowling (2004) demonstrated in their longitudinal study involving 72 pupils over a four-and-a-half-year period. Pupils took part in a battery of tests (measuring nonverbal ability, phonological skills and oral language skills) at the beginning of the study (aged eight) and took part in follow-up

tests at the end of the study. Their findings suggested that listening comprehension and vocabulary skills were able to consistently explain up to 14% of variance in pupils' reading, even when controlling for age, ability and phonological skills. Whilst the sample in this study consisted of monolingual pupils who had no known language and communication difficulties, the relationship between oral language and reading skills, and its persistence in influencing the development of reading over time, cannot be overstated (Language and Reading Research Consortium et al., 2019).

2.3.6 The additional challenges for multilingual learners developing reading in English

Oral language and lexical skills are crucial to multilingual learners' success, however, the need to develop strong literacy skills (namely, the ability to read and write in the target language) is paramount to engaging with the curriculum, irrespective of pupils' language backgrounds (Murphy, 2017). It is therefore important to consider the challenges multilinguals may face in developing the L2 literacy skills.

For example, the development of multilingual learners' L2 reading development may cause an additional layer of complexity in ways that are not captured by the SVoR, nor in the studies previously mentioned. For instance, models such as the SVoR assume children have had exposure to speaking and listening in the target language which allows them to rely on their prior knowledge of oral vocabulary to access the process of reading, yet L2 learners are often encountering the oral and written forms of language concurrently (Woore, 2022). This may mean that multilingual learners could accurately decode a word, without necessarily understanding its meaning (Grabe & Stoller, 2011).

Furthermore, there is no consideration of the diverse language histories multilingual learners bring with them as they attempt to develop the L2 reading skills. It could be that multilingual pupils have received formal literacy instruction in languages other than English outside of school, or if applicable, their age of arrival in the UK may have meant they have had limited schooling experience because of differences in educational systems internationally (Florit & Cain, 2011). As such, drawing upon the broad range of language experiences and background knowledge multilingual learners bring into the classroom could play a role in facilitating their L2 reading development. Such meaningful engagement with pupils' histories is important because there is a strong relationship between learners' motivation for literacy activities and their subsequent attainment (Cummins et al., 2015).

By potentially drawing upon their L1, some multilinguals might be able to compensate for challenges related to L2 reading. The literature has demonstrated that some learner's L1 literacy skills, and their broader language knowledge of the L2, such as an awareness of cognates, can begin to explain some of the variance often observed in the development of reading skills among multilinguals (Bernhardt, 2011). For example, languages such as Spanish and English, share vocabulary that is similar phonologically, orthographically and/or semantically (Hall, 2002). Such

similar language pairings might therefore assist multilingual learners' understanding when encountering and comprehending new vocabulary (Bosma et al., 2019). However, for some multilinguals, the 'linguistic distance' or the extent of structural and orthographic differences between the L1 and L2 should also be taken into consideration, particularly as L1s markedly far from English can add a layer of complexity to multilingual learners' reading development (Brevik et al., 2016; Koda, 2007). For instance, multilingual pupils learning English as an L2 who have a logographic L1 such as Chinese, may experience difficulty in processing the considerable linguistic distance between the two languages (Koda, 2007). Depending on learners' L1 literacy skills that are available to them and how linguistically distant this may be from the target L2, other challenges such as disruption of learners' reading fluency, might impact aspects of L2 reading development (Davis et al., 2018). Furthermore, for multilingual pupils who have an alphabetic L1 similar to English, they may still face some challenges in understanding the inconsistencies between the printed and phonetic representations of words, particularly as there are more phonemes than alphabetic letters in the English language (Ziegler & Goswami, 2006).

Therefore, the process of developing L2 reading skills can become inherently more complicated for multilingual learners in comparison to their monolingual peers as they may potentially need to switch between the demands of their L1 and L2 in order to comprehend more complicated text (Koda, 2007). Sufficient oral proficiency in the target language is therefore often a pre-requisite in developing L2 reading, in addition to adequate knowledge of the L2 orthographic system (Bialystok, 2007). Without these elements, multilingual learners may struggle to deepen their metalinguistic awareness of the language system they wish to develop their reading skills in (Bialystok, 2007). These concerns are reflective of the 'short circuit hypothesis' (Clarke, 1980) which suggests that before multilinguals can draw upon their L1 to develop their L2 reading skills, a sufficient grasp of the L2 is required. Without crossing a certain threshold of adequate proficiency in the L2, multilingual readers' skills are at risk of 'short-circuiting,' in that strategies developed to access L1 reading are unlikely to transfer into the L2 with ease (Clarke, 1980). There is, however, little empirical evidence that demonstrates how much L2 proficiency is required to cross the threshold and there is even less understanding of how the reading development of multilinguals with poorer L1 proficiency relate to this hypothesis (August, 2006).

The limited literature available describing the issues described above, are to some extent, mitigated by the literature that has tracked the differences in reading skills among multilingual learners and their monolingual peers within the classroom context. For instance, multilingual learners are typically able to develop their decoding skills at a similar rate to their monolingual peers, although this rate of learning can vary when considering learners' reading comprehension skills (Raudszus et al., 2021). The difference in comprehension is partially attributed to monolingual pupils' typically broader vocabulary and oral proficiency skills in English compared to their multilingual peers

(Droop & Verhoeven, 2003; Raudszus et al., 2021; Verhoeven & van Leeuwe, 2012). Furthermore, framing pupils' reading progress through decoding and comprehension alone can be problematic within the classroom context, because this can sometimes lead to pupils being assessed as successful readers in English based almost exclusively on strong decoding skills rather than on reading for meaning (Hutchinson et al., 2003).

Being able to decode text without comprehension can limit pupils' engagement with the curriculum and may run the risk of lower-than-expected outcomes. This was demonstrated by Cain and Oakhill (2006) in their longitudinal study involving 46 monolingual pupils (whose L1 was English) at age 8 and then at age 11. It was found that those who were assessed with poor comprehension skills were more likely to achieve lower scores in statutory assessments related to English, mathematics and science taken at the end of primary school in England (aged 11). Whilst no single underlying cause could be found to explain this relationship, the authors suggested deficits in vocabulary and capacity to read for meaning could put pupils at risk of developing their reading comprehension skills at a slower rate.

Burgoyne et al. (2009) went on to assess multilingual pupils' comprehension skills in relation to their monolingual peers. They compared 46 pupils in Year 3 (aged 7-8) who were recognised as EAL learners with 46 of English-speaking only pupils. Their study revealed that despite accuracy in decoding text, EAL pupils still struggled with the comprehension of text due to lower English vocabulary scores in comparison to their monolingual peers.

Finally, the literacy environment in both the home and school may have further implications for multilingual pupils' reading outcomes. A study based in the US examined the role of home and school to support multilingual pupils' reading development (Palacios & Kibler, 2016). The researchers conducted a secondary data analysis of a large, longitudinal national cohort study (n = 21,409). Data collection began from kindergarten and continued at regular intervals throughout elementary school until pupils reached Grade 8 (age 13-14). A range of contextual data were also collected, including pupils' demographics, English proficiency levels and parental education. A key finding was that whilst use of languages other than English in the home could be associated with pupils' unlikelihood of achieving higher reading levels in the earlier years of schooling, by Grade 5 (age 10-11) and beyond, this association was no longer significant. Whilst Palacios and Kibler (2016) acknowledged that data on the nature of pupils' home language environment were not collected in enough detail in this study, these findings suggest that over time, learners' skills in each language within their repertoire may shift as their exposure to language environments change (Mieszkowska et al., 2017). Such findings suggest that teachers can potentially enhance multilinguals' chances of better outcomes in reading assessments in English if they are able to create and sustain language and literacy-rich classrooms (Netten et al., 2016)

To summarise, where there are gaps in multilingual pupils' oral language skills in English, limitations in their reading comprehension are likely to follow (Woore, 2022). Taken together, studies suggested that explicit teaching to develop elements of oral language proficiency, such as building vocabulary, have an essential role in helping learners access the wider curriculum and, as such, should be incorporated within classroom practice particularly to support multilinguals' reading comprehension skills.

2.3.7 Writing development for typically developing L1 writers

In comparison to the literature related to multilingual learners' reading skills, there is limited research pertaining to multilinguals' writing development (Graham, 2008; Murphy et al., 2015; Myhill & Fisher, 2010; Williams & Larkin, 2013). Despite these shortcomings, this section draws upon the literature available to first ascertain models that illustrate the complex process of writing per se, and then presents how this complexity relates to multilingual learners' writing development in the final subsection.

The 'Simple View of Writing' (SVoW) (Berninger et al., 2002) synthesised previous models in the fields of linguistics, neuropsychology, child development and cognitive sciences to explain the complexity surrounding the development of writing for typically developing L1 writers (Boscolo, 2008). Figure 2.3 illustrates the central role working memory plays within the SVoW, in which long- and short-term memory is typically drawn upon to assist in the other domains related to writing (Berninger & Amtmann, 2003). For instance, beginner writers' transcription skills, in which they must translate language into the target orthographic system, may first rely heavily on working memory until this process becomes somewhat automated (Berninger et al., 1994). Typically working memory is more likely to be drawn upon in generating text and more cognitively demanding areas related to writing, such as in the planning and revision of writing produced (Berninger & Amtmann, 2003; Dockrell, 2009). This can allow for writing to develop from the linking of simple sentences at a local level, to planning the organisation of larger texts at a global level (Alamargot & Fayol, 2009). In sum, the SVoW therefore distils writing into two key skill areas: transcription (the act of ideas transferring to written form) and ideation (the generation of such of ideas and thoughts to be written) (Berninger et al., 1994).

```
                    ┌─────────────────────────┐
                    │    TEXT GENERATION      │
                    │  words, sentences, discourse │
                    └─────────────────────────┘
                              ╱  ╲
                            ╱      ╲
                          ╱          ╲
                        ╱  WORKING MEMORY ╲
                      ╱       Activates       ╲
                    ╱ long-term memory (composing) & ╲
                  ╱  short-term memory (reviewing)     ╲
                ╱                                        ╲
  ┌─────────────────────┐                    ┌─────────────────────────┐
  │   TRANSCRIPTION     │                    │   EXECUTIVE FUNCTIONS   │
  │     handwriting,    │                    │ conscious attention, planning, │
  │  keyboarding & spelling │                │ reviewing, revising, strategies │
  └─────────────────────┘                    │   for self-regulation   │
                                             └─────────────────────────┘
```
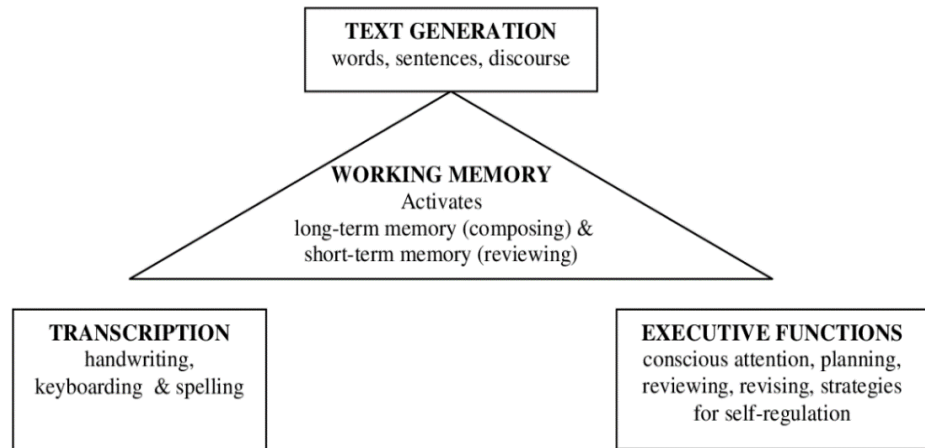
Figure 2.3: The Simple View of Writing (Berninger & Amtmann, 2003)

Other models outlining the writing process have attempted to capture the complexities of writing (Alamargot & Fayol, 2009; Zimmermann, 2000) particularly in areas the SVoW arguably overlooks. For instance, Kim and Schatschneider (2017) suggested that the SVoW lacks detail in defining the skills related to the text generation aspect of the model, which if more explicit, could increase our understanding of how writing develops.

Kellogg's (1996) model, which is often applied to L2 writing research (Andringa et al., 2011; Kormos, 2012; Schoonen et al., 2009) highlights more clearly the challenges writers face within this generative aspect of the process. Kellogg (1996) posits three areas, namely the formulating, executing and monitoring of writing, which together form an iterative and interactive process that the writer must navigate in successfully producing text. The generative aspect of writing is referred to by Kellogg (1996) as 'formulation'. There is also an acknowledgment of the planning and translating elements nested within formulation, in which the learner must draw upon their long-term memory for the generation of ideas and content, in addition to their linguistic knowledge to retrieve the appropriate lexical and syntactical structures required for producing cohesive text. This means that for multilingual learners, the quality and time taken to produce writing may be affected because of the additional cognitive demands placed on them, particularly in the translation of ideas into another language (Schoonen et al., 2009).

2.3.8 Supporting the development of multilingual learners' L2 writing skills

Whilst the concepts in the previous subsection have been adopted in L1 writing research, less is known about how these components develop for multilingual learners' L2 writing skills, nor is much understood about how teachers can best support their writing development (K. Graham & Eslami, 2020; S. Graham et al., 2013). This has implications for some multilingual learners, who may not have sufficient L2 proficiency and as such, may be at risk of disengaging with learning and

struggling with increasingly challenging curriculum content (K. Graham & Eslami, 2019). In a meta-analysis of studies related to L2 learners' development of writing, K. Graham and Eslami (2020) found that nearly a third of multilinguals' variation in writing could be accounted for by their transcription skills, followed by their vocabulary (nearly 25%) and oral language skills (over 15%). Taken together, these findings not only indicate how varied challenges can be for multilinguals, but also highlight areas of support that future interventions could focus on when considering what multilingual pupils need to help develop writing skills. Due to the limited literature available for supporting multilingual learners in this domain, several other studies related to writing in another language in slightly different contexts are first outlined, before considering the UK classroom context.

First, it is important to note that tracking the development of L2 writing development can be methodologically challenging and require considerable time. For instance, Hartshorn et al. (2010) conducted a pre- and post-test intervention study with 47 multilingual students based at a university in the United States, in which 28 of these participants received targeted feedback related to their writing as part of an intervention whilst the remaining 19 did not. All students completed a writing task before and after the feedback intervention, which were collectively scored by three raters for reliability. The findings suggested that whilst the intervention had a positive effect on the accuracy of students' writing, this unfavourably impacted the fluency and complexity of writing produced. In addition to signposting further areas of research, the authors emphasise that the relatively short duration of the intervention (one semester) may have contributed to the rate of measurable impact found in this study and suggest tracking the progress of L2 writing development requires considerable time before changes can be observed.

Drawing upon the context of the Modern Foreign Language (MFL) classroom can be useful in shedding light on how pupils might be formally supported with their writing skills. For instance, Forbes' (2019a) study related to 22 English-speaking MFL learners (aged 13-14) within a UK secondary school found that the explicit teaching of writing strategies, in both English and foreign language classes, could help support the development and subsequent quality of writing produced by experimental pupils in comparison to their control peers. Strategies included guidance on planning what students should write, supporting students in using a checklist to ensure specific features were included in their writing and practising how to identify and correct errors (Forbes, 2019a). Whilst the transfer of pupils' knowledge of writing in their English and foreign language classes was investigated, interviews conducted after writing tasks helped reveal specific 'writer profiles,' which drew out nuanced differences in the types of writers that emerged and the ways in which they approached the challenging task of writing (Forbes, 2019b). The 'multilingual writer' profile was particularly interesting because it identified EAL learners who drew upon their existing linguistic repertoire whilst learning to write in a foreign language, although a common worry shared

among these writers was that their writing did not always make sense either through vocabulary or punctuation choices, which therefore made the production of their writing an iterative process (Forbes, 2019b). This study therefore not only considered the potential benefits of explicitly teaching writing strategies, but also highlighted the nuanced needs of multilingual writers, in which more time and effort is likely to be required in the production of written output.

Allowing pupils the flexibility to drawn upon the languages within their repertoire might assist in the development of multilinguals' writing skills in the target L2. For instance, in a longitudinal case study with three Spanish-speaking four-year olds attending pre-school in the US, it was found that the interlocutors in these children's lives (such as their bilingual teachers, parents, siblings and classmates) influenced their emergent writing skills, and encouraged children to draw upon their L1 in order to build their L2 in the classroom (Reyes, 2006). In another US-based case study, similar findings were found involving a pair of children aged five to six from Latinx and African-American communities (Bauer et al., 2017). Again, by receiving opportunities to freely interact and communicate with others in the classroom in both their home languages and English, this allowed pupils to negotiate the formulation of ideas and process of writing with greater ease. Whilst these studies included very small sample sizes, they highlight how the creation of a classroom climate which encourages and enables discussions in languages pupils can communicate in, can begin to support learners in navigating the complexities of L2 writing.

Framed within England's primary classroom context, however, writing among EAL learners remains an area that is grossly under-researched (Murphy et al., 2015). The few studies that do explore multilingual learners' writing in this context suggest there are differences in their writing output, compared to their monolingual peers. For instance, Cameron and Besser's (2004) study was one of the first to compare differences in writing among pupils framed within the classroom context in England, involving 264 pupils in Year 6 (age 10-11). The study highlighted that despite all pupils having at least five years' experience within the British education system, observable differences could be found in the writing produced by monolingual and EAL pupils. Yet the study did not take account of other aspects of pupils' literacy development and the potentially broad language histories that may have contributed towards pupils' writing development. However, the study demonstrated that multilingual pupils, even with several years of exposure to the education system, still required time to develop strong language and literacy skills.

Another more recent study in England was conducted by Murphy and colleagues (2015) with 100 pupils in Year 5 (age 9-10). Both monolingual and EAL pupil groups were also matched on language age (measured through standardised tests in vocabulary, reading and non-verbal reasoning). These tests demonstrated that monolingual pupils scored consistently higher than their EAL peers (Murphy et al., 2015). Furthermore, all pupils' writing outputs were analysed, and a key finding suggested that even when controlling for language age, monolingual pupils performed

better on the formulation of ideas and organisational aspects of writing, in comparison to their multilingual peers. This study was important because by considering other aspects of pupils' language and literacy skills, it allowed for more detailed distinctions that went beyond the monolingual/EAL binary and acknowledged that higher-order skills such as the development of ideas for writing are challenging for multilingual learners.

To summarise, this section explored how the development of multilingual learners' language and literacy development demands an understanding of the interactions between their oral language skills, the quality and quantity of language inputs and the environments in which they receive these. Within the classroom context, pupils' L2 vocabulary knowledge (which is assumed to be English) plays a pertinent role in their successful engagement with their curriculum and has demonstrated predictive power related to learners' educational outcomes (Bialystok, 2007; Conteh et al., 2008; Miller et al., 2006; Murphy, 2017; K. Nation & Snowling, 1998). To address the variation in these areas that multilingual pupils may or may not have enough exposure to, the embedding of explicit language-oriented classroom practice could be advantageous in supporting learners to develop their English language and literacy skills (Murphy & Unthiah, 2015; Oxley & de Cat, 2019). The practical implications of this are explored in more detail in the next section.

2.4 Effective practice in multilingual classrooms

The previous section considered how multilingual learners' language and literacy skills develop over time, with the environment, quality of input and vocabulary knowledge inextricably linked to multilingual pupils' successful engagement with the classroom and curriculum (Bialystok, 2007; Conteh et al., 2008; Miller et al., 2006; Murphy, 2017, Oxley & de Cat, 2019). Ideally, teachers' subject knowledge and subsequent classroom practice would be reflective of these demands in order to support the development of multilinguals' skills, but what is available to teachers in England remains limited (Oxley & de Cat, 2019). Therefore, this section examines what is needed to develop effective multilingual practice, and how this can be underpinned by sociocultural, critical and linguistically responsive theoretical frameworks. Sociocultural approaches to learning draw upon interactions with others around a learner to help build knowledge (Vygotsky, 1962); critical pedagogical approaches question the status quo in relation to languages within the education system (Freire, 1970); and linguistically responsive practice considers the interplay between multilingual pupils' language(s), home experiences and identities to situate classroom learning in meaningful contexts (Lucas & Villegas, 2013). Understanding the potential design of effective practice for multilingual learners' teaching is important because research focussed on developing teachers' knowledge in such ways is needed to identify sustainable solutions to enhancing multilingual learners' outcomes (Oxley & de Cat, 2019).

2.4.1 The linguistically responsive teacher

As explained earlier in this chapter there is limited research into what works for multilingual learners and limited attention is given to teacher subject knowledge for it in current policy. However, the concepts of culturally and linguistically responsive teaching provide some direction for this shortfall. There can be considerable language and content demands that are placed on multilingual learners in the classroom (Coady et al., 2016). These demands are an important area for teachers to acknowledge, because of multilingual pupils typically needing both instruction in building content knowledge and the ability to read, write, speak and listen in the language of the curriculum (Pass & Mantero, 2009). It is clear then, that the relationship between multilingual pupils' developing language and content is strong, and it is partly rooted in teachers providing adequate context as part of their classroom practice (Viesca et al., 2019).

If learning is viewed as a predominantly social activity, teachers are well placed to provide both knowledge and opportunities for pupils to practise and expand their language and literacy skills within the classroom (Leung, 2022b). However, this requires consideration of the teacher's sense of identity and the role it may play in being able to respond effectively to the needs of multilingual learners (Reeves, 2009). As previously discussed, much of these ideas echo Vygotsky (1978) and Freire (1970) in that teachers have the potential to play a pivotal role in disrupting the traditional classroom dynamic by placing their pupils at the heart of learning, with their voices, interactions

and experiences central to building new knowledge. However, in order to build a sense of identity and renewed agency in their practice, teachers would need to develop their own understanding of what language is and how it can be drawn upon to further multilingual pupils' learning (Foley et al., 2022).

Research conducted by Lucas et al. (2008) recognised that placing the onus on teachers to develop a specialised knowledge base for teaching their multilingual pupils can be an overwhelming task. Instead, several guiding principles that can help develop 'linguistically responsive' practice could be used to address the needs of diverse classrooms (Lucas et al., 2008; Lucas & Villegas, 2013). These principles include an inherent understanding that conversational language is different from academic language (Cummins, 2000) and recognising that pupils' proficiency in other languages can be helpful in developing their language skills at school (Thomas & Collier, 2002). It is also important to consider the nature, quantity and quality of teaching inputs that can support and encourage the production of pupil outputs (Lucas et al., 2008). This could include teachers drawing upon supplementary resources such as images, videos and graphical representations for pupils to access content (Gibbons, 2015), modifying written texts and oral language in the classroom to support pupils' understanding of content (Brown, 2007; Verplaetse & Migliacci, 2008) and planning for activities that focus on building authentic interactions among pupils and adults in the classroom.

Lucas et al. (2008) also stress the importance of creating learning environments that are safe and welcoming for multilingual learners, in which potential anxieties in developing the L2 are reduced. Creating such environments are pertinent when considering that learners who are still attempting to master the dominant language in the classroom may not be able to express themselves fully or retain new knowledge if they feel their language skills are under scrutiny (Chalmers & Crisfield, 2019). This 'othering' of multilingual learners can potentially create a divide within school communities that might perceive such learners at a disadvantage based on their English skills alone (Szymczyk et al., 2022). The onus is therefore on teachers to be consciously aware of creating classrooms that are welcoming and inclusive (Lucas et al., 2008). If such safe cultures are not adequately developed within schools, there will arguably be very little teachers' can apply from technical pedagogies to support the development of multilingual pupils' skills and subsequent outcomes (Conteh & Brock, 2011).

Another example of linguistically responsive teaching relates to the language used in classroom settings. Turkan et al. (2014) suggested 'disciplinary linguistic knowledge,' or the ability to not only understand academic content but teach how specialist language is embedded within their discipline, can support multilingual learners in classrooms. This means that in addition to academic knowledge, teachers should develop a linguistic base which allows for the features of academic language to be explicitly analysed as well as opportunities for it to be modelled through oral and

written means (Turkan et al., 2014). This approach recognises the dual challenge teachers face in simultaneously delivering academic content and developing multilingual pupils' language skills (Coady et al., 2016). However, Turkan et al. (2014) recognise that this approach is not a generic framework which can be applied the same across every classroom, but rather, would need to be tailored according to different subjects and age ranges of pupils.

Taken together, these ideas characterise the 'linguistically responsive' teacher who can begin to advocate for and support the needs of a diverse pupil group (Lucas et al., 2008). Yet Lucas et al. (2018) note that more research is required on mapping teachers' professional journeys in the developing and enacting of such linguistically responsive practice. Arguably, this call for more practice-oriented research identifying the linguistically responsive teacher at work sits alongside the call for more research into professional learning for teachers of multilingual learners. Not enough is yet understood about what linguistically teachers do and whether what they do promotes better social and academic outcomes; addressing this shortfall sits at the heart of this thesis.

2.4.2 Critical socio-cultural pedagogy

We now consider how critical socio-cultural pedagogy might also contribute towards effective practice for multilingual learners in the classroom. The seminal work related to Vygotsky's theories of learning (Vygotsky, 1962; Vygotsky et al., 1978) continue to be relevant for teacher and pupils' learning and development (Newman & Latifi, 2021). Vygotsky's (1962) core arguments suggested that the construction of knowledge and learning is rooted in sociocultural theory. This is broadly characterised by the interactive, interpersonal and intrapersonal processes that an individual develops whilst making meaning of the world around them, through the social, cultural and historical contexts in which they are situated (Daniels, 2008).

Framed within the school context, this means learning is primarily derived from interactions pupils have with those around them (Wells, 1999). Vygotsky (1978) placed emphasis on the salient role of language and communication, suggesting it is akin to the role eyes and hands play when creating new knowledge or problem-solving. It is perhaps unsurprising, then, that the 'zone of proximal development' (ZPD) posited by Vygotsky (1978) centres around the potential difference in learning a pupil can achieve when working with 'more knowledgeable others' (such as peers, teachers and other adults) in comparison to independent learning.

In relation to multilingual learners, the ZPD can be particularly powerful in helping teachers and pupils create an interactional space in which learning can be extended (Teemant, 2020; Tharp, 2006). Through this collaboration, learning of new knowledge is essentially 'scaffolded' or co-constructed (Gibbons, 2015; Vygotsky, 1978). However sociocultural theory also acknowledges the environment in which these social and collaborative interactions take place, as well as the cultural backgrounds and experiences pupils bring to such spaces (Holzman, 2018). Smagorinsky (2013) therefore suggests that teachers can play a pivotal role to help foster and respect differences in how

thinking, speaking, and learning might be presented in their classrooms. Therefore, by utilising the ZPD, valuing the languages multilingual pupils have access to and acknowledging the demands academic language places on such learners, schools can begin to respond to the dynamic language and learning needs of their linguistically diverse pupils (Repo, 2022). Because sociocultural theory typically views "knowledge as cultural, learning as social, and teaching as mediation" (Flynn et al., 2023, p. 2) classrooms are well-placed to foster meaningful interactions to build pupils' learning and understanding of the world.

However, the teacher-pupil dynamics within schools can create challenges for sociocultural-informed spaces to exist (Smagorinsky, 2013) because of the imbalance of power between teachers and pupil relationships that do not foster authentic dialogue in classrooms (Lyle, 2008). Freire's (1970) seminal work on critical pedagogy likens the teacher-pupil relationship to a banking model in which teachers 'deposit' information to pupils as passive receivers of knowledge. The need to think creatively or critically is considered irrelevant, and it is considered that pupils forgo the right to question and challenge the nature or delivery of their teachers' knowledge (Freire, 1970).

Freire (1970) argues that this traditional teacher-pupil dynamic essentially mirrors the oppressive structures found within wider society, in that teachers' knowledge, authority and decision-making abilities have overriding importance which generates and maintains pupils' powerlessness. Yet it is also acknowledged that teachers are subjected to exploitation within the same system, with limited agency that typically does not go beyond the parameters of their pupils' performance in standardised tests (Giroux, 2010). The demands of the National Curriculum in England has meant many teachers attempt to deliver curriculum content under considerable pressure and pace, with pupils' results from national tests published in school league tables for scrutiny and poor test performance typically triggering school inspections from the national inspectorate, Ofsted (Bradbury et al., 2021). Such pressures of themselves foster teaching that might be characterised as inauthentic, intense and with little room for creative approaches to learning because teachers are continually scrutinised for pupils' performance (Sturrock, 2022).

To counter this, Freire (1970) suggests taking a 'problem-posing' approach to pedagogy, that challenges the traditional roles embedded within school systems and encourages teachers and pupils to work as co-contributors. To engage in meaningful dialogue to build understanding, and thus empower pupils to critically reflect on the world around them (del Carmen Salazar, 2013). This approach acknowledges the broader political and moral influences linked to education systems and goes on to redefine pedagogy as needing to provide "the knowledge, skills and social relations that enable students to…be critical citizens" (Giroux, 2010, p. 716). Freire (1970) places emphasis on developing critical thinkers in classrooms who, through collaborative dialogue, work towards creating socially just and equitable communities.

However, framing critical pedagogy within the classroom context can pose practical challenges for educators (del Carmen Salazar, 2013). As stated previously in this chapter, it is difficult to overlook the mismatch of teacher and pupil demographics in which the overwhelmingly White British profession continues to serve ethnically diverse pupil communities in England (Demie & Huat See, 2022). This disproportionality can mean in-service teachers may struggle to connect with their pupils and the curriculum they are trying to deliver (Sleeter, 2012). This is further exacerbated by pre-service teachers who may feel a sense of duty and commitment towards supporting multilingual learners, but still report on leaving teacher training programmes with little understanding and confidence on how best to implement this within their own classrooms (Foley et al., 2022). Furthermore, schools in England continue to face pressures in teaching content and being held accountable for a range of pupils' statutory assessments in an increasingly high-stakes environment (Bradbury et al., 2021). Whilst some teachers may try to promote linguistic diversity in schools, the underlying tensions of testing, monolingually oriented curricula, and implicit encouragement of diverse pupils to assimilate into dominant cultural ideals cannot be ignored (Coyle et al., 2023).

To summarise, critical pedagogy challenges the traditional teacher-pupil dynamic and advocates for a renewed sense of empowerment, agency and identity to drive learning beyond the classroom and into the creation of socially just communities (Freire, 1970). Whilst this is arguably at odds with current education systems, there is scope for pedagogy to revolutionise classroom spaces, and in turn, help support the development of creative and critical thinkers in teachers and pupils alike. As such, it can be argued that sociocultural and critical theories can work in tandem, with each interpreting the creation of knowledge not as an educational outcome, but rather a tool for pupils' individual empowerment and for their potential to enact change in their communities and beyond (Vossoughi & Gutiérrez, 2017).

2.4.3 Dialogic classroom practice

Central to the work of Vygotsky and Freire is the use of language as the tool for empowerment, and the crucial role of dialogue in promoting language, social and literacy development. The use of dialogic practice in classrooms stems from and builds upon these sociocultural theories (Reznitskaya, 2012). Whilst there are several approaches to dialogic pedagogy (Lefstein & Snell, 2013), what unites them is a shared aim to "exploit the power of talk to engage and share children's thinking and learning" (Alexander, 2008, p. 92).

Bakhtin (1981) first suggested that classrooms can often be characterised as 'monologic' in nature, in which much of any talk is dominated by teachers and where pupils are invited to talk, they will typically follow a pattern of answering a question and receiving a response to this. Arguably much of Bakhtin's thinking mirrors that of Freire. Conversely, dialogic practice can be illustrated through teachers (1) preparing open, thought-provoking questions, (2) building upon responses by asking further purposeful questions, and (3) facilitating intentional exchanges among teachers and pupils

which contribute toward logical lines of enquiry as opposed to a mixture of unstructured thoughts (Alexander, 2008). Much of this approach reflects Vygotsky's work (1978) in that dialogic practice teaches pupils thinking skills: engaging in dialogue with others to gain understanding, then internalising this dialogue as new knowledge (Phillipson & Wegerif, 2017).

The dialogic approach therefore emphasises equal importance given to pupils' voices in the classroom, in which genuine questions and collaborative thinking contribute to pupils' understanding (Wells, 2007). This again, reflects much of Freire's ideology in which it is essential for the teacher to be on an equal footing with their pupils so that all are enabled to build meaning through shared dialogue (Freire, 1970). Creating opportunities for pupils to interact with each other, such as in pairs or small groups, can therefore begin to rebalance the distribution of talk in the classroom (Mercer & Littleton, 2007). Where pupils are enabled to engage dialogically with each other in this way, this is often associated with greater progress in language and comprehension skills compared to more monologic classrooms (Gibbons, 2015).

We turn now to how dialogic practice has impacted the development of multilingual pupils' language and literacy skills in previous research. First, a case study conducted by Haneda and Wells (2008) which involved three EAL pupils aged between eight to ten years old. Two pupils were Chinese-speaking and based in Toronto and the other was based in a predominantly Spanish-speaking classroom in California. The teachers in these classrooms were trained extensively in developing dialogic practice related to science and were able to demonstrate in the planning of their lessons clear connections between curriculum content and pupils' own lives. Moreover, they created classroom climates which encouraged pupils to build upon their teachers' and each other's responses without fear of making errors in their speech (Verplaetse, 2000). In each case, teachers were able to foster pupils' curiosity through inquiry-based lessons and therefore, enable active participation and langauge use in the classroom through pupils' questions and discussions, which are considered as key components of dialogic practice (Haneda & Wells, 2008). However, this was a small case study which focussed primarily on science lessons and was based in contexts beyond England. Although small scale and based in the US, the English-speaking context of the research has relevance for the classroom context in England.

A study conducted by Howe et al. (2019) recorded 72 classrooms in England with monolingual and multilingual pupils in Year 6 (aged 10-11), in order to analyse teacher and pupil talk during classroom learning, and its relation to pupils' subsequent outcomes in statutory assessments for English and mathematics. Analysis consisted of coding each recording based on the dialogue that occured in the classroom. It was found that where pupils elaborated or built upon responses, queried earlier contributions and engaged with their peers' ideas and thoughts, their subsequent performance in statutory assessments could be predicted. Overall, the study provided much-needed insights into the potential impact of dialogic classrooms on pupils' outcomes within England.

A notable example of the impact of classroom talk on attainment can be found in the large, randomised control trial which sought to evaluate the dialogic teaching approach with 76 teachers working with Year 5 pupils of all language backgrounds (aged 9-10) in England (Jay et al., 2017). Experimental schools received a structured cycle of mentoring, monitoring and resources to develop dialogic classroom practice, and in comparison to their control school peers, experimental pupils made up to an additional two months' progress in their English, mathematics and science attainment as a result of this intervention (Jay et al., 2017). Reflecting on these findings, Alexander (2018) reaffirmed the pivotal role teachers' talk in the classroom can have in either confining or encouraging pupils' ability to actively participate not only in their meaning-making of new knowledge, but also more broadly in cultural and civic engagement (Teemant et al., 2014).

Creating a talk-based classroom learning environment has implications that need to be considered practically. For teachers, such an approach can be at odds with an intense timetable and testing culture. Talk-based approaches also demand teachers' confidence in subject knowledge and require a shift in mindset which challenges existing school structures (Snell & Lefstein, 2018). It can therefore be considered too idealistic an approach, in which the demands placed on teachers to create such spaces may be too overwhelming to fulfil (Lyle, 2008). Nonetheless, dialogic classrooms can be considered as spaces that are inclusive of all voices in the classroom which can build meaningful engagement in learning, promote independent thinking and enrich understanding of knowledge (Alexander, 2020). They have potential to enhance the learning of multilingual learners because they foreground talk before developing literacy skills in ways that align with what we know works well for new language learners (Jay et al., 2017; Teemant & Sherman, 2022)

2.5 Professional Development (PD) for teachers of multilingual learners

The previous section considered the ways in which teachers could develop effective multilingual practice. This section goes on to examine how teachers might be supported in doing so, through professional development (PD). There have been multiple calls for in-service teachers' PD to include explicit guidance related to EAL pedagogy within the UK context (Murphy & Unthiah, 2015; Strand & Hessel, 2018; Wei et al., 2010). However, given the variety of PD approaches that teachers may participate in, it has been challenging for researchers to assess to what extent the design of PD programmes may have impacted schools, teachers or pupils (Desimone, 2009; King, 2014; Muijs & Lindsay, 2008). Therefore, this section first considers how frameworks might evaluate the effectiveness of PD, before moving on to studies which have attempted to use PD as a means of developing multilingually oriented classroom practice.

Guskey (2000) suggested the effectiveness of PD can be assessed through a hierarchy, in which the most common and easily obtainable is participants' response to the PD they have engaged in. Next, PD effectiveness can be examined by any new learning participants may have gained from the PD, followed by how wider support from participants' organisations may have helped sustain a change in practice. More challenging is assessing to what extent participants have implemented new learning gained from PD into their classroom practice, and finally, the effectiveness of a PD programme might measure how a sustained change in teaching practice impacted on pupils' outcomes (Guskey, 2000). Contrastingly, Desimone (2009) puts forward a conceptual framework which focusses on the interactive relationships between PD, teachers' beliefs, how they apply new knowledge in their practice and pupils' outcomes. These take into account contextual factors, such as the school environment, leadership styles and curriculum demands which may contribute to the effectiveness of a PD approach. Whilst there are nuanced differences in how PD can be evaluated, both frameworks agree that measuring pupils' outcomes should be central to PD evaluations (Merchie et al., 2018). Yet the measuring or reporting of pupil outcomes in relation to assessing the impact of PD programmes remains notoriously difficult (Borg, 2018; Desimone, 2009; King, 2014; Muijs & Lindsay, 2008; Opfer & Pedder, 2010).

An example of accounting for pupil outcomes can be found in a PD study with 91 elementary schools across New Zealand, in which the authors delivered a two-year programme to build teachers' pedagogical knowledge related to teaching literacy skills for both monolingual and multilingual pupils (Parr et al., 2007). Pupils' outcomes in reading and writing were measured over time, and whilst reading outcomes were modest, a key finding suggested that teachers' writing knowledge (such as providing specialised feedback) significantly correlated with pupils' performance in writing (Timperley & Alton-Lee, 2008). Whilst the design of this PD study framed success primarily around pupils' outcomes, there is no indication of whether pupils' language backgrounds had an impact on findings.

A small number of studies have specifically examined how PD could be adopted to support multilingual learners in schools (Murphy & Unthiah, 2015; Oxley & de Cat, 2019). Whilst the majority of these studies are of US origin, one is framed within the UK context. The 'Talking Partners' project (Kotler et al., 2001) was identified by Murphy and Unthiah (2015) as the only UK based intervention study with a PD element, that specifically aimed to support multilingual learners' oral language skills. Based in Bradford, the schools involved in this study served pupils largely from Punjabi and Sylheti-speaking communities. Sixty-four pupils were randomly assigned to an experimental group (with 63 placed in a control group) across Years 1 to 3. The experimental pupils received a 20-minute intervention three times a week, over ten weeks, that provided structured opportunities for pupils' English language and vocabulary skills to develop. A MANOVA followed by univariate ANOVA on a range of language measures showed a statistically significant pre/post-test improvement for the experimental group in oral language skills. The authors found that in comparison to the control pupils, the experimental pupils' oral language skills increased, with this being a statistically significant finding. However, the research design was somewhat weakened due to pupils from both experimental and control groups being based at the same school, which may have unintentionally led to teaching staff informally sharing practice and potentially affecting the findings. Further, no effect sizes were reported, which limits the extent to which meaning can be drawn from these results. However, this study is a helpful addition to the severe lack of research related to talk-based PD programmes for multilingual learners, particularly from a UK context.

Turning to southeast America, where Maerten-Rivera et al. (2016) conducted a large-scale, randomised controlled trial with 63 schools over the course of three years. The intervention consisted of a bespoke science curriculum and PD programme to raise multilingual pupils' outcomes in Fifth Grade science. The curriculum included explicit instruction on a range of topics, hands-on activities to encourage pupil enquiry and supplementary resources in English, Spanish and Haitian Creole, representing the core languages spoken by participating pupils. The intervention also included immersive PD workshops and a comprehensive teacher's guide, which were designed to connect teachers' science subject knowledge with a deeper understanding of how to support their multilingual learners' language and literacy skills. Whilst no intervention effects were detected in the first year of the study, the second and third years indicated differences between the control and experimental pupils' science outcomes. It was also noted that a time lag in the implementation and subsequent impact of an educational intervention can be unavoidable, as teachers require time to familiarise themselves with curriculum changes and embed practice (Maerten-Rivera et al., 2016).

The Pathway Project study (Matuchniak et al., 2014) is an example of another randomised controlled trial that aimed to improve multilingual learners' academic writing outcomes, by

providing an intensive PD programme including resources and coaching over a period of three years. Drawing upon 15 middle and high schools in California, a total of 103 teachers were randomly allocated to control or experimental groups. Teachers in the latter group received 46 hours of training per year, related to the use of cognitively oriented strategies to support multilingual learners in interpreting and writing academic essays. Matuchniak et al. (2014) analysed a sample of pupils' essays (300 at pre-test and 300 at post-test) using a series of ANOVAs and post-hoc tests to find significant intervention effects on writing performance for pupils who had been taught by experimental teachers for two years, in comparison to pupils who had received only one year of teaching and none at all. Whilst the authors acknowledge that an intervention's PD and associated pedagogical changes require time to be internalised by both teachers and pupils alike (Matuchniak et al., 2014) the study did not take into account the school, teacher and pupil differences, which are important contextual factors to consider when evaluating the effectiveness of a PD programme (Merchie et al., 2018).

Taken together, these studies demonstrate the potential impact PD for teaching multilinguals can have on pupils' outcomes. This is despite sometimes unavoidable methodological constraints, such as control and experimental teachers placed in the same settings as was the case for the Talking Partners study (Kotler et al., 2001), or not being able to account for potential differences amongst participants in statistical analyses such as in the Pathway Project (Matuchniak et al., 2014). However, these studies also confirmed that sufficient time is required to allow for PD to be embedded within teachers' classroom practice, as Maerten-Rivera et al (2016) found in their study, and that measurable results may not be detectable until considerable time has passed - which may well be after the life of the project.

2.5.1 Moving from theory into practice: The Enduring Principles of Learning (Teemant, 2014)

It can be a difficult and overwhelming task for teachers be linguistically responsive in their practice, particularly when considering curriculum and testing demands placed on teachers to deliver results which are assessed in English (Haneda & Wells, 2008). The Enduring Principles of Learning (EPL) is an established framework for teachers' professional development which advocates for sociocultural, critical and linguistically informed classroom practice, but links theory to practice by tracking teachers' progress through a tested framework designed specifically for teachers' professional development. Teemant, its principal architect, developed this approach in an attempt to tackle the twin challenges of lack of teacher preparation for teaching multilingual learners and low outcomes for these children (Teemant & Hausman, 2013). Rather than being an intervention per se, it might be described as a series of teacher behaviours which together generate a critical socio-cultural pedagogy (Teemant, 2020).Importantly, this approach is not so much as an add-on to

teaching but more as a way of being in the classroom (Doherty et al., 2003; Teemant, 2014; Teemant et al., 2011).

Use of the EPL sits at the centre of the research reported in this thesis. The professional learning associated with it traditionally occurs through delivery of five-day teacher workshops during summer vacation time, follow-up one to one coaching over one year, and use of a tested rubric built around the principles which supports both teachers' planning and the assessment of their practice (Teemant, 2014). The nature of the rubric itself is called The Standard Performance Continuum (SPC) Plus (Doherty et al., 2002; Teemant et al., 2014; Tharp, 2006). It is discussed in section 3.5 because this is methodologically central to the intervention design used in this study. For the purposes of this chapter, discussion is focussed on how the intervention maps onto what is known about good practice for multilingual learners.

The seven principles which make up the EPL are informed by the theoretical thinking that was introduced earlier in this chapter. The first principle, 'Joint Productive Activity,' encourages explicit collaboration and shared ownership of learning to be nurtured between teachers and students, whereas 'Instructional Conversation' refers to pupils and teachers engaging in dialogue, planned by teachers with set goals which help drive discussions (Teemant, 2014). These principles echo much of the sociocultural and dialogic pedagogies previously discussed, in which fostering a space of intentional interactions among teachers and small groups of pupils can be a powerful approach in building learners' understanding of content (Alexander, 2008; Tharp, 2006; Vygotsky, 1978; Wells, 1999).

'Critical Stance' encourages teachers and pupils to challenge the status quo, by providing a space to explore identities and structures in society, as well as opportunities for pupils to exercise their power and agency (Teemant et al., 2014). In practice, Critical Stance may centre pupils' identities, cultures and understanding to drive the learning of new knowledge in an authentic, enquiry-led way (Teemant & Sherman, 2022). Much of this principle can be traced back to Freirean ideology in which teachers should be encouraged to support pupils in becoming critical thinkers who are equipped to address social inequities (Freire, 1970; Giroux, 2010).

The remaining principles focus on how teachers can make purposeful changes to their practice to support multilingual pupils in their classrooms. This includes 'Language and Literacy Development,' which requires teachers to carefully design activities to enrich pupils' reading, writing or speaking skills (Teemant, 2020; Tharp, 2000). This might be demonstrated through the use of high-quality texts to anchor group discussion and expand pupils' vocabulary (Flynn et al., 2023).

'Contextualisation' encourages teachers to utilise pupils' school-based experiences, communities and/or home lives to meaningfully situate new learning content. 'Challenging Activities' promotes

cognitively demanding thinking, which may be reflected in teachers' use of higher-level questioning and formative feedback to stretch pupils' responses to tasks. Lastly, 'Modelling' is based firmly in the Vygotskyan notion of the ZPD whereby pupils' learning is scaffolded through tailored support (Newman & Latifi, 2021) and largely relates to teachers making explicit the language, skills and final product required for a task (Sherman & Teemant, 2021; Teemant, 2020).

There has been evidence of the effective use and measurable success of the EPL in schools, primarily framed within the American context. For instance, Doherty and Hilberg (2007) – working with a forerunner of the EPL called the Standards for Effective Pedagogy (Tharp, 2000) - replicated their pilot study (Doherty et al., 2003) in an attempt to strengthen their findings related to the use of the principles in raising pupils' achievement scores in language, comprehension, spelling and vocabulary. This study recruited 23 teachers and 394 third- to fifth-grade pupils, from two schools serving largely low-income, Hispanic communities in California. One of these schools had established the use of the SPC Plus to provide a framework for practice for several years, whilst the other school acted as a control that had no prior engagement nor exposure to the EPL. Pupils' outcomes were measured through a standardised achievement test featuring items on comprehension, language, reading, spelling and vocabulary. An ANCOVA followed by MANOVA were used to assess whether there were differences in pupil outcomes between the two schools. After controlling for a range of factors including pupils' English proficiency, prior academic attainment and their teachers' years of experience, Doherty and Hilberg (2007) concluded that as teachers' implementation of the EPL increased, multilingual pupils' academic outcomes related to language, reading and vocabulary also improved.

Teemant et al. (2014) conducted a quasi-experimental study using the EPL with 36 teachers in a diverse elementary school in the US. This meant 21 teachers received EPL coaching with a particular focus on developing teachers' use of the principle 'Critical Stance', whilst the remaining teachers served as a control. Pupil outcomes were measured through an English proficiency test and an English/language arts test endorsed by the state (Indiana Department of Education, 2011) that covered the domains of reading, writing, speaking and listening in English. A range of Pearson product-moment correlation coefficients were analysed, and it was found that teachers' increased application of Critical Stance within their practice positively correlated with pupils' performance in both the English/language arts and proficiency tests.

A randomised control trial with 40 experimental teachers and 34 control teachers in the state of Georgia focused on the impact of the 'Instructional Conversation' principle on multilingual learners' outcomes in Grade Three and Grade Five (Portes et al., 2018). Experimental teachers received 100 hours of professional development over a two-year period, allowing for time to learn about and practise developing their Instructional Conversation for a year before embedding this into teaching practice in the second year. The intervention supported teachers to regularly facilitate

small-group conversations (with three to seven pupils at a time) for around 20 minutes with clearly defined academic purposes. Pupil outcomes were measured through Assessing Comprehension and Communication in English State to State tests (Fox & Fairbairn, 2011) which were used and approved by the state prior to this study. A range of Ordinary Least Squares analyses revealed that the intervention had greater impact on multilingual pupils taught by experimental teachers in comparison to their control peers, with this most prominent in English language outcomes (β = .45) and the least in reading outcomes (β = .22). This study demonstrated that the use of Instructional Conversation, in which teachers could focus on targeted dialogue with pupils to build their content and language skills, had a measurable impact on improving test outcomes.

Collectively, the studies relating to use of the EPL confirm that their use may foster a number of components that can support multilingual learners in schools. For instance, promoting the pivotal role of talk in classrooms has had some measurable success (Jay et al., 2017) and as previously discussed, is a promising example of the type of intervention studies that are needed to address the lack of studies available in England (Murphy & Unthiah, 2015; Oxley & de Cat, 2019). Furthermore, the use of practical resources to explicitly consider the academic language demands on their students (Turkan et al., 2014) and tangible strategies that encourage linguistically responsive teaching (Lucas & Villegas, 2013) can be considered important steps in addressing the lack of PD that is tailored to multilingual learners' needs. Such teachers are fundamentally aware of the connection between multilingual pupils' language, culture and identity, and endeavour to value and advocate for pupils' support and success in the classroom (Lucas & Villegas, 2013).

Whilst there are a number of studies that have tracked the success of the EPL in the US, there are none to date that critique it as an approach where it has been used outside the US. However, there is a body of work that highlights the challenge of trying to develop a critical sociocultural pedagogy among teachers. It could be argued that such pedagogical approaches are simply too idealistic for teachers to embed within their classroom practice (Lyle, 2008) particularly as they must also contend with intense teaching and assessment responsibilities (Bradbury et al., 2021).

Furthermore, the deep-rooted issues related to multilingual pupils' race, ethnicity and the education system in England cannot be ignored, with typically poorer expectations, attainment and ethnocentrically designed curricular considered as areas of concern (Alexander & Shankley, 2020). Pupils' differing language backgrounds can often become conflated with differences in ethnicity, adding further confusion in addressing multilinguals' needs (Demie, 2015). The EPL therefore has the potential to begin addressing some of these issues, not only by raising teachers' awareness of cultural differences but also by actively engaging and incorporating classroom practices that begin to challenge wider societal issues that are important and relevant to their pupils' lives (Sherman & Teemant, 2022; Teemant et al., 2014).

It is also important to acknowledge that transferring US-based intervention studies to the UK context comes with challenges, particularly when considering the differences in "demographic, social and educational infrastructure" (Murphy & Unthiah, 2015, p. iii) present between the two countries. For instance, a key difference is the diversity of learners, with US classrooms typically consisting of learners from the Hispanic community (Echevarria et al., 2006) and the UK having a broader range of languages typically represented in classrooms (DfE, 2019c). Both countries also implement funding formulas related to multilingual learners in considerably different ways: whilst the US allocates funds to each state that are then distributed to learners at a district level, the UK provides funding towards multilingual learners for three years upon their entry to the school system (Flynn et al., 2023). Moreover, there is no requirement for EAL certification for teachers in the UK (Murphy & Unthiah, 2015). Whereas in the US, additional training is available for teachers to meet the needs of multilingual learners, although any requirement for certification varies across states (Leider et al., 2021). Slight differences can also be found in classroom practice, in that UK teachers are likely to adopt a whole-class approach to teaching content, whereas US teachers are likely to adopt small-group approaches (Flynn et al., 2023).

Despite this, both the US and UK share some similarities within their respective contexts. For instance, both countries possess curricula for pupils that are monolingually oriented, in that it is assumed that learners, and the teaching content they are exposed to, are almost exclusively in English (Smith, 2021; Teemant, 2014). Pupils in both countries are also subject to high stakes testing in English throughout their educational careers (Bradbury et al., 2021; Menken & Solorza, 2014). Furthermore, both the US and UK's teacher workforces share a somewhat homogenous demographic - with white, female, monolingual teachers constituting a significant majority in both nations (DfE, 2019b; Teemant, 2020). This is in stark contrast to the linguistically diverse classrooms that some teachers in both countries are likely to work in (Costley, 2014; Lucas & Villegas, 2013) and is further compounded by a shared feeling of unpreparedness in teachers' ability to support the needs of multilingual learners under their responsibility (Cajkler & Hall, 2009; Ginnis et al., 2017; Lucas et al., 2008; Teemant, 2020).

To summarise, the EPL has demonstrated measurable impact on multilingual pupils (Doherty & Hilberg, 2007; Portes et al., 2018; Teemant, 2014), albeit largely in US contexts. Whilst nuanced differences between the two countries may mean taking a cautious approach in transferring interventions (Murphy & Unthiah, 2015), a moral imperative remains in challenging the monolingually-oriented mindset that persists within England's schools (Slaughter & Cross, 2021). The EPL is one such approach that has the potential to provide a tangible framework for teachers, by embedding theory with dialogic practices to support their professional development (Teemant, 2020).

2.6 Assessment of multilingual learners

So far, this chapter has focussed on multilingual learners' language and literacy development, as well as developing teachers' pedagogy and practice. However, it is important not to lose sight of assessment, and to what extent it is meaningfully applied within the context of the multilingual classroom in England. Discussion of assessment is included last in this chapter because recognising and tracking multilingual learners' proficiency in English is closely linked with pupils' subsequent overall attainment (Hessel & Strand, 2021; Strand & Demie, 2005; Strand & Hessel, 2018; Strand & Lindorff, 2020). Studies have repeatedly demonstrated that where multilingual pupils had a secure command of English, they were often able to match or outperform their monolingual peers in national tests across the curriculum, whereas pupils with poor English proficiency were at greater risk of underachievement (Demie, 2015, 2018b; Strand & Demie, 2005; Strand & Hessel, 2018; Strand & Lindorff, 2020).

The following section will now move on to examine the assessment of multilingual learners because measuring improvements for these learners is methodologically pivotal in the reported study. The fields of second language acquisition (SLA) and English as an Additional Language (EAL) are drawn upon. This is because the intersection of these fields allows for a greater understanding of how learners' language and literacy skills can be assessed, particularly when there is considerable variation in how multilingual learners are assessed in schools across England (Evans et al., 2016). Therefore, the nature of language proficiency and how it is conceptualised in both research and practice settings, as well as a discussion on what is missing in the assessment of multilingual learners in schools are explored.

2.6.1 Language proficiency from an SLA perspective

The SLA field has evolved in its understanding of what it means to be proficient in a language, with the history of conceptualising language proficiency tracing back to the 1960s. For example, researchers first suggested an objective focus on specific skills (listening, speaking, reading and writing) and components of language (such as grammatical knowledge and vocabulary) could be scored to yield reliable and accurate data about an individual's proficiency in a target language (Carroll, 1961; Lado, 1961). Chomsky (1965, 2006) challenged these ideas, suggesting instead that the development of language is derived from an innate, internal system of rules that an individual must be competent in applying in order to be proficient in a language. Whilst going beyond the scope of this chapter, Chomsky's theories have been both influential in inspiring a plethora of research areas related to SLA and they continue to be a subject of debate (Llurda, 2000).

More contemporary researchers have continued with efforts to clarify the construct of language proficiency. An interpretation of the construct can be explored from two perspectives: through 'levels' which reflect the progressive nature of skills which develop from a basic to advanced grasp of the language, and 'components', which suggests proficiency as a complex and multi-faceted

construct with distinct attributes (Llurda, 2000). For instance, MacSwan and Pray (2005) define language proficiency through linguistic components, focussing on understanding an individual's development of the language in areas such as phonology, morphology, syntax and semantics. Other researchers such as Crossley et al. (2011) instead emphasise an individual's lexis, or the breadth, depth, and retrieval of vocabulary available to them, as a crucial element towards understanding language proficiency.

Whilst it is clear that such linguistic elements are crucial to the construction of language, it is important to recognise that proficiency can also be viewed as embedded within the broader modalities of language, relating to an individual's development of skills in reading, writing and oral communication within the target language (Hamp-Lyons, 2016; Lado, 1961). However, viewing proficiency in this way may risk reducing the construct's complexity to simply how the language is produced or received within the confines of a test (Bachman & Palmer, 1996). Instead, an individual's skills in reading, writing and oral communication in the target language, whilst an important element of understanding an individual's proficiency, should be viewed as opportunities to demonstrate intentional use of language, through carefully designed tasks and activities (Bachman & Palmer, 2010).

Although the notion of language proficiency has been presented through a number of perspectives earlier in this chapter, each theory shares a common challenge when it comes to assessment; namely that with any attempt to assess proficiency accurately, there is a need to depend on language to both measure and observe the construct (Bachman, 2007). This is further compounded when the nature of language proficiency can often result in variability of data collected and thus designing assessments with strong psychometric properties is hard to achieve within this area of research (Swain, 1993). Therefore, researchers must adequately understand the construct of language proficiency before attempting to apply or measure it (Spolsky, 1989).

2.6.2 How is language proficiency assessed in research?

Some researchers have explored creative ways to measure aspects of language proficiency among multilingual pupils, although it is important to note that tests are driven by a specific purpose, which in turn will influence how and what aspect of language proficiency will be assessed (Schoonen, 2011). For instance, Whiteside et al. (2017) adopted the Children's Communication Checklist-Short (CCC-S) to measure pupils' language proficiency, because this had been validated for use in earlier studies (Norbury et al., 2004, 2016). The CCC-S focussed on assessing communicative aspects of children's language proficiency, using a four-point scale to assess the frequency (ranging from never to always) of children's interactions and behaviours with others. These were then totalled, with a higher score reflective of a weaker proficiency in English (Whiteside et al., 2017). The use of well-established tools like the CCC-S can address concerns surrounding reliability and validity, although it could be argued that this measure of language

proficiency is somewhat indirect or incomplete, with the items focussing almost exclusively on oral communication.

Other researchers have instead explored multilingual learners' proficiency by assessing their literacy skills. This has included using a battery of tests with measures of vocabulary, linguistic skills and cognitive ability to build a detailed profile of pupils' proficiency in reading English texts (Bowyer-Crane et al., 2017; Burgoyne et al., 2009; Lervåg et al., 2018). However, the use of standardised tests to measure such aspects are typically based on monolingual samples and should therefore be used with caution with multilingual populations (Grüter & Paradis, 2014; Paradis, 2005).

There has been little focus on assessing multilingual pupils' writing in English, which features considerably less in the literature in comparison to reading (Dockrell et al., 2015; Miller & McCardle, 2011). The Writing Ability Measure (WAM) developed by Dunsmuir et al. (2015) has been successful in assessing and analysing multilingual pupils' independent writing based on seven domains such as grammar, punctuation and vocabulary. Each domain is scored on a four-point scale, with a score of one indicating very limited evidence, to a score of four indicating strong and consistent evidence of the domain found in the writing. This type of analytical scoring can provide useful diagnostic data on pupils' strengths and weaknesses based on their performance in each domain, identifying areas for further development (Dunsmuir et al., 2015; Spence, 2010). Nevertheless, it is important to note that whilst this validation study produced statistically consistent and reliable usage of the WAM to assess writing, this was based on 97 primary pupils recruited from a single London school, and therefore is limited in its applicability to all multilingual pupils nationally.

The Common European Framework of Reference for Languages (CEFR) is adopted by countries across Europe, to assess an individual's language proficiency in several domains. The CEFR incorporates a range of descriptors that includes assessing an individual's reception, interaction, production and mediation of the target language across six levels (A1-C2) and is therefore readily used in educational and workplace environments across the continent for formal reporting, tracking and assessment purposes (Green, 2018; Harsch & Hartig, 2015). However, Weir (2005) is somewhat critical of the lack of consideration given to contextual factors and development of cognitive skills which may affect assessment of a learner's proficiency, in addition to the limited evidence available on the reliability and scoring validity of the CEFR as a tool to assess language proficiency. These are pertinent concerns, particularly as the CEFR has been adopted in many high stakes testing environments, which can have an impact on learners' later academic and professional prospects (Harsch & Hartig, 2015).

2.6.3 Assessing multilinguals language proficiency in schools

The previous section discussed ways in which language proficiency has been measured in studies, however this may not always be appropriate for practical use by teachers or may require specialist

training. Schools may be more concerned with assessing multilingual learners' English language proficiency in areas related to their command of vocabulary, structure and speech in order to engage with new subject-specific content and communicating with others in school (Bailey & Huang, 2011). Depending on the purpose of assessing an individual's language proficiency, the findings that emerge from such tests may go on to inform teaching practice or track pupil progress at a classroom level or may contribute towards high-stakes studies which may influence national policy decisions (Llosa, 2011).

Within the context of England's primary school system, statutory assessments (DfE, 2016) related to English at ages six, seven and eleven (or Years 1, 2 and 6 respectively) have meant that all pupils are assessed in the same way, irrespective of language background. More specifically, these include a 'phonics screening check' in Year 1, where pupils' ability to decode words is assessed (DfE, 2016; Grundin, 2018) and 'standard attainment tests' (SATs) in Year 2 and Year 6, where pupils' reading, writing and grammar skills (optional in Year 2) are assessed (DfE, 2014; Roberts, 2022). The SATs in Year 2, however, are in the process of becoming non-statutory and are to be replaced with a baseline assessment upon pupils' entry to school, typically aged four (Standards & Testing Agency, 2023). This may go some way to mitigating the pressure teachers may feel to get their young multilingual pupils proficient in English.

There is no formal curriculum related specifically to EAL (previously discussed in section 2.2) which means multilingual pupils in England are expected to acquire English through a mix of academic and social language they encounter in their schools (Foley et al., 2013; Smith, 2021). With no clear syllabus nor objectives for teaching content and language to multilinguals (unlike in contexts where English is formally taught as a foreign language in a more structured way) it is perhaps unsurprising that there are no formal assessment frameworks in place to track the progress of such pupils' English proficiency (Leung, 2022a). This is problematic because where the assessment of pupils' English language and literacy skills is conducted alongside first-language, monolingual peers, with the same materials and affordances, this arguably puts some multilingual learners at a disadvantage, because of assessment criteria assuming a monolingual English learner (McKay, 2005).

Other assessment frameworks, such as those developed by NASSEA (2015) and The Bell Foundation (2019), provide descriptors for how pupils' English proficiency may progress over time, but these materials rely on the largely subjective nature of teacher judgement, with no inclusion of statistical baseline data for teachers to refer to when attempting to assess their own multilingual pupils (Demie, 2018b). Furthermore, some commercially produced assessment materials available in England which aim to test pupils' literacy skills can be problematic because they are fundamentally designed for monolingual English-speaking learners and can have elements of cultural bias (Hutchinson et al., 2003). Additionally, multilinguals' scores from such assessment

materials may be compared against age-standardised scores that are likely to be derived from monolingual samples (Grüter & Paradis, 2014). Such issues can therefore put multilingual learners at a disadvantage because assessments are made based on monolingual norms and expectations (Grüter & Paradis, 2014; Hutchinson et al., 2003; Murphy, 2017). The absence of any standardised assessment of EAL pupils' language proficiency means schools tend to draw upon a range of informal sources (such as information from parents, other professionals, or classroom observations) in understanding pupils' language backgrounds and subsequently identifying their needs (Oxley et al., 2019). It is this very challenge that is addressed by the research reported in this thesis.

Drawing from other anglophone contexts, such as schools in the United States, can be useful. Whilst going beyond the scope of this thesis, it is important to note that the introduction of US government policies (such as the 'No Child Left Behind Act') began to hold schools, districts, and states accountable to the progression and attainment of multilingual learners (see Poza & Valdés, 2016). As a result of this legislation, states have worked independently, with other states or in collaboration with commercial test producers, to ensure assessment materials are both valid and reliable in measuring the language proficiency of multilingual learners (Wolf et al., 2008).

An example includes the World-Class Instructional Design and Assessment (WIDA) Consortium, who provide resources specifically designed for multilingual learners to over 40 states and 500 international schools worldwide (WIDA, 2021). Multilingual learners' speaking, listening, reading and writing are assessed through a framework which fundamentally centres on what pupils 'can do' as opposed to focussing on what they cannot (WIDA, 2018). These four domains are also considered through five curriculum areas: social interactions, arts, mathematics, science and social studies, in which the language demands for each of these areas are acknowledged as different (Board of Regents of the University of Wisconsin System, 2020). However, WIDA goes beyond what is available in England by applying this framework to a range of tangible test materials, to help teachers identify and track pupils' proficiency in English.

Lee (2018) was critical of elements of WIDA's framework, noting that whilst WIDA's underlying philosophy views pupils' multilingualism as an asset, it could be argued that their materials conflated language proficiency with learners' expected cognitive abilities in each domain, in which learners who are new to English are viewed with lower expectations because it is assumed they have limited language and cognitive skills (Lee, 2018). In WIDA's most recent iteration of associated materials, a distinction between language and cognition was made in their assessment of multilinguals' language proficiency, clarifying that learners may have the ability to engage in cognitively demanding tasks, but this may simply be in languages other English (Grapin & Lee, 2022). WIDA's place in the development of tests for this thesis is discussed in Chapter 3.

2.6.4 What is missing in the assessment of multilinguals' language proficiency?

This chapter has already explored the development of multilinguals' language and literacy skills, and current practice in England in relation to EAL pedagogy. Whilst there is little government intervention and accountability to support the needs of multilingual learners in England, it is perhaps unsurprising that there are many informal methods of assessing this group of learners' needs (Evans et al., 2016; Oxley & de Cat, 2019). This lack of cohesion is concerning because it invites variability and inconsistency in how teachers interpret and subsequently score pupils' proficiency (Demie, 2013; Liu et al., 2017).

There is also very limited consideration of pupils' culturally and linguistically diverse backgrounds, which, if taken into account, could assist schools in understanding pupils' proficiency (Demie, 2018a). Other contextual factors such as socioeconomic status can influence the rate of language growth for some multilinguals (Hakuta et al., 2000). Additionally, data on pupils' age, exposure to languages and circumstances surrounding them when they entered school are also not necessarily collected within the assessment of English language proficiency but could potentially contribute to an overall profile and fine-tuned response to a multilingual learner's needs (Hasselgreen, 2012; Lenski et al., 2006a). Therefore, in assessing multilingual learners' language proficiency, there should be a consideration of what may *not* be captured in tests and therefore potentially missed in subsequent analyses.

Not developing sufficient proficiency in English can have implications for multilingual pupils progressing through the education system and beyond (Hasselgreen, 2012; Murphy, 2017). Yet they are subjected to the same statutory assessments and delivery of the curriculum as their monolingual peers, with little, if any, adaptation or acknowledgement of difference in language backgrounds (Safford & Drury, 2013). Shohamy (2001) argued that tests can play an influential role in the development of a country's language policies and ideologies. In contexts such as the US and UK, the use of English as the language for tests (and its dominance in monolingually-centred policy and practice) can begin to devalue the plethora of home languages pupils may have exposure to, as English is perceived as more important and integral to future success (Shohamy, 2007).

Therefore, Schmitt et al. (2020) stressed the need for tests to be designed with purpose, in which the intended test population, educational context, and skills to be assessed should be explicitly shared in order to ascertain the tests' validity as an assessment tool. Whilst tests such as WIDA can provide this focus, such tests which assess multilingual pupils' skills in speaking, listening, reading and writing, simply do not exist in England (Oxley et al., 2019). When the intention of testing multilingual learners shifts from high-stakes statutory assessment to diagnostic support that moves learning on, its role can have a considerable impact on teaching (Shohamy, 2011). This is because carefully designed assessments can serve as opportunities for teachers to pinpoint where their pupils require further support, and thus drive the direction of teaching (Poehner, 2007).

2.6 Chapter summary, research questions and aims

To summarise, this chapter first presented the context surrounding multilingual learners and then explored issues broadly related to three areas: multilingual learners' language and literacy development, teachers' practice and professional development, and the assessment of multilingual learners.

An overview of the development of language and literacy skills framed within the context of multilingual learners in UK classrooms was initially presented. Developing oral language and vocabulary was highlighted as a crucial, multifaceted skillset which typically developing children can master, irrespective of cultural context. However, for multilingual learners, there are additional challenges, such as potentially unequal levels of language input they receive in English in environments beyond the classroom, which often can result in a smaller vocabulary in relation to their monolingual peers. This can have implications for multilingual learners as they simultaneously develop and are assessed in, their English language and literacy skills within England's classrooms (Lucas & Villegas, 2013; Murphy, 2018; Oxley & de Cat, 2019).

The chapter then considered how these theoretical underpinnings have informed pedagogy related to multilingual learners and explored how professional development (PD) can build teachers' knowledge to support their pupils' outcomes (Desimone, 2009; King, 2014). Theories related to sociocultural, critical and linguistic pedagogy were explored, with the EPL introduced in this chapter as a potential PD approach which combines these theoretical underpinnings. Studies that have used the EPL demonstrated measurable impact on pupils' language and literacy outcomes, albeit in largely US contexts.

However, measuring the development of multilingual pupils' language and literacy can be difficult. In England there is no national framework to assess pupils' English proficiency, which means a range of practices have been adopted across the country (Demie, 2018a; Evans et al., 2016). Therefore, the nature of proficiency, and how it is understood from research and school perspectives was explored, and the need for test developers to explicitly consider the purpose of tests was highlighted.

Despite the importance of pupil outcomes when evaluating PD programmes (Desimone, 2009; Guskey, 2000) the current literature seldom reports on this because of perceived difficulties in measuring impact and in making causal links between the two (Opfer & Pedder, 2010). Yet there remains a need for targeted PD that addresses the dual challenges of raising multilingual learners' attainment and developing teachers' limited subject knowledge for effective EAL-related pedagogy in England, as demonstrated through systematic reviews conducted by Murphy and Unthiah (2015) and Oxley and de Cat (2019).

Whilst largely framed within the context of US schools, interventions designed to deliver sociocultural, critical and linguistically informed professional development such as the EPL have been found to close the gap between the varying levels of teaching practice observed in schools (Teemant et al., 2011) and have provided some evidence-informed findings in advancing multilingual learners' outcomes (Teemant, 2020). However, there is little critique of this approach, and nothing is known about its potential impact outside the US. The current study, therefore, will be the first to assess to what extent changes to pedagogic practice, underpinned by a critical socio-cultural pedagogical framework for teacher development, could have on multilingual pupils' language and literacy outcomes in England. The aims can be found outlined below:

- To develop reliable, teacher-oriented test materials for measuring the English language proficiency of pupils with EAL
- To measure the English proficiency of EAL pupils in Years 1 and 4 before and after their teachers have experienced professional development in the EPL
- To interview pupils with a view to harnessing their responses to their teachers' classroom practice resulting from the professional development

The above research aims are accompanied by the following research questions:

RQ1: Does Teacher Professional Development in the pedagogical approaches related to the Enduring Principles of Learning (EPL) have an impact on the English proficiency of pupils with English as an additional language?

1a) what is the impact of this approach on pupils' speaking skills?
1b) what is the impact of this approach on pupils' listening skills?
1c) what is the impact of this approach on pupils' reading skills?
1d) what is the impact of this approach on pupils' writing skills?

RQ2: What are pupils' responses to the teaching approaches related to the Enduring Principles of Learning (EPL) as part of their classroom experiences?
2a) what is their response to EPL in the classroom?
2b) to which aspects of this approach do they respond positively?
2c) to which aspects of this approach do they find more challenging?

Chapter 3 - Methodology

3.1 Introduction

This chapter presents the methodology adopted for this mixed methods study. This includes a discussion and rationale of the research design and research methods, explanation of the professional development intervention related to this study of pupil outcomes, and detailed information about participants. A range of instruments, such as tests and interviews were used, and the procedures and analysis of the data collected are explained in this chapter. Considerations related to the pilot study are given thereafter. Issues surrounding reliability, validity and ethics are also discussed.

The project research questions are as follows:

RQ1: Does teacher professional development in the pedagogical approaches related to the Enduring Principles of Learning (EPL) have an impact on the English proficiency of pupils with English as an additional language?

1a) what is the impact of this approach on pupils' speaking skills?
1b) what is the impact of this approach on pupils' listening skills?
1c) what is the impact of this approach on pupils' reading skills?
1d) what is the impact of this approach on pupils' writing skills?

RQ2: What are pupils' responses to the teaching approaches related to the Enduring Principles of Learning (EPL) as part of their classroom experiences?
2a) what is their response to EPL in the classroom?
2b) to which aspects of this approach do they respond positively?
2c) to which aspects of this approach do they find more challenging?

The above research questions are accompanied by the following research aims:

- To develop reliable, teacher-oriented test materials for measuring the English language proficiency of pupils with EAL
- To measure the English proficiency of EAL pupils in Years 1 and 4 before and after their teachers have experienced professional development in the EPL
- To interview pupils with a view to harnessing their responses to their teachers' classroom practice resulting from the professional development

3.2 Research paradigm

First coined by Kuhn (1970) the term 'paradigm' is rooted in the philosophical considerations of knowledge and existence, and as such, is often referred to as a cluster of principles that guide a researcher's actions (Kaushik & Walsh, 2019). Subscribing to a paradigm has ontological, axiological and epistemological implications for researchers and the subsequent approaches they undertake in conducting research (Bryman, 2008). Whilst it is acknowledged that there is a range of paradigms associated with the quantitative and qualitative research traditions, a discussion of each of these goes beyond the scope of this thesis (see Ling & Ling, 2017). Therefore, a summary of three distinct paradigms with their ontological, axiological and epistemological groundings are presented in figure 3.1 below.

Paradigm	Elements
Positivist	**Ontology** A consistent or ordered reality. **Axiology and drivers** Objective pursuit of knowledge and truth based on theory. **Epistemology** Knowable objective truth.
Interpretivist	**Ontology** The only understanding available is based on observation and interpretation. **Axiology and drivers** Pursuit of an understanding in which the value position of researcher is inherent. **Epistemology** Understandings of elements of the world are subjective and socially constructed.
Pragmatic	**Ontology** Reality is not the issue. The issue is finding what works. **Axiology and drivers** Determined by practical need relevant to the researcher. **Epistemology** Veracity of an understanding determined by practical value.

Figure 3.1: Summary of research paradigms (Ling & Ling, 2017, p. 26)

At a basic level, positivism is typically associated with quantitative data, whereas interpretivism is more aligned with qualitative data (Bryman, 2008). In the context of this study, which sought to investigate the impact of a professional development programme on multilingual pupils in England, each of these paradigms and their associated data collection methods could have been adopted. By taking a more positivist approach, for example, a randomised controlled trial (RCT) with quantitative data (such as numerically orientated test scores) and the random allocation of participants to control/intervention groups could have been conducted. Designs such as RCTs are often considered the 'gold standard' in educational research (Punch & Oancea, 2014). This is because RCTs are typically designed to be able to draw out causal relationships, reduce selection bias and demonstrate generalised applicability to other contexts (Hutchinson & Styles, 2010)

However, this study did not conduct a RCT because it can be argued that human, social and contextual aspects that are inherent in classroom-based research are largely absent in RCTs, and therefore conclusions from such studies can generate generalisation that is at odds with the heterogeneous nature of educational settings (Gale, 2018). This may mean that an RCT could be replicated elsewhere, but it should not be expected that its associated findings can be replicated, because the wider society in which our education systems are situated continues to change (Biesta, 2007).

An interpretivist study with qualitative methods could have been conducted for this study instead, particularly when considering the vast heterogeneity of multilingual pupils, who are at the heart of this research. For example, conducting case studies with a small number of pupils over an extended period of time could have provided an opportunity to understand multiple and detailed perspectives related to how pupils view and make meaning of their learning experiences (Hatch, 2023). Such methods typically generate context-rich data that can allow the researcher to capture the complexity of the space participants are situated in (Hammersley, 2013), and therefore may have lent itself to addressing the research questions in this study, which centre around multilingual pupils' development in the classroom setting. Yet, it is important to acknowledge that a purely qualitative approach with methods such as a case study, can limit the claims that can later be made about findings and cannot necessarily be generalised to contexts beyond where and with whom the study was conducted (Hennink, 2014). Moreover, a solely qualitative approach would not have captured the need to focus on measurable improvements in pupils' academic performance as part of addressing the 'what works' gap in research into multilingual pedagogy (Edovald & Nevill, 2021).

This study therefore aligned more appropriately with the pragmatic paradigm and avoided the somewhat dichotomous nature of positivist or interpretivist research traditions (Hammersley, 2017; Kaushik & Walsh, 2019). This is because pragmatism can draw upon elements of quantitative and qualitative traditions, recognising "the wisdom of both of these viewpoints" (Johnson et al., 2007, p. 113). Furthermore, pragmatism afforded a sense of flexibility in that a variety of methods across the spectrum of paradigms could be utilised to address research questions (Creswell & Plano Clark, 2017; Johnson & Onwuegbuzie, 2004; Tashakkori & Teddlie, 2003).

This study assessed the impact of the professional development intervention, the Enduring Principles of Learning (EPL), on multilingual pupils' English proficiency and sought to understand pupils' perceptions of the use of EPL in their classrooms. A pragmatic approach allowed for a mixed-methods strategy to be implemented in answering the research questions, in ways that a purely positivist or interpretivist approach may not have addressed entirely (Denscombe, 2008). More specifically, this included meeting the need for an objective assessment of whether the EPL improved pupil outcomes, as well as providing a more subjective insight into how pupils responded

to the approach as part of their teachers' classroom practice. In taking a pragmatic approach, relevant data could be collected through the combination of research methods, the limitations associated with a purely positivist or interpretivist approach could be reduced, and the overarching aims of the study could be addressed in more detail (Denscombe, 2008; Tashakkori & Teddlie, 2003).

3.3 Research design

There are several mixed methods research design types that can be drawn upon that consider how methods are mixed, when they take place, and the weighting they are given within a study (Creswell & Creswell, 2017; Tashakkori & Teddlie, 2003).This study adopted a QUAN-qual sequential explanatory design (Creswell & Plano Clark, 2017), which meant there was a heavier weighting related to the largely quantitative data collected and analysed to address the first research question, followed by qualitative data to address the second research question.

To measure the impact of the EPL teaching intervention on pupils' language and literacy skills, a quasi-experimental, pre- and post-test design was adopted to address this first research question. This was then followed by qualitative data collection in the form of focus group interviews, which helped build upon and contextualise the quantitative data and addressed the second research question related to pupils' perspectives of the EPL. A varied approach that combines quantitative and qualitative methods is considered particularly advantageous for school-based studies exploring effectiveness (Harker & Tymms, 2004). Figure 3.2 below presents an outline of the current study's design, which includes a brief overview of the supervisor-led professional development intervention that ran as a sister study.

The current study

Supervisor-led sister study

Development of research instruments

Piloting

Control pupil pre-testing at Time 1

n = 70

Dec 2021

Experimental pupils pre-testing at Time 1

n = 85

Business as usual teaching practice

Teachers receive EPL intervention (supervisor-led project)

Control post-testing at Time 2

n = 64

July 2022

Experimental post-testing at Time 2

n = 72

Focus group interviews with subsample of experimental pupils

Access to on-demand resources via project website

Pre-project observations, interviews and survey

Introducing the EPL (Jan/Feb 22)
- Half day Professional Development (PD)
- 1 x after-school PD
- 1 x classroom observation and coaching follow up

Developing aspects of the EPL (March/Apr 22)
- 1 x after-school PD
- 2 x classroom obs and coaching follow up

Embedding aspects of EPL (May/Jun 22)
- 1 x after-school PD
- 2 x classroom obs and coaching follow up

Post-project interviews

Figure 3.2: Summary of this study's research design and processes, including the supervisor-led sister study

3.3.1 QUAN-qual design considerations

Several features are associated with experimental research: a clear research question, controlled and manipulated variables that are explicitly stated, and random assignment of participants to specified groups (Gass, 2015). In particular, true experimental designs are strengthened through the random allocation of participants to an experimental or control group, with the former receiving an intervention/treatment and the latter being withheld from this (Suter, 2012). Such designs can be combined with pre-tests and post-tests to establish participants' baseline and ascertain to what extent an intervention has had an impact on participants, if any (Leavy, 2017). This can include a further delayed post-test to help confirm whether the effects of an intervention persist over a longer period of time (Punch & Oancea, 2014).

Within the field of educational research, randomised controlled trials adopting an experimental research design are often considered the 'gold standard' (Punch & Oancea, 2014) because of their potential to offer clearer evidence of causal relationships between interventions and effects (Suter, 2012; Torgerson & Torgerson, 2008). However, time and resource constraints, in addition to practical and ethical concerns surrounding the withholding of interventions from eligible participants, can lead to practical challenges in conducting this type of experimental research within schools (Karoly et al., 2005). Hence, quasi-experimental designs are widely implemented in educational research as an alternative and are considered to be more feasible to conduct in schools while still providing some indication of an intervention's effectiveness by tracking differences in observed outcomes over time (Gopalan et al., 2020).

The qualitative aspect of this study supplemented the quantitative data, in which focus group interviews were conducted with a selection of multilingual pupils in the experimental schools. This meant that understanding pupils' learning experiences was central to addressing the second research question in which their perceptions of the EPL intervention were sought. The nature of the qualitative research conducted in this study meant that meaning was derived from participants' responses and constructed by the researcher whose overall purpose was to understand pupils' views without necessarily adhering to a specific qualitative research tradition, such as an ethnography or case study (Merriam & Tisdell, 2016).

To summarise, in addressing the current study's research question pertaining to the impact of EPL on pupils' English language proficiency skills, a pretest-posttest quasi-experimental research design was adopted (figure 3.2). This design shares similar features with experimental research, except that its principal difference lies in its lack of random allocation of participants to control and experimental groups (Shadish et al., 2002). This can increase the risk of selection bias occurring in which there is an imbalance between the experimental and control groups from the outset (Kovera, 2012), although this is addressed in section 3.4.1.

3.4 Participant selection

This QUAN-qual study focussed on testing the language and literacy skills of pupils in Year 1 (age 5-6) and Year 4 (age 8-9) over six months, in addition to conducting focus group interviews with a subsample of these pupils within experimental schools only. These year groups were chosen because they provided insights across the first two Key Stages in primary schools in England, allowing us to understand the extent of the EPL's impact on attainment and pupil perspectives across the beginning years of primary schooling. Furthermore, the selection of Year 1 pupils for this study holds contextual relevance related to the school system in England, as this is when all pupils are first required to participate in statutory testing in primary school through the Phonics Screening Check (DfE, 2016). This test, taken towards the end of the academic year, assesses Year 1 pupils' ability to decode words (by applying their knowledge of letters and sounds) through a series of phonetically decodable words and pseudo-words (Grundin, 2018). It does not however, provide information on pupils' comprehension skills as the test purely focuses on phonic decoding ability (Bradbury, 2014).

Selecting Year 4 pupils for this study addresses the limited research with this age group (Murphy & Unthiah, 2015; Oxley & de Cat, 2019). In this year group, greater demands on language and literacy skills are placed on pupils to access the curriculum, with the accurate production and comprehension of text typically expected (Burgoyne et al., 2011). However, this can sometimes conflict with the needs of multilingual pupils. For instance, a large-scale longitudinal study in Wales tracked over 5000 multilingual pupils who were considered 'New to English' upon school entry, and it was found that over half of these pupils were assessed as 'Developing Competence' in English by the time they reached Year 4 (Strand & Lindorff, 2020). This assessment acknowledged that pupils would still require language and literacy support to access the curriculum (DfE, 2020). As such, this year group was selected for this study because of its potential to help some multilingual pupils 'catch up' with their monolingual peers in accessing the curriculum and making progress with their English language and literacy development (Oxley & de Cat, 2019).

When considering the allocation of pupils to groups in this study, it was accepted that matching experimental and control groups completely can be very difficult to achieve, particularly within the field of educational research (Cohen et al., 2013). This inability to perfectly match samples represents the innate complexity of classroom-based research (Newby, 2014). Therefore, participating schools were matched as far as practicably possible on the following key characteristics: proportion of English as an Additional Language (EAL) learners, pupils with Special Educational Needs and Disability (SEND), and pupils who are eligible for Free School Meals (FSM). FSM is part of a household's entitlement to state support and although it is recognised as an 'imperfect proxy' (Hobb & Vignoles, 2007) for understanding pupils' socio-

economic status, it is nonetheless widely used by schools and researchers to recognise disadvantaged pupil groups (Taylor, 2018).

As a collaborative project, a partnership with a collective group of nine schools (formally known as a 'Community Trust') was created. The external collaborative supervisor served as a headteacher at one of these schools and was not only able to facilitate access to the Trust of schools, but also had extensive practical experience with the EPL prior to this study (see Flynn, 2023). The Trust was formed in 2017 and together serves over 3000 pupils within a linguistically diverse city in the south of England. The majority of these schools also have high levels of EAL learners, with around fifty languages represented by the Trust's overall combined pupil population. Therefore, with access to a considerable number of schools, the sample size was originally intended to have at least 30 pupils in each group (total projected *n* = 240), as suggested by Field (2018). However, only three schools from the Community Trust (*Schools A, B* and *C)* were able to participate, serving as the experimental group (table 3.1). Furthermore, control and experimental schools were initially intended to be compared without necessarily focussing on EAL and monolingual learners separately. However, the final sample attained had a mixed proportion of EAL and monolingual pupils across each of the participating schools, which therefore needed to be considered during the analysis. The overall difficulty in recruiting and maintaining the intended number of pupils for this study was greatly impacted by the aftermath of the Covid-19 pandemic, in which schools across the country were operating under intense pressure to remain open with limited capacity to engage in research. Therefore, to assess the suitability of the sample size attained, a post-hoc power analysis was undertaken and is reported in chapter 4.

Table 3.1: Information about the experimental schools

School name	Number of pupils on roll	Age range of pupils	Pupils with EAL	Pupils with SEND Support	Pupils eligible for FSM
School A	345	3 to 7	94.4% (20.9%)	11.1% (12.6%)	23.3% (21.6%)
School B	411	4 to 11	75.1% (20.9%)	23.5% (12.6%)	33.6% (21.6%)
School C	207	4 to 11	45% (20.9%)	20.6% (12.6%)	36.8% (21.6%)

Note: National averages are provided in parentheses – these figures are derived from state-funded schools in England (HM Government, 2021).

Another large, linguistically diverse primary school in a neighbouring county with a similar demographic to the Community Trust served as the control school. A school with no connection to the Trust was sought to ensure there was no risk of exposure to the EPL training throughout the

duration of this study. Features of the control (*School D)* which provided both Year 1 and Year 4 pupils in this study, can be found summarised in Table 3.2.

Table 3.2: Information about the control school

School name	Number of pupils on roll	Age range of pupils	Pupils with EAL	Pupils with SEND Support	Pupils eligible for FSM
School D	688	4 to 11	46.5% (20.9%)	13.5% (12.6%)	18.7% (21.6%)

Note: National averages are provided in parentheses – these figures are derived from state-funded schools in England (HM Government, 2021).

However, it is acknowledged that there are some inevitable differences between the control and experimental schools. For instance, School *A,* where the experimental Year 1 pupils are based, has a very high percentage of pupils who are considered EAL learners in comparison to control pupils based at School *D*. That said, both schools exceed the national average (20.9%) and are broadly similar in other features related to the proportion of pupils with SEND support and FSM eligibility.

Experimental schools *B* and *C* provided Year 4 pupils, in which similar proportions of pupils with SEND support and FSM eligibility are shared between both schools. Yet once again there are some differences with these experimental schools in comparison to school *D,* the control. For instance, School *B* has a higher percentage of EAL pupils, whereas Schools *C* and *D* have very similar proportions of EAL pupils. Furthermore, it is acknowledged that there is a higher percentage of pupils with SEND and FSM in experimental schools *B* and *C* than in the control school *D*. Whilst this is not ideal, studies related to multilingual learners are challenging to match due to the vast heterogeneity of this pupil group in England (Strand et al, 2015).

3.4.1 Addressing school and pupil-level confounds

The reality of undertaking school-based research and the subsequent design of this study meant that it was not practically viable to randomly allocate at the participant level. When participants cannot be randomly allocated, careful consideration of research elements can strengthen quasi-experimental designs (Gliner et al., 2009) and provide greater flexibility in conducting research within real-world environments (Hans, 2000). In addition to school-level considerations, efforts were made to match control and experimental groups at a pupil-level, matching groups on age, gender and teacher-assessed attainment, where this was possible. In England, there are statutory assessments at certain points in the primary school phase (previously discussed in section 2.5.3).

Teachers will also typically make non-statutory assessments of their pupils' attainment in English, mathematics and science throughout or at the end of an academic year. A combination of day-to-day formative assessment in the classroom and commercial summative test materials are often

drawn upon by teachers when ascertaining pupils' attainment (DfE, 2018; Poet et al., 2018). Whilst there can be variation in the exact wording used by schools to describe pupils' attainment, they typically assess pupils as either working below, working at, or working above age-related expectations (ARE) (Poet et al., 2018). ARE align to the range of National Curriculum objectives (DfE, 2014) that pupils in each year group (from Years 1 to 6) are expected to achieve by the end of the academic year (DfE, 2018). Table 3.3 presents a detailed breakdown of participant features in both condition groups.

Existing pupil attainment data were requested from each of the participating schools (see appendix B). Understanding participating pupils' English attainment can not only help provide contextual data but can also possibly identify and control for pupils' starting points. This can potentially address issues surrounding the 'Matthew effect' in which participants already at an advantage tend to benefit more from intervention efforts than those who start at a disadvantage (Bakermans-Kranenburg et al., 2005; Pretorius & Currin, 2010). Therefore, teachers provided their pupils' assessment data in English, in which pupils, were either 'working toward' age-related expectations (ARE), 'working at' ARE or 'working at greater depth within' ARE. The terminology used reflects the assessment frameworks published by the national government, which teachers in state schools typically refer to for guidance (Standards & Testing Agency, 2018). These data allowed for teacher assessments to be used in conjunction with the study's tests to provide an indication of pupils' baseline at the beginning of the intervention phase (late autumn 2021).

Table 3.3: Information on participating pupils in this study

Experimental schools								**Control school**							
School	**N**	**Gender**	**Pupils with EAL**	**Pupils with SEND Support**	**Pupils eligible for FSM**	**Attainment**	**Languages spoken**	**School**	**N**	**Gender**	**EAL**	**SEND Support**	**FSM**	**Attainment**	**Languages spoken**
School A (Year 1)	46	25 M, 21 F	44	8	8	Unavailable: 7 Below ARE: 26 At ARE: 9 Above ARE: 4	Arabic, Bengali, Dari, Fula, Hindi, Igbo, Luganda, Panjabi, Pashto, Polish, Portuguese, Romanian, Somali, Urdu	School D (Year 1)	34	18 M, 16 F	21	5	6	Below ARE: 14 At ARE: 16 Above ARE: 4	Arabic, Cantonese, Chinese, Farsi, Hindi, Other (not specified), Panjabi, Polish, Portuguese, Russian, Spanish, Urdu
School B (Year 4)	16	4 M, 12 F	11	6	13	Unavailable: 1 Below ARE: 7 At ARE: 7 Above ARE: 1	Arabic, Bengali, Cantonese, Panjabi, Pashto, Polish, Russian, Urdu	School D (Year 4)	36	20 M, 16 F	20	3	5	Below ARE: 15 At ARE: 11 Above ARE: 10	Bulgarian, Chinese, Hindi, Indonesian, Italian, Nepalese, Other (not specified), Panjabi, Portuguese, Romanian, Urdu, Uzbek
School C (Year 4)	23	13 M, 10 F	13	6	13	Below ARE: 3 At ARE: 18 Above ARE: 2	Bengali, Farsi, Italian, Kurdish, Other (not specified), Polish, Romanian								

3.4.2 Sampling participants for interviews

Experimental pupils in Schools A, B and C were drawn on for the focus group interviews. In addressing research question two, purposive sampling was undertaken to ensure that only multilingual pupils who were based in the experimental schools were interviewed. To do so, each experimental classroom teacher was first approached to identify a sub-sample of pupils in their classroom who were recognised as EAL learners. The teachers' professional judgement was further drawn upon in not only considering pupils with a range of English attainment and proficiency, but also for knowledge of which pupils would be most likely to be comfortable with participating in an interview.

Pupils' composite scores derived from the test data collected prior to interviews (as part of the quantitative element of this study) were also used to select potential participants for interviews. A broad representation of multilingual pupils for this part of the study was important because a mixture of pupils with differing language backgrounds, test scores and teacher-assessed attainment levels is reflective of the heterogeneity of this pupil group (Strand et al., 2015) as well as the diverse nature of classrooms in England (HM Government, 2021). Table 3.4 summarises contextual information related to each of the interviewed pupils, who were given pseudonyms that are referred to throughout this thesis.

Table 3.4: Information about interviewed pupils

Teacher (and school)	Name*	ID	Age (years, months)	Gender	Composite test score at Time 2	Attainment in English	Languages spoken
L (School A)	Sita	17	6y, 2m	F	19.67	At ARE	Panjabi
	Natalia	13	6y, 3m	F	19.34	Below ARE	Polish
	Imran	15	6y, 0m	M	13.33	Not avail	Urdu
	Yusuf	20	6y, 6m	M	25.00	At ARE	Somali
	Filip	3	6y, 5m	M	14.17	Below ARE	Romanian
A (School A)	Nina	23	6y, 2m	F	15.17	Below ARE	Arabic
	Hafsa	27	6y, 8m	F	22.17	Below ARE	Urdu
	Hanna	31	6y, 5m	F	17.67	Below ARE	Romanian
	Virat	38	6y, 8m	M	26.00	Above ARE	Hindi
	Jamal	43	6y, 8m	M	19.83	At ARE	Fula
S (School B)	Ingrid	75	9y, 7m	F	18.67	Below ARE	Romanian
	Kiran	80	9y, 0m	F	24.84	At ARE	Farsi
	Yusra	81	9y, 3m	F	21.67	At ARE	Bengali
	Salma	85	9y, 5m	F	20.83	At ARE	Farsi
J (School C)	Maya	47	9y, 2m	F	26.84	At ARE	Urdu
	Amir	52	9y, 2m	M	27.34	At ARE	Urdu
	Lana	54	9y, 1m	F	24.00	At ARE	Pashto
	Julia	63	9y, 7m	F	23.33	At ARE	Polish
	Fahad	65	9y, 4m	M	27.50	At ARE	Arabic
	Michal	69	9y, 5m	M	28.57	At ARE	Russian

Note: the maximum composite score possible is 35.00. *All names are pseudonyms.

3.5 The intervention

The collaborative and supervisor-led nature of this project meant that the child-focussed data featured in this thesis is related to a teacher-focussed sister study in which the Enduring Principles of Learning (EPL) (Teemant, 2014) dictated the shape and content of the professional development delivered to teachers in the experimental schools (Flynn et al., 2023).

Collaborative coaching conversations were centred around the Standard Performance Continuum (SPC) Plus (Doherty et al., 2002; Teemant et al., 2014; Tharp, 2006), a tool that allowed for teaching practice to be systematically observed and developed (see appendix C). Engaging in this programme typically requires a collaborative relationship between teachers and instructional coaches to explore and develop classroom practice (Teemant et al., 2014).

There are a total of seven principles that were used to observe and score teachers' practice related to the SPC Plus on a five-point scale, with teachers being able to score: '0 - not observed', '1 – emerging', '2 – developing', '3 – enacting' or '4 - integrating' for each principle (Teemant, 2014). Therefore, a maximum of 28 can be scored, and where teachers were implementing EPL practice at the enacting level in three or more principles, they were scored at the integrating level (4) in recognition of their ability to incorporate principles simultaneously (Teemant, 2014). In practice, this may mean that teachers were able to demonstrate critical sociocultural practices in their classrooms, with collaborative learning, dialogic spaces, linguistic support and highly contextualised learning as dominant features in their teaching (Flynn et al, 2023). Table 3.5 goes on to present an abridged version of the SPC Plus, which demonstrates how teachers' practice may be scored in relation to each of the principles (see appendix C for full version).

Table 3.5: Abridged version of the SPC-Plus (Doherty et al., 2002; Teemant et al., 2014; Tharp, 2006)

	NOT OBSERVED (0)	EMERGING (1)	ENACTING (3)
General definition	*The principle is not observed*	*One or more elements of the principle are enacted*	*The teacher and a small group of students collaborate on a joint product. (Teacher does not float and is a full participant with group.)*
Joint Productive Activity *Teacher and Students Producing Together*	Students work independently of one another.	Students are seated with a partner or group, AND (a) collaborate* or assist one another, OR (b) are instructed in how to work in groups, OR (c) contribute individual work, not requiring collaboration, to a joint product*.	The teacher designs and enacts instructional activities that generate language expression and development of 'content vocabulary,'* AND assists* student language use or literacy development through questioning, rephrasing, or modelling. (Teacher can float.)
Language & Literacy Development *Developing Language and Literacy Across the Curriculum*	Instruction is dominated by teacher talk.	(a) The teacher explicitly models appropriate language; OR (b) students engage in brief, repetitive, or drill-like reading, writing, or speaking activities; OR (c) students engage in social talk while working.	The teacher integrates* the new activity/academic concepts with students' prior knowledge from home, school, or community to connect everyday and schooled concepts. (Teacher does not have to be present. This can be about activity design.)
Contextualization *Making Meaning – Connecting School to Students' Lives*	New information is presented in an abstract, disconnected manner.	The teacher (a) includes some aspect of students' everyday experience in instruction, OR (b) connects classroom activities by theme or builds on the current unit of instruction, OR (c) includes parents or community members in activities or instruction, OR (d) connects student comments to content concepts.	The teacher designs and enacts challenging activities with clear standards/expectations and performance feedback, AND assists* the development of more complex thinking. (Teacher can float.)
Challenging Activities *Teaching Complex Thinking*	Activities rely on repetition, recall, or duplication to produce factual or procedural information.	The teacher (a) accommodates students' varied ability levels, OR (b) sets and presents quality standards* for student performance, OR (c) provides students with feedback on their performance.	The teacher designs and enacts challenging activities with clear standards/expectations and performance feedback, AND assists* the development of more complex thinking. (Teacher can float.)

Instructional Conversation *Teaching Through Conversation*	Lecture or whole-class instruction predominates.	With individuals or small groups of students, the teacher (a) responds in ways that are comfortable for students, OR (b) uses questioning, listening or rephrasing to elicit student talk, OR (c) converses on a non-academic topic.	The teacher designs and enacts an instructional conversation* (IC) (at least 10 minutes) with a clear academic goal*; listens carefully to assess and assist student understanding; AND questions students on their views*, judgments, or rationales. Student talk occurs at higher rates than teacher talk. (Teacher does not float.)
Critical Stance *Teaching to Transform Inequities*	Instruction reflects appropriate content-area standards.	The teacher designs instruction using variety*, which includes a) multiple sources of information*; OR b) values and respects multiple perspectives*; OR c) supports learning through multiple modalities*.	The teacher designs or facilitates instruction that consciously* engages learners in a) interrogating* conventional wisdom and practices; AND b) reflection upon ramifications* of such practices; AND c) actively seeks to transform* inequities within their scope of influence* within the classroom and larger community.
Modelling *Learning through observation*	Students begin working immediately following a verbal explanation.	The teacher, or student, models behaviours, thinking processes, or procedures, but does not provide an opportunity for students to practice.	The teacher provides a model of a completed product that students then make, or models the behaviours, thinking processes, or procedures necessary for the task, and assists students during practice.

As the delivery of the teacher-focussed, professional development programme ran as a sister study to the current one, each of the seven principles that make up the EPL were discussed more fully in the previous chapter (see section 2.5.1). However, the EPL does warrant description methodologically, because the current study measured the impact of this intervention on pupils' outcomes. Therefore, before explaining the nature of the professional development programme in detail, it is helpful to know more about the researcher who delivered the intervention.

The intervention was designed and delivered by the lead supervisor of this study who is a researcher with: three years' experience working with one school in the Trust to establish the EPL as a whole school approach to multilingual pedagogy; a working research partnership with Teemant who is the principal architect of the EPL; and experience from observing the EPL working both as a professional development tool and a driver of classroom practice in US classrooms over three months (Flynn et al., 2023). Her combined professional and research experiences meant that she had both a theoretical and practical understanding of the EPL and grassroots understanding of how teachers might translate this US approach to their UK-based classrooms. Importantly, her evaluation of the use of the EPL in the USA (Flynn et al., 2023) led to her observation that a vital component for success with the EPL is that teachers work first on making their practice more dialogic; teachers say less, and children say more. It was this that drove the professional development intervention associated with this study, which became known as the Talk Rich Teaching project (https://research.reading.ac.uk/talk-rich-teaching/).

Figure 3.3 presents the content and timing of the intervention, which began collecting pre-project data on each participating teacher, to understand more about their practice for multilingual learners. Control teachers then continued with business-as-usual teaching practice, with their classroom practice observed and scored with the SPC Plus (Teemant, 2014) at the beginning and end of the intervention phase.

Pre-project classroom observations, and short information-gathering survey	**Dec 22**	• Pre-project teacher interviews, classroom observations, and short information-gathering survey
	Jan 22	• Whole staff half day training • First 1:1 observation and coaching
Business-as-usual practice undertaken by control group teachers	**Feb 22**	• Whole staff after school training • Second 1:1 observation and coaching
	March 22	• Whole staff after school training • Third 1:1 observation and coaching
	May 22	• Whole staff after school training • Fourth 1:1 observation and coaching
Post-project classroom observations	**June 22**	• Fifth 1:1 observation and coaching
	July 22	• Post-project teacher interviews

Figure 3.3: Structure of the intervention

Experimental schools took part in a series of whole-staff professional learning meetings, classroom observations of the four experimental teachers selected for individual focus, and subsequent coaching conversations with written notes for each of these teachers (see appendix D for training materials). Findings from the work with teachers are presented elsewhere (Flynn et al., 2023) but some references to the choices the teachers made in their classrooms are presented in relation to the children's responses to the intervention (see Chapter 5).

The content of the intervention was, in part, driven by the expertise of the researcher working with the schools, but there was also some school-specific flexibility built in. This meant that each of the

schools where the experimental teachers were based had some say in how they responded to the professional development, which of the EPL they wished to focus on, and the opportunity to link the EPL with other interventions running in their respective schools.

For instance, School A was already working with an oracy education charity, Voice21 (https://voice21.org), which complemented the EPL intervention. In School C, the intervention was partly designed in partnership with the Modern Foreign Languages co-ordinator, who provided input on staff developmental needs. The fluidity in designing the EPL intervention for each school context encouraged meaningful research-to-practice partnerships with each school. At the classroom-level, the flexibility of the intervention meant that there were no demands placed on experimental teachers having to apply their EPL-informed teaching practice to any specific curriculum subject area. Teachers' practice was scored with the SPC Plus (Teemant, 2014) in lessons they felt most comfortable in allowing the researcher to observe. Mutually convenient times were also organised with each teacher directly, to ensure coaching conversations occurred shortly after classroom observations.

Taking this fluid approach meant that the wider research project could appropriately align with each school's context and, more specifically, the delivery of the EPL intervention could be tailored to each teacher's needs. Whilst this may mean the intervention in this study may have inevitably engaged teachers in differing ways, such rich collaboration between the researcher and participating teachers from the outset is recognised to encourage ownership of the process, reduce the possibility of attrition, and increase the likelihood of such research being utilised in the future (Dagenais et al., 2012). Further, the cycle of formal training sessions combined with targeted support and coaching for each participating teacher, acknowledged the emotional and psychological areas of professional development that are often absent from traditional programmes, but are crucial in the balanced, holistic growth of teachers' practice (Eun, 2021). Taking this flexible approach is considered advantageous in professional development research, because it is reflective of what the profession needs, namely exploring the application of classroom practice and demonstrable outcomes related to effective teaching and learning (Everton et al., 2000).

Table 3.6 introduces the four experimental teachers who participated in the teacher-focussed, professional development intervention sister study which ran concurrently with this study. In all four cases, teachers' normal classroom practice was observed to be largely geared towards whole-class teaching. That is not to say they did not group children, but practices related to the EPL, such as the highly developed small group conversations, were outside their normal classroom practice prior to the intervention phase.

The table includes the number of years each teacher spent teaching multilingual pupils as part of their career. Each lesson observation's total score, out of a maximum of 28 using the SPC Plus

(appendix C) is presented. One of the participating teachers, *S,* sadly passed away during the intervention phase, which is why their fourth and fifth observations could not be completed.

A range of curriculum subjects was chosen by each teacher throughout the scheduled lesson observations in both conditions. In considering teachers' fidelity to condition, the following range of values were applied, mirroring previous intervention studies with the EPL: emerging < 7.50, developing = 7.50 -12.49, enacting = 12.50-17.49 and integrating = 17.50-28.00 (Flynn et al., 2023; Teemant, 2014).

Table 3.6: Experimental teacher scores

Teacher (and school)	Years teaching multilingual learners	Pre-project observation	Obs 1, Jan 22	Obs 2, Feb 22	Obs 3, Mar 22	Obs 4, May 22	Obs 5, June 22	Post-test mean score
L, teaching Year 1 (A)	1.5	11	21	19	21	20	15	19.2
		Maths	Maths	English	Maths	PSHE	English	
A, teaching Year 1 (A)	6	12	21	19	21	21	22	20.8
		English	English	English	Maths	PSHE	English	
S, teaching Year 4 (B)	9	18	21	22	22	-	-	21.6*
		Maths	Maths	Toolkit for writing	Writing	-	-	
J, teaching Year 4 (C)	3	13	19	19	23	22	15	19.6
		Maths	Maths	Reading	DT	Maths	Reading	

*Note: *Unfortunately Teacher S's observations could not be completed due to her passing.

Four teachers from the control school were also observed at the beginning and end of the intervention phase. It is acknowledged that these teachers had considerably more years of experience in comparison to some of the experimental teachers. Teachers' varied profiles across the two groups meant that individual teacher effects had to be considered in the main analyses conducted in the study (see section 4.4). The control teachers' total scores from pre- and post-intervention can be found summarised in table 3.7. Largely mirroring the experimental teachers at pre-intervention, much of the control teachers' practice was observed as whole class teaching in style. Furthermore, where pupils were sat in groups, often giving the illusion that group work takes

place – such seating arrangements were typically made to meet the practical needs of the classroom layout and not to facilitate pupil dialogue and collaborative learning (Baines et al., 2009; Kutnick et al., 2002). The limited change in scoring over time is therefore perhaps reflective of the 'business-as-usual' teaching practice that continued during the intervention phase.

Table 3.7: Control teacher scores

Teacher (and school)	Years teaching multilingual learners	Pre-project observation	Post-project observation	Mean score
D, teaching Year 1 (D)	20+	14 PSHE	14 Geography	14
L, teaching Year 1 (D)	12	11 PSHE	8 Geography	9.5
H, teaching Year 4 (D)	9	12 RE/PSHE	13 Maths	12.5
M, teaching Year 4 (D)	12	10 RE/PSHE	9 Maths	9.5

3.6 Quantitative data collection: The pupil tests

The literature review demonstrated the complexities and considerations that need to be made when measuring pupils' English language proficiency, as well as the wide variation of practice regarding the assessment of multilingual pupils' proficiency in England (Evans et al., 2016). However, efforts were made to source existing test materials to act as the measures that could address the first research question pertaining to the development of pupils' English language proficiency.

Well-established assessment frameworks, such as those developed by NASSEA (2015) and The Bell Foundation (2019) were initially considered. Whilst these were useful in providing descriptors of pupils' English proficiency, such materials did not fulfil the study's need of measuring multilingual pupils' proficiency systematically or at a sufficiently fine-grained level. Other commercially produced assessment materials available in England that aim to test pupils' literacy skills, are often culturally biased and typically designed for monolingual English-speaking learners, which can put multilingual learners at a disadvantage (Hutchinson et al., 2003).

Therefore, the World-Class Instructional Design and Assessment (WIDA) consortium, based at the Wisconsin Centre for Education Research in the United States, was approached for further assistance. WIDA specialises in creating resources to assess multilingual learners' proficiency and these are used by educators worldwide, including in over forty states across the USA and around five-hundred international schools (WIDA, 2021). The tests used to measure pupils' proficiency were developed using existing WIDA materials and with permission from the test authors (see appendix E). Issues surrounding the reliability and validity of these tests are discussed in section 3.10.

More specifically, the WIDA Screener papers were selected for use in this study because they are designed to give educational professionals an overview of multilingual learners' English language proficiency (WIDA, 2018). This can be particularly useful in informing educational professionals whether such pupils require additional support in school, giving a broad snapshot of pupils' proficiency across the four domains of speaking, listening, reading and writing (King & Bigelow, 2018). The full suite of WIDA Screener Papers were obtained for pupils in UK-equivalent year groups, and these were then used when designing bespoke tests for the purposes of the current study. Therefore, participating pupils in Year 1 and Year 4 each received a set of tests in the four language and literacy domains (see appendix F for sample materials).

The fundamental structure of the tests, such as the number of items, scoring and format remained largely unchanged from the original WIDA versions for reach year group's set of materials. However, where it was required, adaptations were made to change some of the US-centric language and images and make them better suited to a UK classroom audience. This was important because the use of graphics is integral to framing each of the contexts used in the tests, to ensure broadly the same level of contextual knowledge is available to all pupils (Bauman et al., 2007). Advice was

sought from teachers to ensure that tests were also largely aligned with curricular expectations and experiences from the National Curriculum.

3.6.1 Speaking test

This test (see appendix F.ii) required the participants to sit with the researcher (who administrated the tests) on a 1:1 basis to participate in a short, structured conversation about a topic. While the conversation is guided by scripted information and questions, the test is also accompanied by a pre-recorded fictional pupil, 'Ava' responding to similar questions. The primary purpose of the pre-recorded pupil is to support the participant's response by providing a model of expected language use, in addition to providing a benchmark for the administrator to subsequently score the participant's response (WIDA, 2018). Pupils were provided with two opportunities to provide responses, which are guided by information in the script, graphics in the test materials and pre-recorded model responses.

For Year 1 pupils, the speaking test revolved around a story related to children finding a bird's nest in a park, whereas Year 4 pupils were tasked with explaining the life cycle of a ladybird. For the older pupils, this assumed that they had some scientific understanding of life cycles, as pupils typically begin to learn about this topic in Year 3 as part of the National Curriculum (DfE, 2014). However, in recognising that some multilingual pupils may have been new arrivals and/or potentially missed previous curriculum coverage, the task was adapted to mitigate this by using through the use of model answers provided by the fictional pupil, 'Ava,' preceding each pupil response as demonstrated in figure 3.4. Using part of the Year 4 speaking test material as an example, pupils were first provided with relevant graphics to illustrate the test administrator's scripted conversation, which included an explanation of each graphic in turn (appendix F.ii). This was then followed by 'Ava', who provided her response that pupils could draw upon for additional support. Pupils were then invited to provide their own responses to the test administrator. Therefore, the test considered multilinguals' needs by providing a model responder as a tool to specifically support L2 learners' language development (Paradis, 2011; Unsworth, 2016), with much of these procedures reflective of Vygotskyan ideology in which pupils' learning can be scaffolded through more knowledgeable others (Vygotsky, 1978).

Figure 3.4: Extract of Year 4 Speaking test material, with Ava's response

Year 1 and Year 4 pupils' speaking responses were assessed using the WIDA Screener Speaking Scoring Scale (WIDA, 2018). Each pupil's set of two responses were assessed based on three domains: word choice, comprehensibility and language use. The five-point scale ranged from an 'Exemplary' use of English in which participants were awarded for precision in their word choice, clear delivery and sophisticated language usage to 'No response' in which the participant was not able to respond at all or in English (see figure 3.5). Each of these domains was scored individually from one to five for both attempted responses, and then averaged to calculate pupils' overall speaking performance pre- and post-test. It can be argued that the process of scoring pupils' responses in this way threatens objectivity because it is fundamentally reliant on the test administrator's potentially subjective judgement. However, this issue was addressed by using an additional rater to score sample tests. More information about the inter-rater reliability can be found in section 3.10.1.

The WIDA Screener Speaking Scoring Scale	
Score point	**Response characteristics**
Exemplary use of oral language to provide an elaborated response	Language use comparable to or going beyond the model in sophistication. Clear, automatic, and fluent delivery Precise and appropriate word choice
Strong use of oral language to provide a detailed response	Language use approaching that of model in sophistication, though not as rich Clear delivery Appropriate word choice
Adequate use of oral language to provide a satisfactory response	Language use not as sophisticated as that of model Generally comprehensible use of oral language Adequate word choice
Attempted use of oral language to provide a response in English	Language use does not support an adequate response Comprehensibility may be compromised Word choice may not be fully adequate
No response (in English)	Does not respond (in English)

Figure 3.5: WIDA Screener Speaking Scoring Scale in assessing pupils' speaking test

3.6.2 Reading test

Participants' reading skills were assessed through twelve multiple-choice items (see appendix F.iii) which were dichotomously scored. These were divided into four sections that cover a range of language contexts, including vocabulary associated with the classroom/social purposes, as well as language related to the Arts, Science, Mathematics and Social Studies (Yanosky et al., 2012).

Pupils attempted a practice section with three items to help build familiarity and understanding of the task's expectations (Fox & Fairbairn, 2011), before going on to attempt the twelve items that made up the full reading test. For instance, figure 3.6 presents a comparison of item 2 featured in the Year 1 and Year 4 reading test materials, in which additional graphics for younger pupils were employed to assist with retrieving information, whereas Year 4 pupils were expected to make an inference based on the text provided. Each item in both year groups' tests had a maximum of four options, mirroring the structure of the original WIDA test materials. The rate of difficulty broadly increased as pupils progressed through the test, namely through the use of higher word counts and vocabulary frequencies.

Year 1 – item 2 **Year 4 – item 2**

> **2:** It is a sunny day. The child enjoys eating a strawberry outside.
> **Which picture shows this?**
>
> | A | B | C |

> **2:** Jamal and Anna now want to play a game together. It needs three players. They ask if Peter wants to play with them. Peter was playing his favourite game, but he puts it down and joins them at the table. The friends tell Peter that they will play his favourite game with him tomorrow.
>
> **What does Peter do to show he is a good friend?**
>
> | A | He stops playing his favourite game. |
> | B | He asks his friends to play another game. |
> | C | He makes his friends play his favourite game. |

Figure 3.6: Reading test material samples in Years 1 and 4

An overview of the difficulty level of each text was produced by examining its length and the vocabulary they contained. Vocabulary can be organised into frequency ranges: K1 words relate to the first one thousand most frequently used words in English, K2 indicates the next one-thousand words, and so on (LexTutor, n.d.). Table 3.8 presents the text length and vocabulary ranges for each of the reading tasks across the year groups that were analysed using the LexTutor Vocabulary-Compleat tool (https://www.lextutor.ca/vp/comp/).

Table 3.8: Reading test features

	Text length	Vocabulary frequency range								
		K1	K2	K3	K4	K5	K6	K7	K9	K15
Year 1	591	90.4%	6.3%	-	0.8%	0.3%	0.8%	1.4%	-	-
Year 4	1319	90.7%	4.7%	2.1%	1.1%	0.4%	0.5%	0.5%	0.2%	0.2%

When we consider that decoding and linguistic comprehension are central to the Simple View of Reading (Hoover & Gough, 1990), it could be argued that this study's reading task leans heavily towards assessing pupils' linguistic comprehension, which encompasses the knowledge and skills that are required to derive meaning from text (Hoover & Gough, 1990). The decoding element of reading is not explicitly assessed in this task and can therefore be viewed as a limitation. However, previous studies suggest that multilingual learners do not necessarily find decoding problematic, but rather, struggle to master the understanding of vocabulary and comprehension of texts (Burgoyne et al., 2009; Murphy, 2017). As such, the items in the reading task largely focused on aspects of linguistic comprehension, namely, assessing pupils' accuracy in retrieving information from the text

and their ability to make local inferences, in which the information required to do so is primarily rooted within the text (Kispal, 2008).

It is acknowledged that these tests may not be suitable for new-to-English learners who do not yet have adequate knowledge of the English letter-sound system to successfully decode. Despite this, these pupils could possibly attempt the listening and speaking tasks because they posed considerably less demand on their decoding skills. This aligns with WIDA's philosophy of encouraging multilingual pupils to demonstrate what they can do, as opposed to what they cannot (Board of Regents of the University of Wisconsin System, 2020).

3.6.3 Listening test

The listening test (see appendix F.i) required participants to listen to pre-recorded audio and respond to twelve multiple-choice items that were dichotomously scored. The spoken language featured in this task included a mixture of social and academic contexts, echoing Cummins' (1981) BICS and CALP distinction of language use that multilingual learners' often face in school environments. In a similar vein to the reading test, this test comprised four contexts related to classroom/instructional language and technical, subject-oriented vocabulary relative to the year group under assessment (Yanosky et al., 2012).

Largely mirroring the reading test format, three items were initially offered to participants as a practice. This was then followed by twelve items, in which pupils were provided with a maximum of three options. These were all pictorially represented for Year 1 and Year 4 pupils, as demonstrated in figure 3.7. Each item aimed to assess pupils' local comprehension of the audio, or in other words, pupils needed to identify details and interpret meanings based on what they could hear, and the question being asked (Shohamy & Inbar, 1991).

Figure 3.7: Extract of Year 1 Listening test material, accompanied by item script
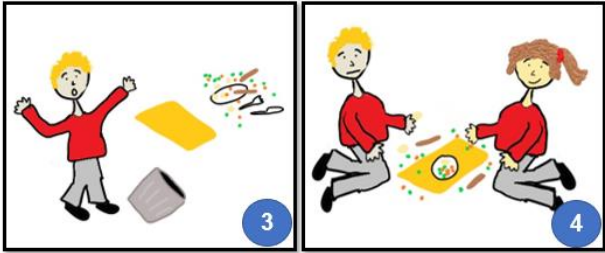
To further reduce the potential cognitive load, the twelve items were divided into four short sections. Each item's passage and corresponding question were pre-recorded, ensuring consistency in the input received by all pupils. As displayed in table 3.9, the speech rate across both year groups' tests was approximately 130 words per minute (wpm), which is considerably slower than radio presenters' average speech rate of 150 to 170 wpm (Tauroza & Allison, 1990). As previously outlined for the reading tests, vocabulary frequency ranges are also provided in table 3.9 below. Further, the test administration guidelines originally devised by WIDA (2018) were followed, in which pauses between each item and section were built into the pre-recording for pupils' comfort and ease.

Table 3.9: Listening test features

	Text length	Speech rate (wpm)	Vocabulary frequency range							
			K1	K2	K3	K4	K5	K6	K7	K8-11
Year 1	1451	130 wpm	89.8%	7.1%	0.6%	0.1%	1.1%	0.1%	0.1%	1%
Year 4	1671	131 wpm	91%	5.9%	2.2%	0.6%	0.1%	-	-	0.2%

3.6.4 Writing test

The writing test required participants to respond to a prompt, which consisted of five wordless comic book-style images (see appendix F.iv). For Year 1 pupils, these images were about a boy called David who accidentally dropped his lunch, and for Year 4 pupils, the images presented a trip to the supermarket with a girl called Tara and her dad. The writing prompt provided a box with key words related to the images, to further support pupils with spellings and vocabulary to encourage a written response. Figure 3.8 presents an extract of the Year 1 writing task, with the prompt and some of the images provided to pupils.

Figure 3.8: Year 1 writing task extract

Participants in each year group were required to write the story in their own words and were given up to twenty-five minutes to complete the test. This was a self-paced task in the sense that pupils could choose to plan, write and edit as they wished within the allotted time.

The WIDA Screener Writing Scoring Scale (WIDA, 2018) assesses all participants' writing for this task using a six-point scale (see appendix H.i for full scale) related to three areas. The first is at the discourse level, which relates to the overall cohesiveness of the text produced. The next is at sentence level, which assesses the accurate use of grammar to help structure writing. Lastly, pupils' writing is also assessed at word level, which largely refers to the range of vocabulary featured in the writing.

A maximum score of 6 can be awarded to participants who demonstrate sophistication in how they organise the text, make purposeful choices in sentence structures, and have precisive control over vocabulary use. These descriptors differ as the scale moves to the other end, whereby a score of 1 is awarded for minimal text that may represent an idea, the use of short phrases as opposed to sentences, and vocabulary that is limited to high-frequency words or words derived from the prompt materials. Each of these three areas was scored individually and then averaged to calculate

pupils' overall writing performance pre- and post-test. Figure 3.9 presents an abridged version of the scale, which illustrates the difference in scoring. A full version of the scale can be found in appendix H.i.

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The WIDA Screener Writing Scoring Scale, Grades 1-12		
[...]	**Score Point 6** D: Sophisticated organization of text that clearly demonstrates an overall sense of unity throughout, tailored to context (e.g., purpose, situation, and audience) S: Purposeful use of a variety of sentence structures that are essentially error-free W: Precise use of vocabulary with just the right word in just the right place [...] **Score Point 1** D: Minimal text that represents an idea or ideas S: Primarily words, chunks of language, and short phrases rather than complete sentences W: Distinguishable English words that are often limited to high frequency words or reformulated expressions from the stimulus and prompt	
D: Discourse Level	S: Sentence Level	W: Word/Phrase Level

Figure 3.9: Extract of the WIDA (2018) Writing Scale

3.6.5 Adapted version of the British Picture Vocabulary Scale (BPVS)

The BPVS (Dunn et al., 1997) was included to complement the full suite of tests, with the aim of providing an indicative measure of pupils' receptive vocabulary. Traditionally, the BPVS is administered on a 1:1 basis, with the participant starting a set at an age-related baseline, or the 'basal' set in which very few errors should occur. A set typically consists of 12 items, in which the administrator is required to say each item's stimulus word, and then the child must choose which image, out of a possible of four, is closest in meaning. The participant would then progress through each of these sets until a 'ceiling' is established, or more specifically, when eight or more errors are made within a set. This ceiling score and total errors made can then be used to generate a raw score. This raw score and the child's age at the time of testing can then be used to establish a standardised score, which can allow for comparisons (Dunn et al., 1997). This test usually takes less than ten minutes to administer per child, and a record of scoring is completed by the administrator.

However, due to time and resource constraints, the test administration had to be adapted. The principal difference was that the BPVS was administered in groups, instead of on a 1:1 basis as originally designed. Advice was taken from experienced scholars on how to use the BPVS at the whole-class rather than at the individual level. Doing so allowed for this test to be included as part of the listening, reading and writing tests taken in the classroom setting. Pupils were provided with a multiple-choice test sheet, in which they circled which image (out of a maximum of four) best

represented the stimulus word, which was shared orally by the researcher. Each item's collection of four images was shown on a large screen that could be seen by all pupils, and the stimulus word was repeated clearly when required. Figure 3.10 illustrates how pupils responded via the test sheet and how images were projected to pupils. Sufficient pauses were provided to maintain pupils' comfort and attention. A maximum of 96 could be scored by Year 1 pupils, and 108 for Year 4 pupils.
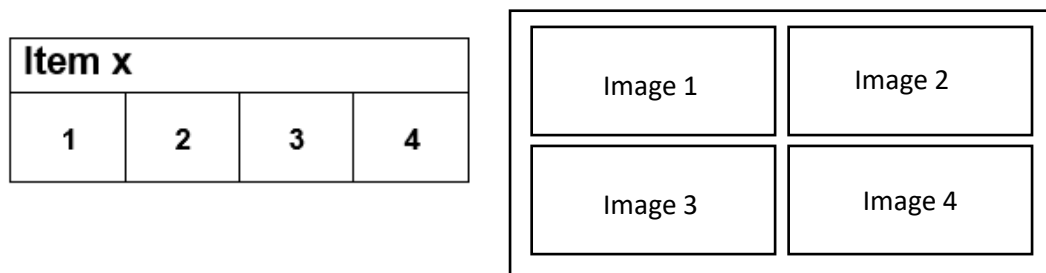
Figure 3.10 Pupils' vocabulary test response sheet and projected images example

However, as pupils completed their own record of scoring this meant that pupils in each year group started and stopped at the same sets. More specifically, this meant that Year 1 pupils started on set two, whereas pupils in Year 4 started on set five, and continued to set 8 and set 9, respectively. Each pupil's errors were then subtracted from the ceiling set and a raw score was generated. This meant that Year 1 pupils could score a maximum of 96, whilst Year 4 pupils could score up to 108. The data derived from the BPVS should be approached with caution and treated as a complementary strand to the principal suite of tests featured in this study because the procedures were adapted as outlined.

However, adopting the BPVS in this way somewhat aligned with the study's aims to develop teacher-orientated tests that required little specialised training. Doing so also acknowledged the time and resource constraints teachers face in attempting to assess their pupils' proficiency in classrooms (Leung & Rea-Dickins, 2007), and this study attempted to reduce this by using tests that are relatively short and easy to administer to groups.

3.7 Qualitative data collection: Focus group interviews

As an explanatory QUAN-qual mixed methods study, the purpose of collecting qualitative data was to add contextual value to the quantitative data, because this can help clarify and interpret data at the analysis stage (Edmonds & Kennedy, 2017). Data were derived from focus group interviews with multilingual children from the experimental classes using stimulated recall (Gass & Mackey, 2017; O'Reilly & Dogra, 2017). Both interviews and the use of stimulated recall are explored in this section.

3.7.1 Interviewing children

The inclusion of pupils' voices was an important aspect of this study, warranting its own research question and aim. This is because pupils' voices are seldom considered when decisions related to their language needs in educational contexts are made (Kuchah & Pinter, 2021). Moreover, previous research related to the EPL in the US does not include data that considers pupils' responses. Therefore, by conducting pupil interviews, valuable insights related to the change in teaching practice were explored from the pupil perspective.

The context of an interview and its associated formalities can be unusual, difficult and anxiety-inducing for some children (O'Reilly & Dogra, 2017). Coupled with the potentially unequal balance in power between the researcher and the young participants (Eder & Fingerson, 2003) it is important to acknowledge these challenges when interviewing children and consider how these can be alleviated. Kirk (2007) suggests several ways to address this: giving young people ample and open opportunities to share their thoughts, researchers exercising flexibility in response to participants' agendas and reminding participating children of their right to continue or end interviews. The following sections document how the researcher attended to this necessary flexibility in her use of focus group interviews with stimulated recall.

3.7.2 Focus group interviews

Focus group interviews, conducted at the end of the project, were used because this format was considered most appropriate for encouraging pupils to share their thoughts on the use of EPL as part of their classroom experiences. Adopting a focus group format for interviews can help young participants feel less intimidated by what is likely to be an unfamiliar experience for them (Greig & Taylor, 1999). It can also encourage a more open and free-flowing discussion of pupils' thoughts (O'Reilly & Dogra, 2017). Group interviews are also considered a better choice than individual interviews because in addition to being time and cost-efficient, group interviews can provide researchers with wider insights and multiple versions of the same event than individual interviews alone (Brinkmann & Kvale, 2018).

Whilst focus group interviews are associated with interactions between participants in which the researcher takes a secondary role, the researcher still needs to moderate the interview to ensure that the proposed areas of discussion are addressed (O'Reilly & Dogra, 2017). As such, building rapport

is essential when interviewing young people, to help foster an environment of trust in which children can participate comfortably (O'Reilly & Dogra, 2017). In this study, the researcher already had a rapport with the pupils built through the two testing periods.

Hennink (2014) suggested that conducting focus group interviews with young people is justifiable but emphasises that a careful balance must be achieved to ensure that the groups are not so large that the focus of the discussion is lost, or indeed too small to avoid participants feeling pressured into providing their input. An average size of around five pupils is recommended when conducting group interviews with young people (Hennink, 2014; Morgan et al., 2002; Punch, 2002). Whilst this study endeavoured to maintain this group size, in fast-moving spaces such as schools, flexibility was often required in accessing pupils for interviews (Punch, 2002) and this meant focus groups had between four to six pupils.

A focus group's dynamics, or the ways in which the participants may interact and contribute to an interview, was also considered (O'Reilly & Dogra, 2017). Morgan et al. (2002) conducted focus group interviews with a total of 42 participants (aged 7-11) to understand children's experiences with asthma. The composition of focus group interviews meant that some children were friends or attended the same school, while others did not know each other. In groups where participating children were unfamiliar with each other, Morgan et al. (2002) observed a greater willingness to talk openly about sensitive topics, such as experiences of bullying due to asthma. However, when discussing topics that are not as personal, groups made up of acquaintances helped some children feel encouraged to share their thoughts, or when referring to shared experiences, such group dynamics allowed for details to be challenged or clarified (Morgan et al., 2002). This can be useful in building a fuller, more accurate picture of an experience with multiple perspectives. Kennedy et al. (2001) indicated that participants' similarity in age, rather than familiarity with each other, is more important when considering how focus groups may interact. This is because conducting focus group interviews with children of a similar age (one to two years' difference) can encourage discussion in which participants are likely to engage in a similar style and comprehend what is being discussed (Kennedy et al., 2001).

In this study, participating pupils were classmates and therefore were similar in age and shared daily learning experiences. The dynamic of each focus group was carefully considered through consultation with each class teacher prior to inviting pupils to participate. However, it is also important to consider how familiarity between participants can influence a focus group interview (Hennink, 2014). With each focus group based in the same class, they may have been reluctant to share detailed responses or personal perspectives openly. However, as previous studies have demonstrated, interviewing children who are already familiar with each other can facilitate discussions in which points are organically built upon, with shared experiences giving potential depth in accurately addressing a research question (Hennink, 2014).

Lastly, it could be argued that focus group interviews are contrived and only focus on set topics (Cohen et al., 2018). Whilst the researcher traditionally provides the topic of discussion and monitors that the group does not deviate from it (Denscombe, 2014), the nature of group interviews means emphasis is primarily placed on the thoughts and interactions between participants (O'Reilly & Dogra, 2017). Therefore, conducting interviews in this way attended to this study's research question by enabling a focus to remain on understanding pupils' responses to a change in teaching practice in their classrooms.

3.7.3 Stimulated recall

The use of stimulated recall was central to the focus group interviews conducted in this study. Stimulated recall was considered beneficial because of its flexibility in operating within busy classroom environments, whilst still encouraging participants' introspection about previous events (Lyle, 2003).

First developed by Bloom (1953) and later developed by Siegel et al. (1963) to include video recordings, this technique centres around a stimulus to prompt respondents' thoughts about a prior event, situation or task. The stimulus typically involves video, audio or images of an event, although written stimuli, such as field notes and transcriptions of conversations, can also be used, in conjunction with the interviewer's questions, to elicit responses (Gass & Mackey, 2017).

The strength of the stimulus, and the time lapse between the event and the interview, are important points to consider. An immediate recall of an event can draw upon participants' short-term memory and can lend itself to providing a potentially richer account in interviews (Ericsson & Simon, 1998). However, Gass and Mackey (2017) acknowledge unavoidable logistical issues that can sometimes lead to a delay between the event and the interview and suggest that this can be somewhat alleviated with the nature of the stimulus. DeWitt and Osborne (2010) found that in small group interviews with 129 primary pupils (aged 9-11) reflecting on visits to a science centre, the use of photographs and videos helped pupils elaborate beyond what could be seen in stimuli. Participating in these interviews as pairs or trios, the stimuli helped prompt discussion about what they enjoyed about different exhibitions at the science centre, in addition to demonstrating their understanding of scientific phenomena.

In another study involving group interviews with 90 younger children (aged 3-7), Morgan (2007) video-recorded lesson observations and used this to stimulate children's recall of their learning in that lesson. Groups of four were involved in interviews which included viewing and discussing the stimulus, suggesting that participants found it easier to talk about what they found memorable and more challenging to share their understanding of the intended lesson outcome. However, there was a delay of up to three months between the lesson and interview, which may have impeded the children's ability to remember and reflect on the recorded lesson (Morgan, 2007). Taken together,

these studies demonstrate that stimulated recall can act as a mediator when attempting to elicit responses from children in interviews (DeWitt & Osborne, 2010).

In the context of this study, experimental classroom teachers were consulted to identify suitable stimuli to be used in preparation for each interview. This included discussing topics/units of work pupils had recently completed, and identifying books, resources, videos and work used or produced by the pupils, which were then drawn upon during the interviews to prompt pupils' memory and responses. Time was spent referring to these materials, by both the researcher and participants alike, during the initial talk at the start and throughout each group interview. This helped put pupils at ease and relaxed for what could have been perceived as an unusual event (O'Reilly & Dogra, 2017).

3.8 Data collection: procedures

This section provides an outline of the full study's procedures in collecting data to address the research questions. Before these were addressed, test materials were developed and then piloted to ensure they were fit for purpose in the full study. Further details about this process can be found in section 3.9: *Pilot study*. Figure 3.11 below summarises the study's design. This shows that after the development and piloting of test materials, pre-testing in the late autumn term of 2021 began for all pupils. From January 2022, the intervention phase commenced, with experimental pupils working with their teachers who had received the EPL training (see section 3.5: The intervention) and control pupils continuing to receive business-as-usual teaching practice. Finally, from June/July 2022, post-testing commenced for all participating pupils, with the focus group interviews scheduled for a subsample of experimental multilingual pupils only.
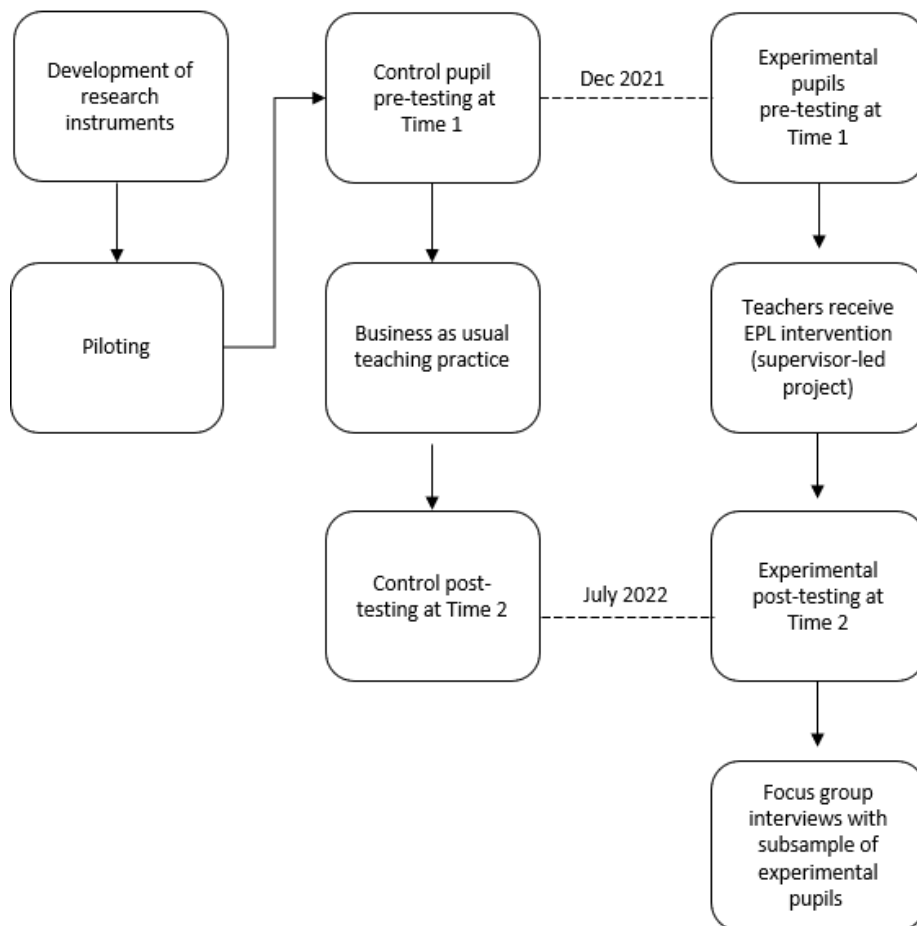
Figure 3.11: Summary of the study's procedures

3.8.1 Administrating tests

At pre-test (Time 1), pupils from each school attempted the vocabulary, listening, reading and writing tasks in existing classroom spaces, during the school day. Liaising with teachers directly

allowed the administration of these tasks to take place at mutually convenient times and thus minimised disruption to pupils' learning. To further support participants in this study, efforts were made to administer the tests in smaller groups where this was required, to ensure pupils understood how to complete the tasks and felt supported in doing so. These again were organised with each teacher's guidance and knowledge of the children, to ensure that all pupils could comfortably access the tasks. The time taken to complete the pen-and-paper tests was approximately an hour, although short breaks in between each task were included.

However, Year 1 pupils' writing at pre-test was handled differently in response to contextual factors beyond the researcher's control. At this time point (November 2021), this cohort of young pupils had experienced immense disruption from the beginning of their formal schooling, due to the Covid-19 pandemic. This meant pupils across the control and experimental schools were largely behind age-related expectations, coupled with prolonged periods of varied home learning experiences. Participating teachers in this study anecdotally shared concerns about their pupils' language and literacy development, which are reflected in the literature elsewhere (Bowyer-Crane et al., 2021; Moss et al., 2020). Therefore, whilst pupils attempted all tests, due to the lack of examinable writing produced at pre-test, these were scored as zero, rather than being considered as missing data.

The speaking test was somewhat different in that it was not a traditional pen-and-paper test, but rather, required the participant to engage in a structured 1:1 conversation with the administrator. As such, the speaking test was attempted by pupils considered as EAL learners only. This is because it was not viable for the researcher to collect this time- and resource-heavy data at each time point for all participating pupils across the four schools. The speaking test was administered after all pupils completed the suite of pen-and-paper tests. Given the nature of the task, a quiet space within each school was essential to the successful administration of the speaking test and this was organised directly with school staff. Small teaching and learning spaces with which pupils were already familiar with were used throughout the duration of the data collection and all were completed within the school day, to contribute towards participants' comfort and familiarity.

At post-test (Time 2), which was approximately six months later, the tests were administered again to pupils, under the same procedures and with the same considerations previously discussed. Whilst an additional delayed post-test was considered advantageous in order to see how durable any effects were, it was not feasible to collect pupil data beyond one academic year for this study and a pre- and post-test design was implemented instead.

3.8.2 Conducting interviews
Shortly after Time 2 tests were administered, four focus group interviews with stimulated recall took place within pupils' schools and took no more than 20 minutes for Year 4 pupils, and fewer than 15 minutes for Year 1 pupils. This aligned with previous research that suggested attempting to

engage in focus group interviews for considerably longer periods of time can impact on the quality of children's responses (Kennedy et al., 2001; Morgan et al., 2002).

Pilot interviews were conducted with pupils to ensure that the questions were suitable for the full study. Slight adaptations needed to be made when conducting the Year 1 and Year 4 interviews because of the pilot phase. Additional details about this process can be found in section 3.9: Pilot study. This meant that for Year 1 pupils, a series of additional images (see appendix O) were used as part at the beginning of their interviews, to help familiarise and assist pupils in generating initial responses. Images were not of participating pupils but were sourced from the University's stock photo collection. Figure 3.12 presents an example set of images which were shown to children. These were accompanied by a discussion of whether they enjoyed working on their own, with a friend, or in a group when they were in the classroom.

Figure 3.12 Set of images for Year 1 pupil interviews

For Year 4 pupils, this additional layer of support was not necessary, however time was taken at the beginning of the interview to talk to pupils informally in order to feel comfortable and less intimidated. For example, this included talking to one group of pupils about a recent school trip (see appendix J).

For all four interviews, after this initial phase of talk, each then followed the same procedure, in that a 'stimulated recall' or a discussion of the interview questions (see figure 3.13), was framed by the materials provided by each classroom teacher. The questions essentially asked pupils what they enjoyed, found challenging, learned, and would change in the lessons where their teachers had explicitly drawn on elements of the EPL in their teaching. The materials provided for the stimulated recall were referred to by the interviewer and pupils throughout the interviews and guided each discussion. However, the nature of focus group interviews meant that a semi-structured style of questioning took place, in which the researcher typically demonstrates flexibility in how the schedule of questions are asked (O'Reilly & Dogra, 2017). In this study, the inclusion of

stimulated recall encouraged pupils to drive each focus group interview, however the researcher re-ordered or rephrased with appropriate synonyms, repeated pupils' comments for clarification and re-directed the conversation back towards the questions where required. This format and its corresponding procedures were considered most appropriate for addressing the research question pertaining to pupils' responses to the EPL in their classroom. The final question essentially provided participants with an opportunity to include any final thoughts that may not necessarily have been covered through the previous questions.

Year 4 pupils	- Could you tell me how much you enjoyed these sessions? - Did you find the sessions difficult or easy? What did you find difficult/easy? - Tell me about what you learnt from these sessions? - Is there anything you would change/improve to help with your learning in these sessions? - Is there anything else you'd like to talk about?
Year 1 pupils	- Could you tell me how much you enjoyed these sessions? - What did you learn from these sessions? - What did you find hard in these sessions? - Is there anything else you'd like to talk about?

Figure 3.13: Interview questions for each year group

3.9 Pilot Study

A pilot study was conducted to ensure that the language and literacy tests developed for the purposes of this research were appropriate to use. Irrespective of research tradition, taking this preliminary step is considered essential as potential issues with the design, language and response to tasks can be flagged and subsequently amended by the researcher before the full study begins (Bryman, 2016; Malmqvist et al., 2019). The piloting of these tasks was undertaken in July 2021 with a total of 19 multilingual pupils across Years 1 and 4 as detailed in table 3.10 below. These pupils were selected from two other partner schools that form part of the wider Trust, that did not take part in the full study. However, the school that provided the Year 4 pupils had been part of previous training and research related to the EPL (Flynn & Leena, 2021). One Year 4 pupil was absent on the day of testing, which meant that their data could not be included.

Table 3.10: Pilot study participants

Year Group	No. of Pupils	Languages spoken by pupils
Year 1	10	Polish, Chinese, Punjabi, Urdu, Russian, Romanian
Year 4	9	Urdu, Punjabi, Farsi, Polish, Somali

Descriptive statistics for each of the listening, reading, writing and speaking tasks are summarised in table 3.11. The highest possible score available on the listening and reading tests is 12 each, whereas for the writing and speaking tests, the highest possible score available is 6 and 5 respectively. The descriptive statistics in the table below broadly demonstrate a spread of scores across the year groups, although Year 4 listening, reading and speaking test scores approached ceiling. These scores may have been influenced by the school's established engagement with the EPL.

Table 3.11: Descriptive statistics – pilot study

	N	Minimum	Maximum	Mean	Std. Deviation
Year 1					
Listening	10	3	9	5.10	1.792
Reading	10	3	8	5.70	1.767
Writing	10	1	3	2.00	0.816
Speaking	6	2	4	2.67	0.816
Year 4					
Listening	9	5	11	8.89	1.764
Reading	9	2	11	7.67	2.872
Writing	9	1	4	2.44	0.882
Speaking	9	2	4	3.44	0.726

Upon further analysis of the Listening and Reading tests, some changes to the items were considered. Table 3.12 presents the difficulty index, calculated for both tests, across the year groups. The difficulty index calculates the proportion of participants who answered the item correctly, with values above 0.9 and below 0.2 indicating extreme ease and difficulty respectively (Quaigrain & Arhin, 2017). However, caution should be taken in interpreting the table data, as the pilot study was conducted with small groups of participants from each year group. Internal consistency was also not assessed during the pilot study due to sample size, although this is reported in the full study's findings (see section 4.2). Nevertheless, this additional layer of analysis at an item-level gave greater clarity on where changes could be made to improve the test materials, which descriptive statistics alone could not provide.

Table 3.12: Difficulty index for listening and reading tests

	Items											
	1	2	3	4	5	6	7	8	9	10	11	12
Y4 listening	**1.00**	0.78	0.89	**1.00**	0.78	0.44	0.78	0.89	0.89	0.44	0.67	0.33
Y4 reading	0.22	0.56	**1.00**	0.67	**1.00**	0.56	0.78	0.89	0.44	0.44	0.33	0.78
Y1 listening	0.50	0.50	0.60	0.20	0.50	0.30	0.30	**0.10**	0.40	0.90	0.80	**0.10**
Y1 reading	0.80	0.50	0.30	0.50	0.40	0.30	0.80	0.20	0.70	**0.10**	0.60	0.50

The figures highlighted in bold within table 3.12 were prioritised when considering further adaptations required for test materials. The table broadly suggests that Year 1 materials had items that indicated difficulty, whereas Year 4 items suggested relative ease.

First, amendments were made to the Year 1 materials. For the listening task, it was found that items 8 and 12 required some attention, as these indicated intense difficulty. Both items' scripts were edited for clarity and can be found in appendix G. Furthermore, item 10 on the Year 1 reading test had an additional image of twelve cupcakes added to it to aid pupils' comprehension of the text.

Year 4 materials were then considered. The difficulty index suggested ease as items 1 and 4 in the listening test, and items 3 and 5 in the reading test were answered correctly by all participating pupils. This meant that in the listening test, the pictorial multiple-answer choices for item 1 were amended to include images which are more closely related to the script (namely a wheel and farm),

as shown in figure 3.14, whereas the script for item 4 was lengthened slightly. Regarding the reading test, the accompanying text related to items 3 and 5 was lengthened to increase the level of challenge. These changes can all be found in full within appendix G.

Figure 3.14: Amended answer sheet for Year 4 listening task, accompanied by the script for this item

3.9.1 Pilot interviews
The aim of conducting pilot interviews was to refine the proposed interview questions and confirm that these would be suitable for pupils participating in the full study (O'Reilly & Dogra, 2017). Year 4 pilot pupils (whose teachers had already received EPL training but were not part of the full study) were invited to take part in a focus group interview with stimulated recall. Each focus group consisted of four to five pupils, who were recognised as EAL learners. Pilot pupils from the Year 1 school were unavailable to participate in interviews, and their teachers also had no exposure to the EPL training.

Questions essentially asked pupils what they enjoyed, found difficult, learned, and would change in their lessons. Prior to the interview, their classroom teacher was consulted to ensure that appropriate stimuli (such as relevant books, resources and media) were selected for discussion. Pupils engaged well with these questions, although on reflection, adaptations needed to be considered for younger pupils in the full study. As such, for Year 1 pupils in the full study, the question related to what they would change in their lessons was considered too challenging and

removed. Minor changes to wording were made and the order of questions was slightly amended to assist them in generating responses. For the questions asked to each year group, see section 3.8.2.

From the pilot, it was clear that pupils needed to feel comfortable talking with an adult, before the interview formally began. The role of 'small talk' is emphasised by O'Reilly and Dogra (2017) as critical in building familiarity, trust and comfort for young people being interviewed. For Year 1 pupils, it was considered that images of different teaching and learning styles (see appendix O) could be a useful aid in encouraging conversation, before beginning the interview question schedule. For Year 4, piloting demonstrated this additional layer was not needed, but considerable time looking through stimuli together and talking informally about school was useful for all pupils before engaging in the interview questions. Therefore, these steps were implemented in the main study's focus group interviews.

3.10 Reliability and validity

3.10.1 Assessing the study's reliability

Reliability can refer to the "dependability, consistency and replicability over time, over instruments and over groups of respondents" (Cohen et al., 2018). In the quantitative phase of this study, a suite of language and literacy tests was the primary data collection instrument. These were implemented within a pretest-posttest quasi-experimental research design to address the research question pertaining to the impact of the EPL intervention on the development of multilinguals' English language and literacy skills.

To ensure consistency in testing difficulty, the same materials were used at pre- and post-test. Further, in order to avoid a practice effect, there was an approximately six-month gap between pre- and post-test administration. This is important because to ensure the stability of the instruments used, an appropriate length of time between the test and re-test points should be considered, ensuring this is not so short that participants still remember the test contents, or indeed so long that other logistical factors may disrupt the collection of data (Coe et al., 2017). A period of six months between the two data collection points aligned with other logistical factors within this study, namely the delivery of the EPL intervention and completion of pre- and post-testing within a school year.

To further strengthen reliability in the quantitative phase of the study, another PhD student who is also a qualified teacher was sought for the purposes of interrater reliability (IRR). IRR was calculated based on the scores awarded for the more subjective speaking and writing tasks in order to help minimise the potential threat of inconsistency and inevitable infallibility a sole assessor may bring (Cohen et al., 2018). This meant a sample of speaking and writing responses were assessed independently at both pre-test and post-test by two raters.

At Time 1, a sample of speaking responses from Year 1 pupils (n = 10) and Year 4 pupils (n = 10) were randomly selected across the control and experimental schools. The IRR initially reached 73.96% agreement between the two scorers. The reasons for differences in scoring were recorded and discussed on a case-by-case basis until 100% agreement for the scores could be reached. The speaking scoring scale was also annotated (see appendix I) to reflect key points that emerged from this discussion, to ensure the scoring could be applied consistently moving forward.

A similar process was followed for the writing responses. A sample of ten Year 4 writing scripts were randomly selected for IRR, as Year 1 pupils did not participate in the writing task at Time 1 (see section 3.8.1). The IRR reached 87.5% agreement between the two scorers. The IRR may have been higher than for the speaking scores because both scorers had experience in moderating pupils' writing for school assessment purposes. However, differences were duly noted and discussed until 100% agreement was achieved, with these discussions helping develop understanding and inform

the consistent application of the writing scoring scale through additional annotations (see appendix H.ii).

At Time 2, the same PhD student was approached to assess a sample of speaking and writing responses for IRR. Fourteen speaking responses (n = 7 from each year group) and writing scripts (n = 7 from each year group) were independently scored. The IRR at this time point reached 91.67% for speaking and 92.86% for writing. This considerably higher IRR could be due to familiarity with the tests, the use of the annotated scales or a combination of both. Despite this, each difference in scoring was still discussed on a case-by-case basis until full agreement was reached. After each of these assessments of IRR, all speaking and writing tests were marked by the main researcher.

For qualitative data, reliability is often framed as the space between what actually occurs and what the researcher records is considered (Cohen et al., 2018). Whilst a highly structured interview with closed questions can help maintain uniformity in the process of collecting interview data and thus address issues surrounding reliability (Silverman, 1993), the rationale behind the focus group interview approach was that it better addressed the research question pertaining to pupils' responses to the EPL. This format provided participants with the space to define and discuss their own experiences and unique viewpoints that may not necessarily be captured through individual, closed questioning (Cohen et al., 2018; Hennink et al., 2020). Furthermore, the use of stimulated recall within the focus group interviews functioned as a tool to support these conversations, providing a prompt to ensure each focus group understood the questions posed to them in the same way (Silverman, 1993). Other issues affecting reliability within focus group interviews include being able to establish trust, overcoming traits such as shyness and being cognisant of vocabulary choices and non-verbal cues, with such issues further compounded when interviewing young people (Greig & Taylor, 1999). This has been addressed in section 3.7.

Thematic Analysis (TA) was undertaken (Braun & Clarke, 2006) in relation to the qualitative data produced in this research. This meant data were systematically discussed at each iterative stage of coding with the supervision team, allowing for the initial stages of codes, which captured detail and nuance, to be continually refined until a final set of themes were established. Further details on how the qualitative data were analysed can be found in section 3.11.5.

Other approaches pertaining to the reliability of the analysis were also considered, such as conducting intercoder reliability (ICR). However, ICR, or the level of agreement that different coders have for the same data (O'Connor & Joffe, 2020), can be challenging to conduct for a small number of interviews, as was the case for this research. Moreover, quantifying codes for a small dataset can risk the creation of 'superficial and underdeveloped' (Braun & Clarke, 2022, p. 240) codes to encourage higher coding agreement. Therefore, undertaking ICR was considered inappropriate as it risked simplifying the analysis of the qualitative data generated, potentially

affecting the extent to which the research question pertaining to pupils' responses to the EPL could be addressed.

3.10.2 Assessing the study's validity

Without considering validity, the subsequent claims made in this study, or any research, can be subject to much scrutiny (Coe et al., 2017; Cohen et al., 2018). Regarding quantitative studies, there are three areas of validity that can be addressed by researchers: construct, concurrent and internal validity. Each of these are discussed in turn. First, construct validity largely concerns itself with the accurate definition and operationalisation of the construct under research (Cohen et al., 2018). In the context of this study, pupils' English language proficiency was measured through a suite of language and literacy tests. To demonstrate construct validity, section 2.6 of the literature review chapter was dedicated to discussing and defining the construct.

Concurrent validity examines how far the results of a measure correlate with an existing measure that claims to assess a similar construct (Frey, 2018). The tests designed for this study are integral to measuring multilingual pupils' English language and literacy outcomes, and it is therefore imperative that these materials were valid for use. As mentioned previously, the suite of language and literacy tests in this study was derived from the WIDA Screener Paper. This paper is a shortened version of its predecessor, the WIDA Model Paper.

However, reliability and validity are likely to be similar across both the Screener and Model papers; test content in the four language and literacy domains do not differ across the two papers, except that the Reading and Listening tests have a smaller number of items in the Screener Paper than in the Model Paper (Amos et al., 2014; Yanosky et al., 2012). Further, as shown in table 3.13, concurrent validity of the listening and reading sections of the Screener Paper with the full Model Paper has been demonstrated (Yanosky et al., 2012).

Table 3.13: Pearson Correlations between WIDA Screener and WIDA Model Papers (Yanosky et al., 2012)

	Listening		Reading	
	N	**Pearson's correlation**	**N**	**Pearson's correlation**
Grades 1-2	506	.802**	61	.693**
Grades 3-5	595	.714**	561	.790**

Note: **Correlation is significant at the 0.01 level (2-tailed).

Regarding the Screener Paper's speaking and writing domains, reliability figures were not reported by WIDA. However, such figures can be found within another similar test, WIDA ACCESS for ELLs 2.0, which measures pupils' language proficiency, albeit through an online format (Center for

Applied Linguistics, 2018). The authors report that a 20% sample of pupils' speaking and writing responses were assessed for internal consistency, using Cronbach's alpha. These are summarised in table 3.14 below and largely show levels above or close to the typically accepted value of 0.7 (Taber, 2018). Lastly, although these materials have undergone extensive field testing, and are currently used worldwide across hundreds of educational settings (WIDA, 2018), each of the tasks used in this study were reassessed through piloting, as discussed previously in section *3.9.*

Table 3.14: Reliability of WIDA ACCESS for ELLs 2.0 Speaking and Writing responses (Center for Applied Linguistics, 2018)

	Speaking		Writing	
	N	**Cronbach's Alpha**	**N**	**Cronbach's Alpha**
Grade 1	43,064	.688	126,315	.860
Grades 2-3	66,637	.585	103,665	.863

Internal validity considers the extent to which a study can establish a trustworthy causal relationship between a treatment and an outcome whereas external validity questions to what extent such findings can be generalised (Leighton, 2012). Lastly, data analysis validity considers how well the researcher has planned the collection and analysis of data that form the basis of any subsequent findings (Coe et al., 2017). To address these concerns, several areas were considered, and decisions were made when designing this study. For instance, the potential maturation of participants is inescapable (Cohen et al., 2013). However, such maturation effects across the experimental and control schools were expected to be broadly similar. This is because there was a careful consideration of the time between the two testing points, which was designed to be contained within one academic year as it was not feasible to go beyond this time period. Teachers' fidelity to condition was maintained and closely monitored through the sister study, as explained in section 3.5. Furthermore, the test materials attempted by pupils at both time points were the same and can be considered to have high ecological validity because these were already well-established materials used in classrooms around the world (WIDA, 2021).This is important because the materials used in this study, resemble what pupils would be likely to encounter as part of their real-world classroom experiences (Osborne-Crowley, 2020).

The validity of qualitative data in this study is now considered. Qualitative studies traditionally place greater emphasis on internal validity, as generalisability of findings is not typically a primary aim of such research (Hammersley, 2013) but rather the focus is on representing the phenomenon under investigation, with integrity and accuracy (Cohen et al., 2018). Lincoln and Guba (1985) posited four broad areas of 'trustworthiness' specifically relevant to qualitatively orientated research, which

intend to be somewhat parallel to the notions of validity in relation to quantitative research (Nowell et al., 2017). These include establishing credibility of any truth found in the results, transferability of such conclusions in other contexts, achieving dependability through a clearly documented research process and confirmability of the findings, which is largely dependent on the three former areas being addressed before the latter can be achieved (Nowell et al., 2017).

These areas of validity and trustworthiness are addressed in the qualitative part of this study in several ways. First, the focus group interviews were scheduled to take place after a prolonged engagement with participants. The researcher became a somewhat 'familiar face' to pupils throughout the data collection periods, frequently visiting schools to administer the language and literacy tasks, in addition to occasionally shadowing teacher observations. Such visits can be particularly useful in building rapport with pupils before the interviews take place (O'Reilly & Dogra, 2017). This meant that a sufficient level of trust could be built over time, which allowed for findings to be reported with a level of integrity and understanding of the pupils' contexts.

Further, transferability and dependability are often addressed through detailed descriptions of contexts and processes which enable readers to evaluate the interpretations of findings and assess the extent of transferability to their own settings, if applicable (Nowell et al., 2017). These are addressed in this thesis through detailed information on the schools, teachers and pupils and related research processes involved in the study. Providing this information thus shifts the onus onto the reader to reflect on how the data and interpretations shared in this study may align with the contexts in which they are situated in (Braun & Clarke, 2022).

3.11 Data Analysis

As discussed in earlier sections within this chapter, this study took a mixed methods approach, and so both quantitative and qualitative data were collected and analysed. This included the analysis of quantitative data derived from pupils' listening, reading, writing and speaking tests which were taken at two time points, pre- and post-test. Qualitative data from four focus group interviews with stimulated recall, were then analysed to complement and contextualise findings.

3.11.1 Listening and Reading tests

These multiple-choice tests were taken by pupils in Year 1 and Year 4, in both the control and experimental groups. As discussed previously is section 3.6, test content was reviewed and adapted accordingly, although the fundamental structure of these tests, such as the format, number of items and mark scheme (WIDA, 2018) remained unchanged. The same test materials were attempted at both pre-test and post-test. At each time point, tests (for which a maximum of twelve could be awarded) were marked by the researcher and corresponding score data were entered directly into SPSS 27 (IBM Corp., 2020).

3.11.2 Writing test

This test, again, followed the mark scheme provided by WIDA (2018) in which pupils' writing was marked against a six-point scale (see appendix H.i) at a discourse, sentence, and word level. The WIDA (2018b) mark scheme suggests awarding a single score (up to a maximum of six) based on a 'best fit' of each of these three sub-domains, as these materials are primarily designed for teachers' ease.

For the purposes of this study, scoring was adapted so that each of these levels were assessed and individually awarded a score up to a maximum of six. Scores for levels were then combined to create a single average writing score, at each time point. However, due to the more subjective nature of the scoring, interrater reliability was undertaken at both time points with a sample of writing test responses in Year 1 and Year 4 to strengthen the reliability of the analysis. Further details related to this were previously discussed in section 3.10.

3.11.3 Speaking test

Like the writing test, this test adhered to the WIDA (2018) mark scheme, in which verbal responses were assessed against a five-point scale (see appendix I) related to pupils' word choice, comprehensibility and language use. To generate more nuanced test data, each of these domains were again, scored individually and then combined to create an average score at each time point.

3.11.4 British Picture Vocabulary Scale (BPVS)

An adapted version of the BPVS (Dunn et al, 1997) was used in this study and discussed in section 3.6.5. The primary purpose of this test was to provide an indicative measure of pupils' receptive vocabulary and to complement the suite of listening, reading, writing and speaking tests that are an

integral feature of this study. For Year 1 pupils, this meant a maximum of 96 could be scored and for Year 4 pupils, a maximum of 108. This raw score was only used for the purposes of data analysis and therefore were not converted into standardised scores as the original test procedures were not implemented in this study. More specifically, pupils' raw score was used as a covariate because of the strong relationship between vocabulary and language/literacy skills (Brabham & Villaume, 2002; Graham & Eslami, 2020; Lawrence et al., 2012; Lesaux et al., 2010; Ouellette & Beers, 2010; Peets et al., 2022). Doing so allowed for a clearer picture of pupils' progress, independent of their vocabulary knowledge.

Taken together, the quantitative data derived from each of the tests stated above were processed and analysed in SPSS 27 (IBM Corp., 2020). This first included generating basic descriptive statistics and histograms for each year groups' test data, in addition to running preliminary tests to ascertain how far the data could meet the assumptions for the use of parametric tests (Field, 2018). Further details can be found in chapter 4, with the rationale provided for where parametric tests (and non-parametric alternatives) were adopted.

3.11.5 Focus group interviews

Four interviews took place with a subsample of multilingual pupils in experimental schools. This approach was adopted in eliciting pupils' responses to the use of EPL in their classrooms. Each interview was audio recorded and then transcribed (full transcripts can be found in appendix J - M). Each of these transcripts were then imported to NVivo 12 (QSR International, 2020) to assist with analysis.

The process of reflexive thematic analysis (Braun & Clarke, 2021) was adopted for the qualitative data and is summarised in the figure 3.15. This meant that transcripts were initially read and then closely re-read several times to ensure familiarity with the data. From here, an inductive approach to analysing the data was taken, whereby cycles of coding, and subsequent themes that emerged, were continually developed and modified until saturation was reached (Braun & Clarke, 2013; Saldaña, 2015).

| 1. Data familiarisation | → | 2. Systematically coding data | → | 3. Developing initial themes | → | 4. Reveiwing themes | → | 5. Refining themes |
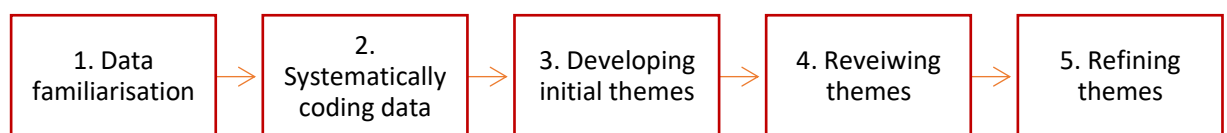
Figure 3.15: Process of reflexive thematic analysis (Braun & Clarke, 2021)

A code can be conceptualised as a meaningful assignment of an attribute to a dataset (Braun et al., 2017; Saldaña, 2015). Coding, therefore, refers to the process that the researcher takes in identifying such attributes that are relevant to their research questions (Braun & Clarke, 2022). In the context

of this study, this meant each line of transcript was closely inspected and coded broadly in relation to the research question related to pupils' responses to classroom practice. Saldaña (2021) acknowledged that although an inductive approach to coding takes more time, due to its reflective and compositional nature, it remains an approach that is mostly preferred by qualitative researchers. The solitary nature of coding is also recognised, and therefore discussing each stage of analysis is recommended as an opportunity to reflect on "internal thinking processes…clarify [the researcher's] emergent ideas and possibly make new insights about the data" (Saldaña, 2021, p. 52).

Therefore, regular meetings were held with the lead supervisor at each stage of thematic analysis for this purpose. This meant that each stage of coding was continually discussed and developed until final themes were established. Extracts of each iteration are provided below to illustrate how reflexive thematic analysis (Braun & Clarke, 2021b) was conducted in this study.

Figure 3.16 below shows extracts of initial codes which formed the first codebook (see appendix N.i for full codebook). In acknowledging the difference in pupils' ages (Kennedy et al., 2001), each year group's data were initially analysed separately.

Year 1 interviews	Year 4 interviews
Challenging myself	Developing literacy skills
Clarifying learning	Difficulty with abstract ideas
Making connections with learning	Learning related to pupils' lives
Pro-group work	Meaningful reflection beyond self
Pro-partner work	Self-reflecting on learning
Pro-solo work	Teacher response

Figure 3.16: Extracts from the first round of coding

The reflexive element of thematic analysis places emphasis on the coding process as "open and organic" (Braun & Clarke, 2021b, p. 334) in which there is less reliance on adhering to specific coding frameworks, and more attention given to the iterative stages of thematic analysis. As such, each of the codes that emerged from the first round, were reviewed and discussed with the supervision team.

Using Nvivo 12's properties function, each of these codes were then built upon by giving a description to ensure the code name matched what it was intended to capture within the interview data. This exercise helped identify patterns and refine the codebook, as similar codes which were identified in both year groups could be reviewed and amalgamated if required. Figure 3.17 presents examples of codes with their descriptions (see appendix N.ii for full codebook at this stage).

Name	Description
Challenges with developing literacy	Challenges with aspects of writing/text: composing ideas, transcription, constructing sentences etc.
Collaborative group work	Pupils share their opinion on working in groups, with their friends, teachers etc.
Reflecting on learning	Children make reference to previous learning and consider/clarify/analyse these experiences
Teacher support	Children make reference to teacher practice: whole-class teaching, small group work, feedback
Thinking about others	Children demonstrate meaningful consideration of others (beyond themselves) through their classroom learning

Figure 3.17: Extracts from the second round of coding, with descriptions

This second iteration of coding was again shared and discussed with the supervision team. From here, themes could begin to be developed. Themes can be defined as the purposeful arrangement of attributes that share meaning, and so these are derived from the careful analysis of codes (Braun & Clarke, 2022). This means that themes do not necessarily 'emerge' or wait to be found within the data but are actively constructed and interpreted by the researcher (Saldaña, 2021). Figure 3.18 presents an example of one overarching 'parent' theme, which could be further broken down into 'child' or sub-themes that demonstrate instances of learning related to engagement, that pupils referred to in their interviews. Each of these parent themes (and respective sub-themes) was continually refined until saturation had been reached (Braun & Clarke, 2013; Saldaña, 2015). Appendix N.iii presents the full codebook for this final iteration.

Name	Description
Engagement	Children share their enjoyment and direct involvement in learning experiences, as well as how learning has sometimes related to their own lives
Engaged learning	Children share what they enjoyed doing in class and how they were directly involved in their learning experiences.
Recalling learning	Children refer to previous learning and share this openly (related to stimulated recall materials)
Relatable learning	Children recognise how aspects of their classroom learning can relate/draw upon their lives

Figure 3.18: Third round of coding example, with parent and child descriptions.

To summarise, in the context of this study, the initial stages of coded transcripts informed how themes were developed, reviewed, and refined, with each iteration discussed with the supervision team. These themes thus served as the main reportable outcome in addressing the research question related to pupils' responses to EPL, of which details can be found within chapter 5.

3.12 Ethical considerations

This study considered guidelines issued by the British Educational Research Association (BERA, 2018) with regard to ethical issues. However, before the study's data collection could commence, ethical approval was sought and subsequently awarded by the Institute of Education's Research Ethics Committee (see appendix A).

As the study required the involvement of child participants, seeking informed parental consent was essential before any data collection could begin. To that end, pupils' parents and/or guardians were provided with information letters (appendix Q) explaining the project's aims, tasks, benefits and risks associated with participation, as well as explicit consent prior to the study taking place (Vargas & Montoya, 2009). Furthermore, as the data collection took place within school settings, gatekeeper consent from each participating school's headteacher and classroom teacher was sought (appendix P).

Pupils were provided with information leaflets about the study and their verbal assent was sought prior to data collection (appendix R) and they were reminded that they could withdraw at any point without any repercussions. All information materials to parents, schools and pupils stressed issues surrounding confidentiality and the secure handling of data throughout the duration of this study, of which further information can be found in appendix P - Q.

The information materials also highlighted each participant's right to withdraw from the project at any time, without any repercussions. However, it is important to recognise that language barriers may inhibit the process of gaining informed consent, particularly in linguistically diverse communities where researchers may struggle to communicate information clearly (Hernández et al., 2013). Consequently, information letters related to the study followed each schools' protocols in translating material for parents and pupils, where this was required.

As the quantitative phase of this mixed methods study adopted a quasi-experimental design, the headteacher of the control school may have felt at a disadvantage for not receiving an intervention that may have been beneficial to the professional development of their staff (Dawson et al., 2018). This potential risk of limited engagement with the full study was somewhat mitigated by the researcher's former professional connection with the control school. Further, the control school was offered priority in acting as an experimental school for future research opportunities. Moreover, the lead supervisor offered the prospect of professional learning meetings for the control school after the project end.

The qualitative data was primarily derived from focus group interviews, which intended to build and elaborate on the quantitative findings. It is therefore important to consider the ethics surrounding interviews with young people. There can be an unequal balance of power between researchers and participants, with this dynamic potentially exacerbated when children are

participants (Einarsdóttir, 2007). This is because young people may view an adult researcher as an authoritative figure, and potentially attempt to shape their responses to fit what they perceive as the researcher's ideal narrative (Einarsdóttir, 2007; Flewitt, 2005).

Whilst the difficulty of addressing this imbalance is acknowledged (Alderson & Morrow, 2011), the current study endeavoured to reduce this where possible. For instance, the interviews were deliberately scheduled to take place after the quantitative data collection, to allow the researcher to build rapport with the subsample of participants. Further, conducting interviews with pupils in small groups as opposed to individually can not only give a greater sense of collective power to pupils, but such an arrangement can lend itself to relaxed interactions (Einarsdóttir, 2007; Greig & Taylor, 1999). Section 3.7 explained how the focus group interview format helped address these issues. Additionally, interviewing pupils who are considered EAL learners may find it difficult to respond to questions in interviews, giving limited answers or remaining quiet through the session (Alderson & Morrow, 2011). Section 3.4.2 in this chapter discussed how participants were selected through consultation with teachers.

3.12.1 Researcher positionality

This section outlines my position within this study, particularly as a pragmatic approach is inherently influenced by a researcher's own context, knowledge and beliefs (Morgan, 2007). Both my professional teaching background and South Asian heritage meant that I straddled insider-outsider perspectives, which may have affected how this research with predominantly White British teachers and culturally and linguistically diverse pupils was conducted.

For instance, whilst I could be considered an 'outsider' by way of ethnic background, my professional identity as a qualified teacher afforded me 'insider' perspectives, which to some extent, allowed me to relate to the experiences of the four experimental teachers in this study. Contrastingly, my ethnic background also meant I had a clear affinity with some of the pupils in this study who shared a similar cultural and/or language background. It is perhaps unsurprising that this fluidity in researcher identity has been reflected in other studies that have explored the notion of insider-outsider positionings within educational research (Katyal & King, 2011; Thomson & Gunter, 2011). Forgoing the insider-outsider binary, Milligan (2016) goes on to argue that a researcher's positioning may instead shift on a continuum, in which the context, people and the researchers' experience of cultural norms within a situation contribute to a researcher's understanding of their positioning rather than asserting that they are an insider or outsider. Whilst going beyond the scope of this thesis, there can be strengths and drawbacks to a researcher being from the same or different ethnic background as participants in education research (see Milner, 2007).

However, it is important to acknowledge that there are several risks that may have affected my positionality and thus, the research produced in this study. First, there may have been a sense of

pressure in conducting the study successfully because this was funded by a research council with external stakeholders invested from the outset. Furthermore, this study was dependent on the lead supervisor's success in delivering the intervention to participating teachers (see Flynn et al., 2023). As such, there may have been an inherent desire, shared by the collaborative research team, for the intervention to 'work' and demonstrate positive findings. This could have potentially influenced any stage of the research process, such as the development and delivery of the intervention, or the interpretation of data that were generated from it.

In mitigating these risks, a careful consideration of the philosophical and methodological aspects related to answering the research questions was sought (Tashakkori & Teddlie, 2003). This included extensive dialogue with the supervision team at each stage of the study, frequent dissemination of the study with specialist and non-specialist audiences and drawing upon colleagues to assist with aspects of analysis (see section 3.10). For example, emerging outcomes from the study were presented at several national and international conferences and these afforded opportunities for discussion and feedback with audiences of both established scholars and fellow researchers. I contend that this sustained and varied engagement with others encouraged a healthy culture of questioning and accountability, and thus reduced the risk of becoming too subjective and intwined with the study itself.

Chapter 4 - Quantitative findings

4.1 Introduction

This chapter presents the current study's quantitative findings, derived primarily from pupils' test data in speaking, listening, reading and writing at two time points: before and after experimental teachers engaged with the Enduring Principles of Learning (EPL) intervention. Before doing so, the chapter outlines details related to the statistical analyses undertaken in order to address the first research question (see below). These include presenting the reliability of scales, normality of distribution and rationale for statistical tests undertaken. Findings from each of the language and literacy tests are then presented in turn.

As discussed in section 2.1, multilingual pupils are considered as 'English as an Additional Language' (EAL) learners in both the curriculum and classroom context in England (Demie, 2018; Murphy & Unthiah, 2015; Strand et al., 2015). Analyses in this chapter adopt the term EAL to reflect how multilingual learners are referred to both in the literature and in practice, although the limitations of this label were previously acknowledged. The research questions (RQ) for the quantitative part of this study are restated below, with related aims.

RQ1: Does Teacher Professional Development in the pedagogical approaches related to the Enduring Principles of Learning (EPL) have an impact on the English proficiency of pupils with English as an additional language?

1a) what is the impact of this approach on pupils' speaking skills?
1b) what is the impact of this approach on pupils' listening skills?
1c) what is the impact of this approach on pupils' reading skills?
1d) what is the impact of this approach on pupils' writing skills?

Aim 1) To develop reliable, teacher-oriented test materials for measuring the English language proficiency of pupils with EAL.

Aim 2) To measure the English proficiency of EAL pupils in Years 1 and 4 before and after their teachers have experienced professional development in the EPL.

4.2 The reliability of scales

The use of language and literacy tests was central to this study's aim of assessing the impact of the EPL intervention on pupil outcomes. The internal consistency was calculated through Cronbach's alpha, which assesses the reliability of an instrument by measuring a variable across its different items (Loewen & Plonsky, 2016). Table 4.1 presents the alpha values for each of the speaking, listening, reading and writing test instruments for both year groups (except for Year 1 who did not complete the writing test at Time 1, see Section 3.8.1).

Table 4.1:

Cronbach's alpha for each test instrument across time points

	Speaking (6 items)		Listening (12 items)		Reading (12 items)		Writing (3 items)	
	Time 1	**Time 2**	**Time 1**	**Time 2**	**Time 1**	**Time 2**	**Time 1**	**Time 2**
Year 1	0.93	0.91	0.66	0.66	0.61	0.61	N/A	0.91
Year 4	0.95	0.91	0.67	0.67	0.72	0.72	0.95	0.94

While the alpha levels for both listening tests and the Year 1 Reading test were somewhat below the recommended level of 0.7 (Bryman, 2016) they were deemed to be acceptable. This is because the 0.7 alpha value is considered to be somewhat arbitrary (Taber, 2018), and less crucial for assessments that are not 'high stakes'. Dörnyei & Taguchi (2010) also suggest that an alpha value lower than 0.7 (but not lower than 0.6) is acceptable.

4.3 Normality of distribution

Before proceeding with data analysis, the distribution of test score data was reviewed, primarily to ascertain if parametric tests could be undertaken. Normally distributed data can typically be characterised by the bell-shaped curve of datapoints on histograms, in addition to assessing skewness and kurtosis values (Pallant, 2020). These values (as given in Tables 4.2 and 4.3) show that each of the variables across the different condition groups largely fall within the acceptable range of ±1.96 (Pett, 2016). However, there were instances of kurtosis values that went beyond this range at both time points.

Therefore, tests of normality were conducted across pupils' scores in the listening, reading, writing, speaking and vocabulary tasks at both time points. Visual inspections of each of the tests' histograms were first undertaken, which indicated relatively normal distribution of data. However, these were then followed by Shapiro-Wilk tests on each of the variables used for both year groups, as shown in tables 4.2 and 4.3. Where test results are significant ($p < 0.05$), this can indicate a deviation of the sample from normal distribution (Field, 2018).

Both Year 1 and Year 4 test scores had instances of significant values for the Shapiro-Wilk test. Whilst this is not ideal, it is acknowledged that the limitations of normality tests can sometimes produce significant results for large samples and be unable to detect significance in smaller samples (Field, 2018). Furthermore, the central limit theorem can be drawn upon and applied to this dataset because when a sample size is typically larger than 30 (which was the case for each condition group) it can be presumed that data will be somewhat normally distributed, even if this is not necessarily detected through formal statistical testing (Field, 2018).

Table 4.2: Tests of normality across tests and year groups at Time 1

| | | Shapiro-Wilk | | | | |
		Statistic	*df*	Sig.	Skewness	Kurtosis
Year 1						
Speaking	Control	.90	20	.04	.77 (.51)	1.50 (.99)
	Experimental	.96	41	.10	-.27 (.37)	-.09 (.72)
	Overall	.96	61	.05	.01 (.31)	.29 (.60)
Listening	Control	.97	34	.41	.20 (.40)	-.57 (.79)
	Experimental	.96	46	.14	.12 (.35)	-.87 (.69)
	Overall	.97	80	.08	.23 (.27)	-.56 (.53)
Reading	Control	.95	34	.16	.22 (.40)	-.82 (.79)
	Experimental	.93	46	.01	.64 (.35)	1.14 (.69)
	Overall	.96	80	.02	.46 (.27)	.07 (.53)
Vocabulary	Control	.97	34	.47	-.04 (.40)	-.72 (.79)
	Experimental	.96	44	.09	-.11 (.36)	-1.14 (.70)
	Overall	.97	78	.08	-.22 (.27)	-.83 (.54)
Year 4						
Speaking	Control	.96	20	.61	-.39 (.51)	-22 (.99)
	Experimental	.94	24	.17	-.07 (.47)	-.63 (.92)
	Overall	.94	44	.03	-53 (.36)	-.28 (.70)
Listening	Control	.95	36	.08	-.27 (.39)	-.52 (.77)
	Experimental	.96	39	.15	-.55 (.38)	.73 (.74)
	Overall	.96	75	.02	-.40 (.28)	.08 (.55)
Reading	Control	.91	36	.01	.38 (.39)	-.79 (.77)
	Experimental	.95	39	.06	-.69 (.38)	.084 (.74)
	Overall	.96	75	.02	-.35 (.28)	-.09 (.55)
Writing	Control	.82	36	<.01	-.1.50 (.39)	4.70 (.77)
	Experimental	.92	39	.01	-.85 (.38)	1.177 (.74)
	Overall	.88	75	<.01	-1.05 (.28)	2.140 (5.48)
Vocabulary	Control	.81	36	<.01	-1.75 (.39)	2.94 (.77)
	Experimental	.85	38	<.01	-1.68 (.38)	3.61 (.75)
	Overall	.84	74	<.01	-1.67 (.28)	3.15 (.55)

Note: Standard Error (SE) in parentheses.

Table 4.3: Tests of Normality across tests and year groups at Time 2

| | | Shapiro-Wilk | | | | |
		Statistic	*df*	Sig.	Skewness	Kurtosis
Year 1						
Speaking	Control	.93	17	.20	-.02 (.55)	-.1.40 (1.06)
	Experimental	.96	35	.22	.23 (.40)	-.87 (.78)
	Overall	.96	52	.07	.13 (.33)	-1.04 (.65)
Listening	Control	.94	30	.08	-.37 (.43)	-.73 (.83)
	Experimental	.96	39	.13	-.12 (.38)	-.84 (.74)
	Overall	.96	69	.02	.23 (.27)	-.56 (.53)
Reading	Control	.95	30	.13	.34 (.43)	.58 (.83)
	Experimental	.94	39	.05	.38 (.38)	-.16 (.74)
	Overall	.96	69	.02	.46 (.27)	.07 (.53)
Writing	Control	.93	28	.07	.40 (.44)	1.37 (.86)
	Experimental	.93	38	.02	.47 (.38)	-.46(2.09)
	Overall	.96	66	.04	.20 (.30)	-.23 (.58)
Vocabulary	Control	.88	31	<.05	-1.70 (.42)	.26 (.82)
	Experimental	.93	38	.02	-.75 (.38)	-.28 (.75)
	Overall	.92	69	<.01	-.88 (.29)	-.10 (.57)
Year 4						
Speaking	Control	.97	20	.84	-.15 (.51)	-.03 (.99)
	Experimental	.92	19	.11	-.75 (.52)	-.31 (1.01)
	Overall	.93	39	.01	-1.00 (.38)	-.98 (.74)
Listening	Control	.94	34	.06	-.80 (.40)	.75 (.79)
	Experimental	.96	32	.25	-.14 (.42)	.31 (.82)
	Overall	.95	65	.01	-.66 (.30)	.74 (.59)
Reading	Control	.97	34	.36	.16 (.40)	-.56 (.77)
	Experimental	.93	32	.03	-.69 (.41)	-.03 (.81)
	Overall	.96	66	.02	-.21 (.30)	-.68 (.58)
Writing	Control	.91	34	.01	.1.26 (.40)	3.12 (.79)
	Experimental	.95	32	.11	-.25 (.41)	1.80 (.81)
	Overall	.94	66	<.05	-14 (.30)	2.43 (.58)
Vocabulary	Control	.71	34	.09	-.55 (.41)	-.54 (.80)
	Experimental	.83	32	<.01	-1.43 (.41)	1.49 (.81)
	Overall	.84	65	<.01	-1.68 (.30)	3.34 (.59)

4.3.1 Outliers

Before running parametric statistical tests, there is also a need to check for outliers in the dataset (Field, 2018). Whilst unusual values can occur naturally and should almost be expected in quantitative data (Wilcox, 2009), the creation of boxplots can be useful in detecting outliers from the outset (Wilcox & Serang, 2017). Therefore Year 1 and Year 4 pupils' test data at each time point were examined in this way. In Year 1, at pre-test, there were no outliers for the vocabulary and listening tests. For reading and speaking tests, there were two instances of outliers in each. By contrast at post-test, there were no outliers in the listening, reading, and speaking tests for Year 1, however one outlier was identified in the vocabulary test. Figure 4.1 presents the boxplot for the writing post-test, because it identified three outliers with considerable range.

Across both time points, outliers on each Year 1 test was carefully reviewed by looking at pupils' original test data and data entry point to ensure that no measurement or human error could be attributed to these outliers. Upon review, it emerged that each of these unusual instances could be somewhat explained by the contextual background of pupils. This included pupils who have Special Educational Needs and Disability (SEND), pupils who were considered by their school to be working at above age-related expectations (ARE) and pupils who were new arrivals to the country.
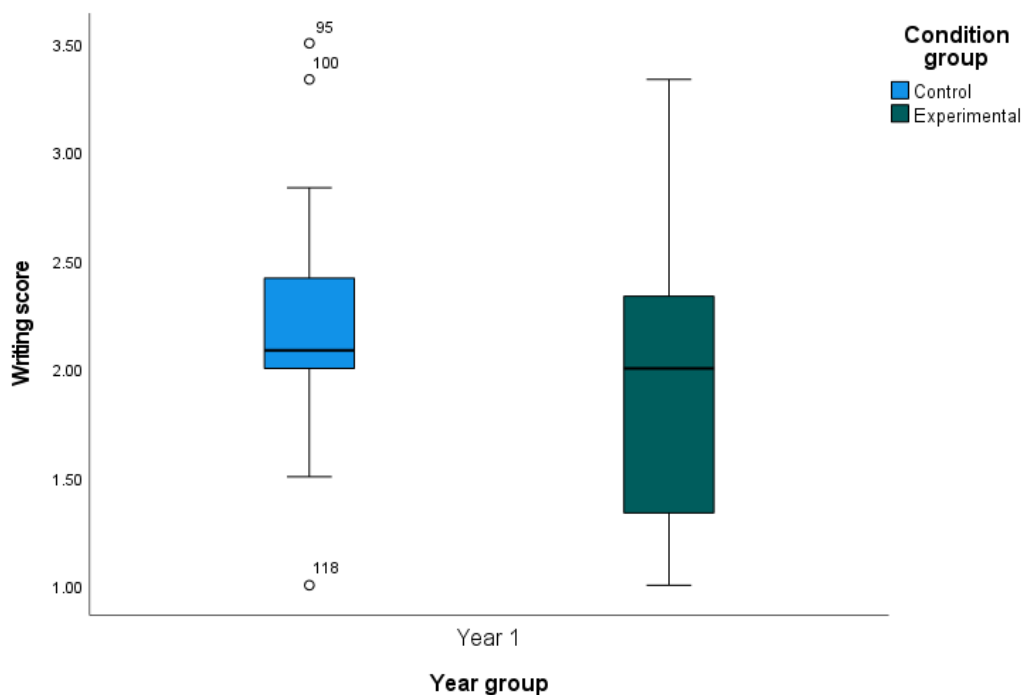
Figure 4.1: Boxplot for Year 1 writing test scores at Time 2

Moving on to Year 4, there were no outliers detected at time 1 for the speaking test. However, there were some outliers detected in some of the other tests at this time point. For example, in the

reading test, there were two outliers: a pupil with SEND and another who was assessed by their teacher as working considerably below ARE. In the listening test, the same pupil with SEND was detected as an outlier. At time 2, the boxplots for speaking, listening and reading tests suggested no further outliers.

However, at both time points, the boxplots for vocabulary and writing tests (figures 4.2 and 4.3) suggested there were several outliers, and each instance was carefully inspected. Upon review, it seemed again these instances could be somewhat attributed to the varied contextual backgrounds of each pupil. For the writing test (figure 4.2) where there was considerable range at both time points, the high scores were derived from pupils who were monolingual and/or considered as working above ARE. Considerably lower scores in figures 4.2 and figure 4.3 (which presents outliers in the vocabulary test) were reviewed and could, again, be attributed to pupil contexts which included those with SEND, working below ARE, and/or were relatively new to their schools.
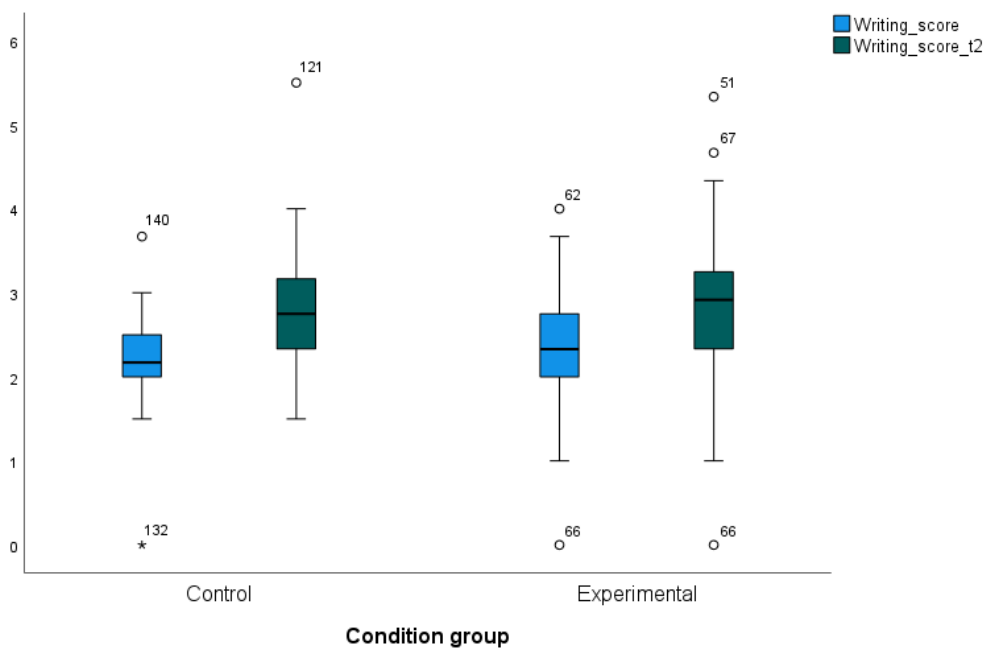
Figure 4.2: Boxplot for Year 4 writing test scores at Time 1 (blue) and Time 2 (green)
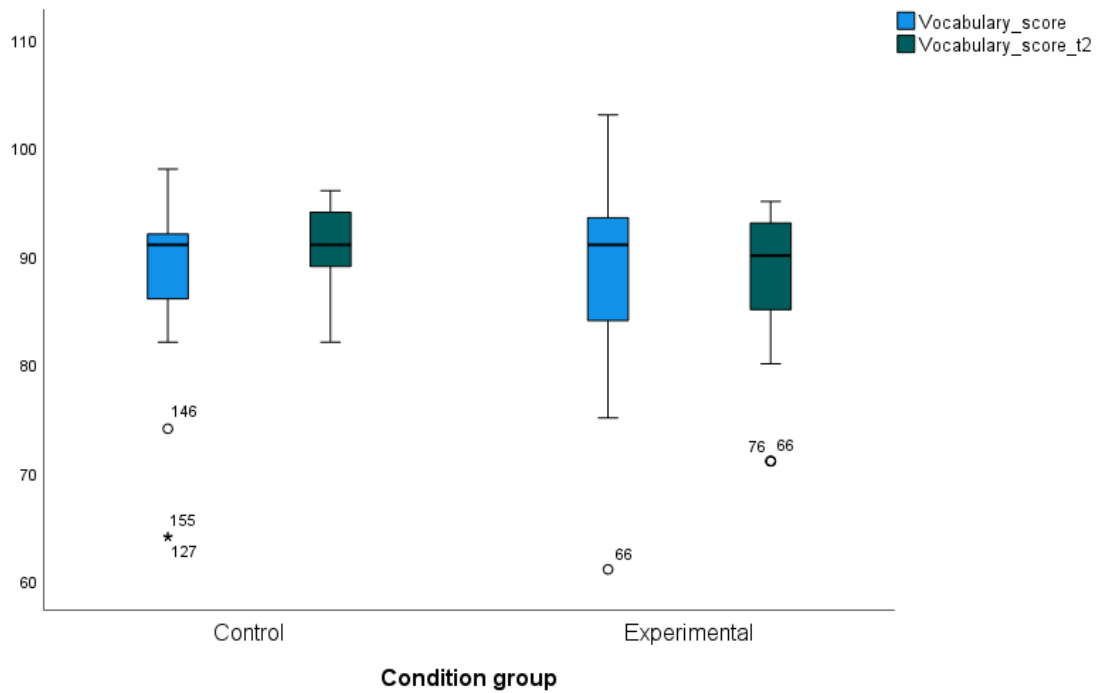
Figure 4.3: Boxplot for Year 4 vocabulary scores at Times 1 and 2

Whilst running and reporting analyses with and without these outliers may be an acceptable approach, this has implications that need to be considered (Larson-Hall, 2015). The removal of outliers can call into question the objectivity and replicability of the dataset (Wilcox, 1998), the assumed independence of the data (Huber, 1981) and such removal processes may begin to inadvertently reveal data points that are considered outliers when they previously were not (Larson-Hall, 2015). In an educational context, in which this study is firmly framed, the structure of the data (in which pupils are nested within different schools, taught by different teachers and have differing language backgrounds) means the nature of an outlier becomes harder to conceptualise (Langford & Lewis, 1998). Therefore, in relation to both year groups, no outliers were removed to maintain the objective, independent nature of the dataset (Larson-Hall, 2015). Furthermore, the decision to retain outliers is in recognition of the diversity of classrooms in England (Dakin, 2017; HM Government, 2021) and acknowledges the large heterogeneity of pupils' linguistic backgrounds in England (Strand et al., 2015) which is at the heart of this study.

4.4 Rationale and assumptions for statistical tests

RQ1: Does Teacher Professional Development in the pedagogical approaches related to the Enduring Principles of Learning (EPL) have an impact on the English proficiency of pupils with English as an additional language?

RQ1 relates to the impact of the EPL intervention on pupils' English proficiency, and pre- and post-intervention test data from pupils' speaking, listening, reading and writing were collected and primarily analysed with the use of parametric tests. Doing so allowed for the inclusion of vocabulary as a covariate which is not possible with non-parametric tests. However, non-parametric tests were adopted for pupils' speaking scores only, which can be found in section 4.6.

Mixed ANOVA tests were primarily conducted to address the first research question. Taking a mixed 2x2 ANOVA approach can be advantageous because it can allow us to examine the impact of the EPL intervention on pupils' test performance in each area over time, as well as identify to what extent this impact differed in the control and experimental schools. Therefore, in the context of this study, the mixed ANOVA considered time (pre-and-post-test) as the within-subject variable, and condition group (experimental-control) as the between-subjects variable.

ANOVAs are part of the parametric testing family, which means there are several statistical principles that are assumed when undertaking this type of analysis. This includes assuming that the data between outcome variables and predictors share a linear relationship, that data are normally distributed and that are derived from samples of equal variances (Field, 2018; Pallant, 2020). Some of these assumptions have been previously addressed in section 4.3, while Levene's test of Equality of Error Variances was assessed through test statistics and is reported for each relevant analysis of skills throughout this chapter.

However, before the mixed ANOVAs in this study could be conducted, two additional assumptions needed to be met. First, this included ensuring homogeneity of intercorrelations, which can be confirmed with the Box's M test statistic. However, Pallant (2020) notes that due to its particularly sensitive nature, a test statistic greater than .001 can be accepted in meeting this particular assumption. Second, the assumption of sphericity, in which the variance of differences between combinations of groups are equal, can be confirmed with a non-significant Mauchly's test statistic or more commonly, is corrected by referring to the Greenhouse-Geisser estimate (Field, 2018). The test statistics related to the assumptions for ANOVA are restated in the reporting of each of the relevant language and literacy skills in this chapter.

Furthermore, each ANOVA test included pupils' vocabulary scores at pre-test as a covariate. Field (2018) states that the inclusion of covariates within ANOVA (i.e. using ANCOVA) can help in eliminating confounds that could potentially influence findings related to the outcome variable, which in this case, is pupils' test performance across the four domains. However, there are several

assumptions which need to be met related to the use of covariates (Pallant, 2020). This includes ensuring that the measurement of a covariate occurs before the intervention phase; a reliable covariate is used and that this correlates significantly with the dependent variables in a study; linearity and homogenous regression slopes.

The assumptions for using a covariate were addressed accordingly: Pupils' vocabulary was measured at pre-test, and table 4.5 demonstrates broadly medium to large correlations between this covariate and all other tests used at both time points with each year group. Another assumption is that the covariate used should be reliable in its measuring. In this study, an adapted version of the well-established British Picture Vocabulary Scale (BPVS) was used to provide an indicative measure of pupils' vocabulary. Linearity and homogeneity were inspected graphically and did not seem to be violated. Therefore, pupils' vocabulary score at pre-test (Time 1) were included as a covariate and could therefore be taken account of in the resulting analyses.

Table 4.4:
Pearson's correlations between vocabulary and tests for each year group

	Vocabulary	Listening	Reading	Writing	Speaking
Year 1			Time 1		
Vocabulary (BPVS)	1	.58**	.64**	N/A	.47**
			Time 2		
Vocabulary (BPVS)	1	.37**	.47**	.46**	.62**
Year 4			Time 1		
Vocabulary (BPVS)	1	.58**	.64**	.56*	.47**
			Time 2		
Vocabulary (BPVS)	1	.36**	.60**	.65**	.66**

**Correlation is significant at the 0.01 level (2-tailed).

Following each 2x2 ANCOVA, a further analysis was undertaken using a mixed 2x2x2 ANCOVA, in which pupils' language status (i.e. monolingual or EAL) was included as an additional between-subjects variable. This could allow for finer-grained analyses in which the impact of the EPL intervention, on monolingual and EAL pupils in the control and experimental schools, could be examined over the two time points. However, the Year 1 experimental pupil group had only one child recognised as a monolingual learner (see section 3.4 for details of the highly multilingual nature of School *A*, where experimental pupils were based). This meant that, for Year 1 only,

comparisons derived from 2x2x2 ANCOVAs were not reported for monolingual pupils in each condition.

However, at both the 2x2 and 2x2x2 ANCOVAs, a visual inspection of profile plots and then, Bonferroni-corrected post-hoc tests, were undertaken after omnibus F tests, to ascertain whether there were differences between groups of pupils' test performance in both year groups. Furthermore, in this study, comparisons were sometimes made in spite of non-significant main or interaction effects which is a practice deemed permissible for several reasons. First, it can be argued that the demand for overall significance was not part of how comparison tests were initially designed and so this may be considered as an unnecessarily strict expectation (Howell, 2013). Further, ANOVAs are known to employ exceedingly conservative methods that run the risk of inflating Type I errors, in which the null hypothesis is rejected, despite being true (Francis, 2019). To address this, it is noted that for ANOVAs, the omnibus F test alone can still be susceptible to Type I errors and it is therefore suggested that additional post-hoc tests, such as the Bonferroni procedure, can help mitigate such risks (Cramer et al., 2016; Francis, 2019). Yet in doing so, statistical power can be lost and so findings can be less compelling than expected (Cramer et al., 2016; Francis, 2019). Returning to the context of this study, whilst a power analysis undertaken before the study may have helped address issues related to statistical power, the context surrounding this study, as discussed in the methodology (see section 3.4) meant the recruitment of additional participants to meet such requirements was difficult. Therefore, post-hoc power analyses were undertaken and are reported in order to further illuminate the findings. However, given that in the majority of the analyses the observed power is low, this should be taken into account when interpreting the results.

Effect sizes, which indicate the magnitude of an effect through a standardised measure (Field, 2018), will be reported throughout the analyses in this chapter. Whilst the traditional criteria for interpreting effect sizes put forward by Cohen (1988) are acknowledged, particularly in relation to eta-squared values ($\eta^2 = 0.01$, small; $\eta^2 = 0.06$ medium, $\eta^2 = 0.14$ large), this study adopted revised benchmarks put forward by Plonsky and Oswald (2014) as these are more appropriately aligned with the field in which this study sits. Therefore, for between-subject effects these were interpreted as: $d = .40$ (small), $d = .70$ (medium), $d = 1.00$ (large). By contrast, for within-subject contrasts these were interpreted as: $d = .60$ (small), $d = 1.00$ (medium), $d = 1.40$ (large). Lastly, correlation coefficients were interpreted as: r = .25 (small), r = .40 (medium), r = .60 (large). Plonsky and Oswald's (2014) criteria were also applied where non-parametric testing was required, namely in analysing speaking test data (see section 4.6).

4.4.1 Pupils' average test scores based on teacher group

For all participating teachers, their pupils' average test score for each test (listening, speaking, reading and writing) are presented in table 4.6. Writing scores for Year 1 teachers from both the control and experimental schools are not included here, as was explained in section 3.8.1.

Table 4.5:

Pupils' average test scores for each participating teacher

Teacher (school/year group)	Pupils' average scores at pre-test (T1) and post-test (T2)							
	Listening		Speaking		Reading		Writing	
	T1	T2	T1	T2	T1	T2	T1	T2
Experimental teachers								
L (A/Year 1)	4.32	6.60	2.69	3.24	2.95	4.60	N/A	1.71
A (A/ Year 1)	4.00	7.00	2.33	3.05	3.33	5.37	N/A	2.06
S (B/Year 4)	6.69	7.91	2.07	2.87	6.19	7.64	1.96	2.51
J (C/Year 4)	6.65	8.85	2.94	2.97	8.22	9.52	2.36	2.97
Control teachers								
D (D/Year 1)	6.07	6.79	2.84	3.35	3.67	5.43	N/A	2.19
L (D/ Year 1)	4.89	7.69	2.36	2.26	3.58	5.87	N/A	2.26
H (D/Year 4)	6.45	8.00	3.25	3.88	6.60	7.05	2.27	2.74
M (D/Year 4)	7.75	8.40	3.18	3.87	7.75	8.47	2.12	3.13

4.5 Listening

4.5.1 Listening test performance in Year 1

A 2x2 mixed ANCOVA was first conducted to assess the impact of the EPL intervention on experimental and control group pupils' listening test performance, across two time points: pre- and post-intervention. Pupils' vocabulary score at pre-test was included as a covariate. Both the Box's test (p = .36) and Levene's test (p = .76) produced non-significant results suggesting the assumptions previously discussed in section 4.7 were met.

Table 4.6:

Descriptive statistics for Year 1 listening test, Time 1 and Time 2

	n	Minimum	Maximum	Mean	Std. Deviation
Time 1					
Control	34	0.00	11.00	5.41	2.72
Experimental	46	0.00	9.00	4.15	2.41
Overall	80	0.00	11.00	4.69	2.61
Time 2					
Control	30	2.00	11.00	7.27	2.70
Experimental	39	2.00	11.00	6.79	2.27
Overall	69	2.00	11.00	7.00	2.46

Table 4.7 shows that control pupils had a higher average test score than the experimental group at both time points, though these figures are accompanied with fairly large standard deviations. It is also worth noting that at time 1, some pupils scored zero, and that at time 2, some pupils scored close to the maximum of 12. Whilst floor and ceiling scores are not ideal, an explanation of where else this occurred in the study's tests, and reasons for why this may have been, can be found in chapter 6.

Table 4.7:

Main within-subjects effects and interactions – Year 1 listening (2x2 mixed ANCOVA)

Source	Df	F	p	Effect size (η_p^2)	Observed Power
Time	1, 65	9.27	.003	.13	.85
Time* Vocabulary	1, 65	.79	.38	.01	.14
Time * Condition	1, 65	1.17	.28	.02	.19

Table 4.8 demonstrates there was a significant main effect of time with a large effect size, although there were no significant time*vocabulary or time*condition interactions. This suggested that participants in Year 1 made significant gains in their listening test performance at post-test, but neither vocabulary nor condition significantly interacted with the rate of their post-test outcome.

Tests of between subject effects indicated there was a significant effect of the covariate, vocabulary score, on pupils' listening test performance $F(1, 65) = 18.07$, $p = <.001$, $\eta_p^2 = .22$, power = .99. Despite no significant effect of condition being detected, $F(1, 65) = .08$, $p = .77$, $\eta_p^2 = .001$, power = .06, an inspection of profile plots (figure 4.4) suggested there were differences in how the control and experimental pupils progressed over time with regard to their listening test performance.

As such, Bonferroni-corrected post-hoc tests (applied in view of the profile plots) indicated that the two conditions did not differ significantly at either pre-test (p = .42) or post-test (p = .76). A comparison of pre-test and post-test scores for each condition showed, however, that whilst both groups made statistically significant progress over time, experimental pupils made slightly greater improvement in their pre- and post-test scores, with a medium effect size *(p < .001, d = 1.12*, CI 95% [.63 - 1.60]), in comparison to their control school peers *(p < .001, d = .84*, small effect size, CI 95% [.31 – 1.37]).
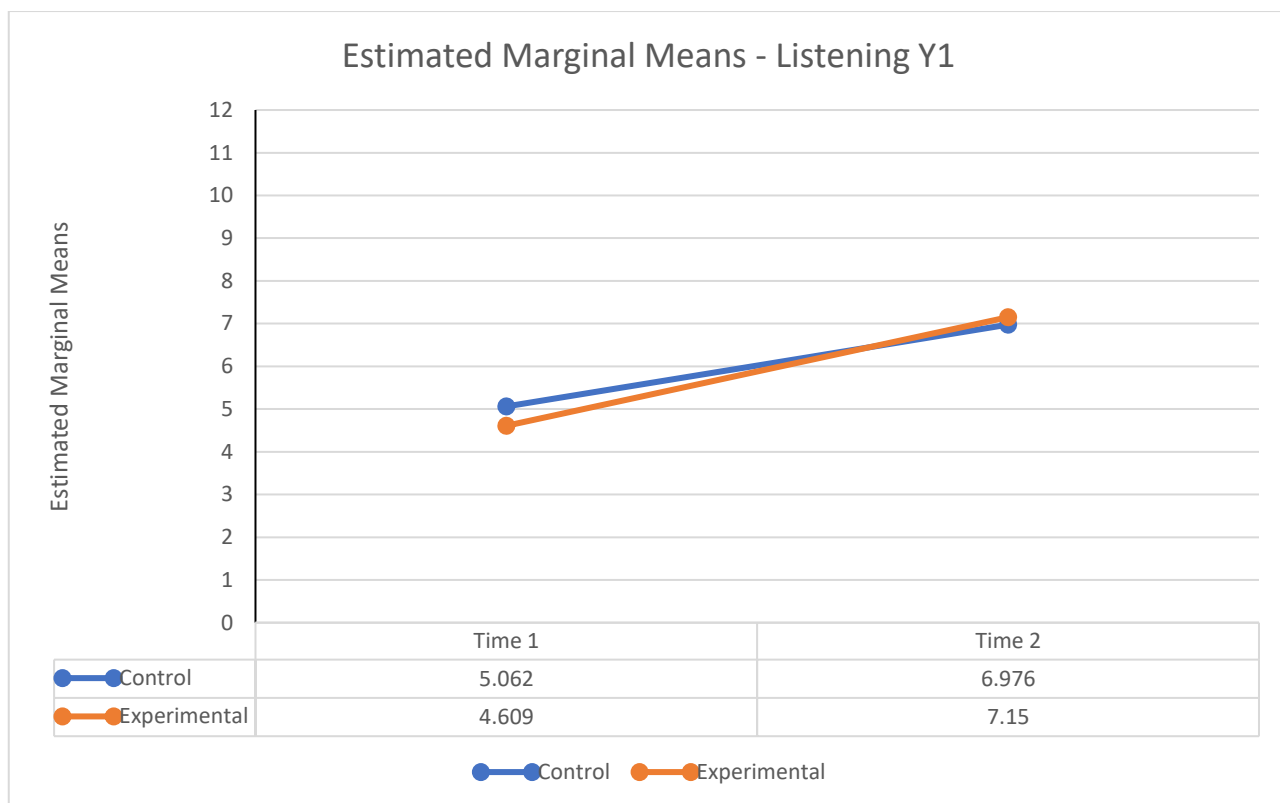
Figure 4.4: Profile plot for Year 1 listening test: Condition group x time interaction

A small difference in the amount of progress in listening scores made by pupils in each condition could be detected, however, the previous analysis could not determine if these differences applied for EAL pupils in each of the conditions. A 2x2x2 mixed ANCOVA was then conducted, which involved adding pupils' language status (i.e., monolingual or EAL) as an additional between-subjects factor (see table 4.9). Although non-significant results were produced for Box's and Levene's tests at Time 1, it is acknowledged that at Time 2 the latter produced a significant result (p = .04).

Table 4.8:

Main within-subjects effects and interactions – Year 1 listening (2x2x2 mixed ANCOVA)

Source	Df	F	p	Effect size (η_p^2)	Observed Power
Time	1, 63	3.37	.07	.05	.44
Time* Vocabulary	1, 63	.45	.51	.01	.10
Time * Condition	1, 63	.15	.70	<.01	.07
Time * Language status	1, 63	1.24	.27	.02	.20
Time * Condition * Lang status	1, 63	.75	.39	.01	.14

Tests of between subject effects indicate there was a significant effect of the covariate F (1, 63) = 17.04, p = <.001, η_p^2 = .21, power = .98. Although there was no significant effect of condition, F (1, 63) = .99, p = .32, η_p^2 = .02, power = .17, profile plots (figure 4.5) and then Bonferroni-corrected post-hoc tests (see table 4.10) suggested there were statistically significant differences in how the EAL pupils in control and experimental schools progressed over time. The comparisons suggest that marginally greater pre- and post-test improvement was made by the EAL pupils in the experimental group, with a medium effect size (p < .001, d = 1.14). This compares with a small-medium effect size for the pre- and post-test improvement made by EAL control pupils (p < .001, d = *.90*).

Table 4.9:

Pairwise comparison – Year 1 EAL pupils' listening scores (pre-post test difference)

Condition	Lang status	Mean difference over time	Std. error	p	d	95% CI for difference*	
						LB	UB
Control	EAL	+2.028	.54	<.001	.90	.22	1.59
Experimental	EAL	+2.620	.39	<.001	1.14	.65	1.64

Note. CI = confidence interval; *LB* = lower bound; *UB* = upper bound. *Adjustment for multiple comparisons: Bonferroni

Estimated Marginal Means - Listening Y1, EAL pupils

	Time 1	Time 2
EAL- Control	4.73	6.76
EAL - Experimental	4.61	7.23

Figure 4.5: EAL pupils' listening scores at pre-test and post-test in Year 1

4.5.2 Listening test performance in Year 4

As in Year 1, a 2x2 mixed ANCOVA was first conducted to assess the impact of the EPL intervention on experimental and control group pupils' listening test performance, across two time points: pre- and post-intervention. Pupils' vocabulary score at pre-test was included as a covariate. Both the Box's test (p = .49) and Levene's test (p = .61) produced non-significant results.

Table 4.10:

Descriptive statistics for Year 4 listening test, Time 1 and Time 2

	n	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
			Time 1		
Control	36	1.00	11.00	7.03	2.44
Experimental	39	0.00	11.00	6.67	2.43
Overall	75	0.00	11.00	6.84	2.43
			Time 2		
Control	34	1.00	12.00	8.18	2.43
Experimental	32	4.00	12.00	8.52	1.87
Overall	66	1.00	12.00	8.34	2.17

Table 4.11 demonstrates that whilst control pupils initially had higher mean scores at pre-test, this changed at post-test and experimental pupils had the higher mean score at that time point. Mirroring Year 1's pre- and post-test descriptive statistics (previously presented in table 4.7), instances of pupils scoring floor and ceiling, in addition to wide standard deviations, were also identified in Year 4.

Table 4.11:

Main within-subjects effects and interactions – Year 4 listening (2x2 mixed ANCOVA)

Source	*Df*	*F*	*p*	Effect size (η_p^2)	Observed Power
Time	1, 62	4.49	.04	.07	.55
Time* Vocabulary	1, 62	2.81	.10	.04	.39
Time * Condition	1, 65	1.95	.17	.03	.28

Table 4.12 demonstrates there was a significant main effect of time with a medium effect size, although there were non-significant time*vocabulary and time*condition interactions. This suggested that participants in Year 4 made progress in their listening test performance over time, but neither vocabulary nor condition significantly interacted with the rate of progress in listening. Turning to between-subjects effects, this suggested a significant effect of the covariate on pupils' listening test performance F $(1, 62) = 27.29, p = <.001, \eta_p^2 = .31$, power = 1.00. However, there was no significant effect of condition F $(1, 62) = 1.92, p = .56, \eta_p^2 = .01$, power = .09.

Although there was no significant time*condition interaction, and no significant main effect of group, further investigation of profile plots (figure 4.6) indicated there were differences in how the control and experimental pupils progressed over time. These were hence followed by Bonferroni-corrected post-hoc tests (table 4.13), which suggested that whilst both conditions made statistically significant progress over time, experimental pupils made marginally greater progress in their pre- and post-test scores with a near medium effect size ($p < .001, d = 0.92$). This contrasts with a small effect size for improvement in pre- and post-test score made by control pupils ($p = .006, d = 0.54$).

Table 4.12:

Pairwise comparison – Year 4 pupils' listening scores (pre-post test difference)

Condition	Mean difference over time	Std. error	p	d	95% CI for difference*	
					LB	UB
Experimental	+1.07	.38	.006	.92	.40	1.45
Control	+1.83	.40	<.001	.54	.05	1.02

Note. CI = confidence interval; *LB* = lower bound; *UB* = upper bound. *Adjustment for multiple comparisons: Bonferroni
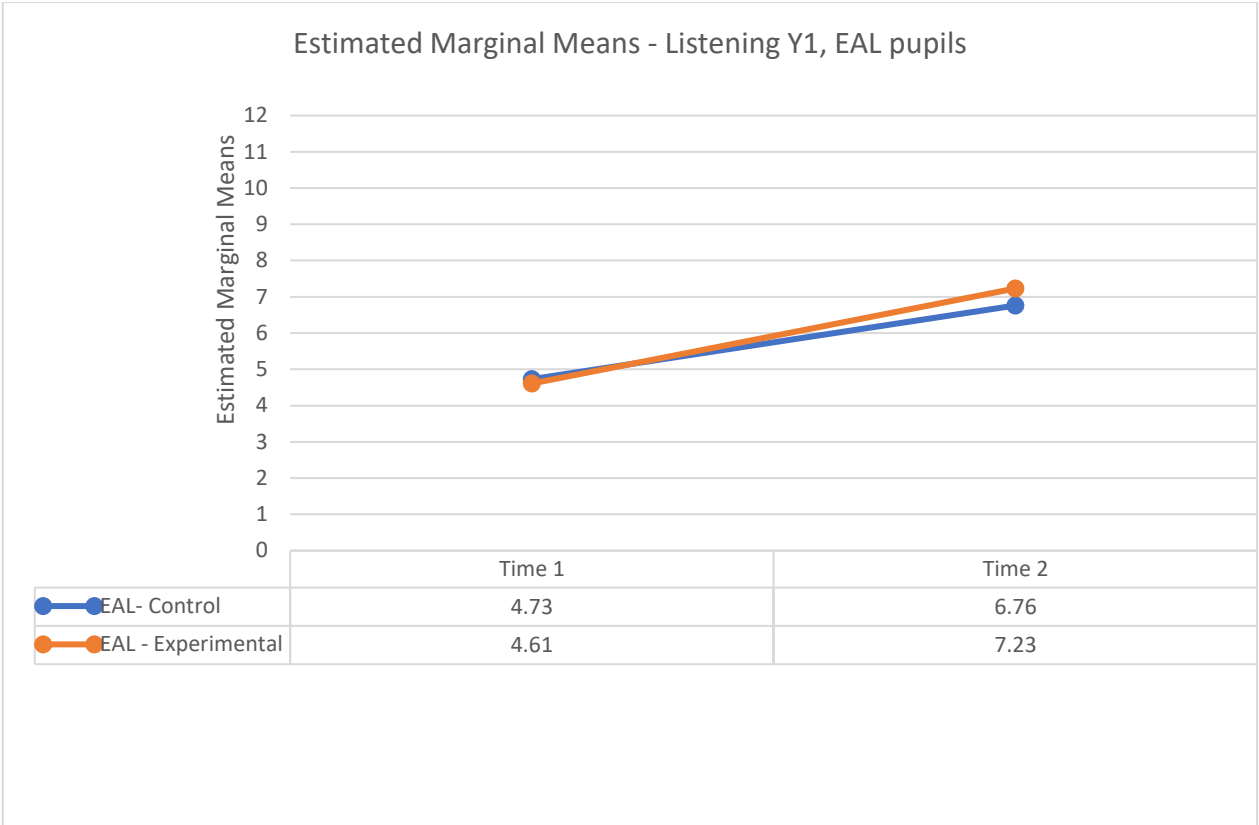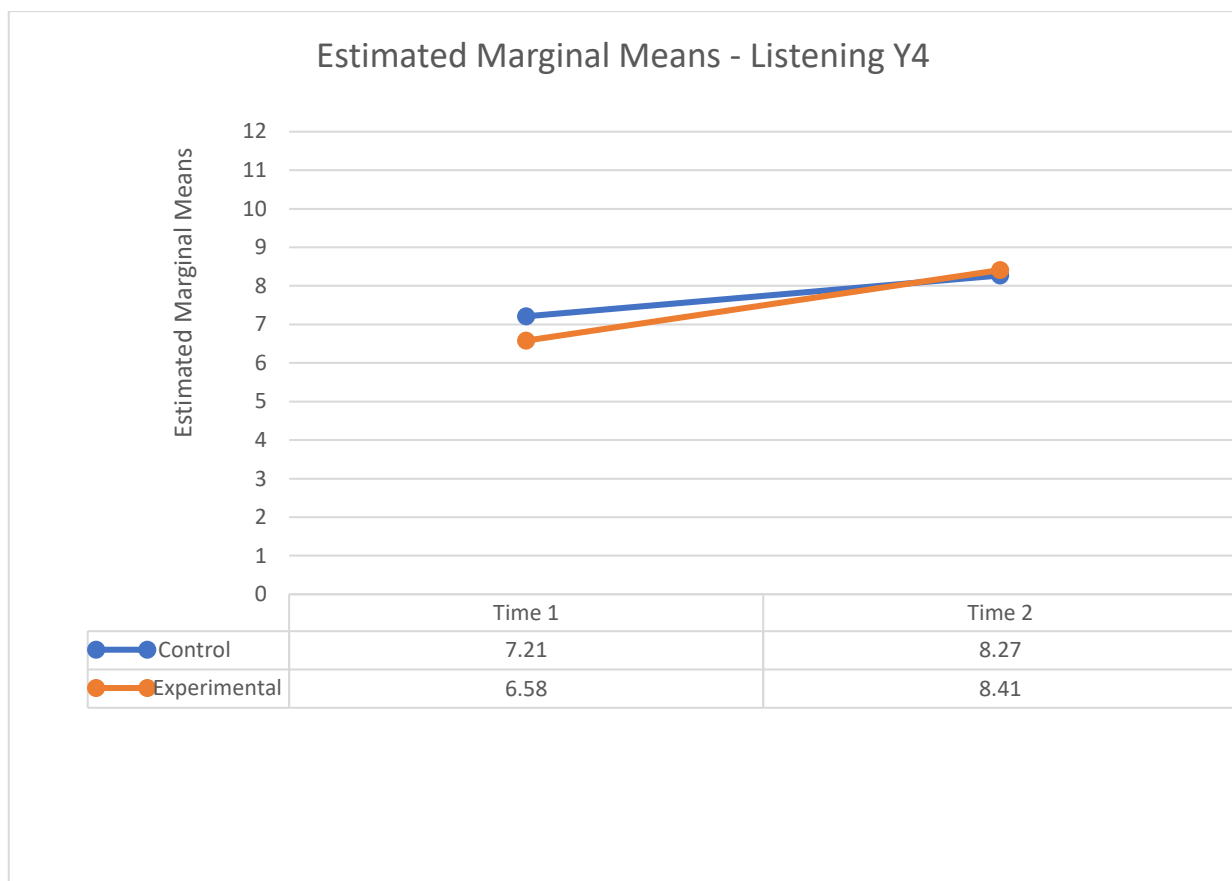
Figure 4.6: Profile plot for Year 4 Listening test: Condition group x time interaction

As for the Year 1 listening analyses, the next step was to conduct a 2x2x2 mixed ANCOVA in order to explore whether there were differences between monolingual and EAL pupils in each condition. Both the Box's test (p = .39) and Levene's test (p = .43) produced non-significant results.

Table 4.13:

Main within-subjects effects and interactions – Year 4 listening (2x2x2 mixed ANCOVA)

Source	Df	F	p	Effect size (η_p^2)	Observed Power
Time	1, 60	3.06	.09	.05	.41
Time* Vocabulary	1, 60	1.87	.18	.03	.27
Time * Condition	1, 60	1.31	.26	.02	.20
Time * Language status	1, 60	0.03	.86	.001	.05
Time * Condition * Lang status	1, 60	0.93	.38	.006	.09

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Table 4.14 demonstrates a lack of significant main effects and interactions. However, between-subjects effects demonstrated a significant effect of the covariate $F(1, 60) = 20.63$, $p = <.001$, $\eta_p^2 = .26$, power $= .99$, although there was no significant effect of condition $F(1, 60) = .261$, $p = .61$, $\eta_p^2 = .004$, power $= .08$.

An inspection of profile plots (figures 4.7 and 4.8) suggested some difference in how groups of pupils (based on language status) progressed over time in each condition. These were then further investigated with Bonferroni-corrected post-hoc tests (table 4.15) which suggested that all pupils in each condition except for EAL pupils in the control group made statistically significant progress over time. Nevertheless, the 95% confidence interval crossed zero for all groups except the EAL experimental group, indicating that for the other groups the significant effect was unreliable. Furthermore, examination of comparisons suggests that EAL experimental pupils made the greatest pre- and post-test improvement in their listening scores with a near-medium effect size ($p < .001$, $d = 0.98$) in contrast to their EAL control peers ($p < .06$, $d = 0.48$).

Table 4.14:

Pairwise comparison – Year 4 listening scores (pre-post test difference) according to condition and language status

Condition	Language status	Mean difference over time	Std. error	P	d	95% CI for difference*	
						LB	UB
Control	Monolingual	+1.22	.59	.04	.51	-.24	1.26
	EAL	+.967	.50	.06	.48	-.15	1.11
Experimental	Monolingual	+1.525	.72	.04	.71	-.15	1.58
	EAL	+.1.99	.50	<.001	.98	.33	1.64

Note. CI = confidence interval; *LB* = lower bound; *UB* = upper bound. *Adjustment for multiple comparisons: Bonferroni

Estimated Marginal Means - Listening Y4, EAL pupils

	Time 1	Time 2
EAL - Control	7.05	8.02
EAL - Experimental	6.38	8.37
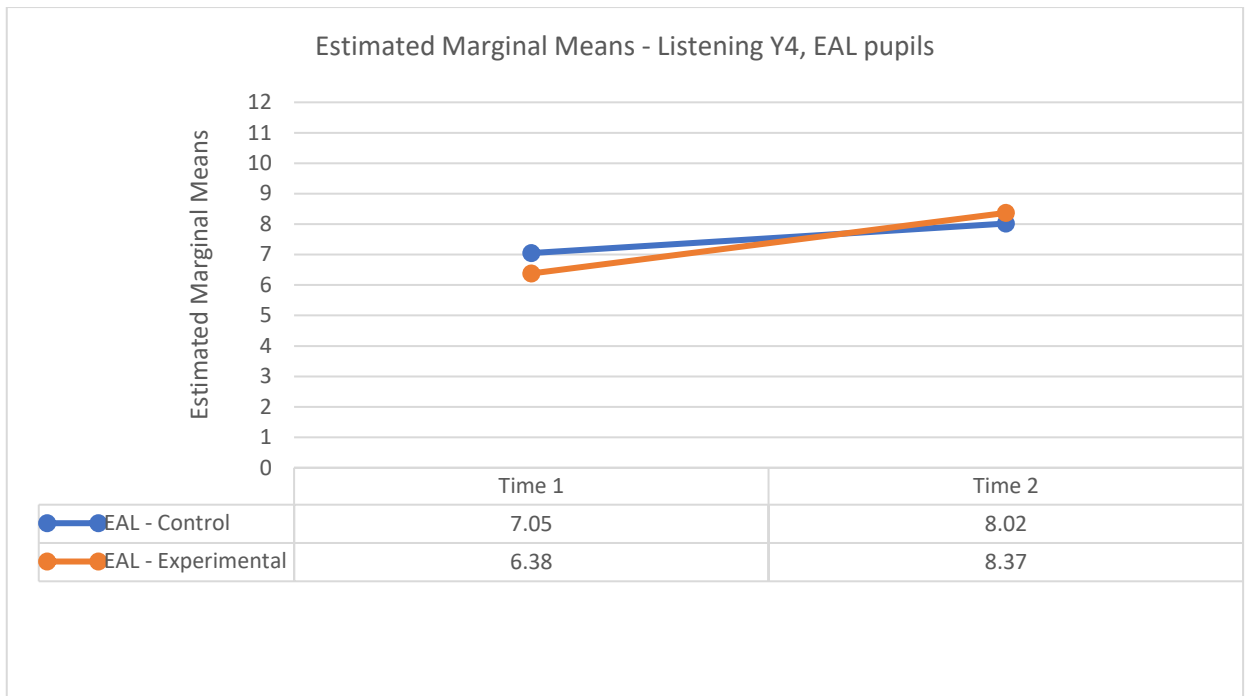
Figure 4.7: EAL pupils' listening scores at pre-test and post-test in Year 4

Estimated Marginal Means - Listening Y4, monolingual pupils

	Time 1	Time 2
Mono. - Control	7.41	8.63
Mono. - Experimental	6.97	8.50
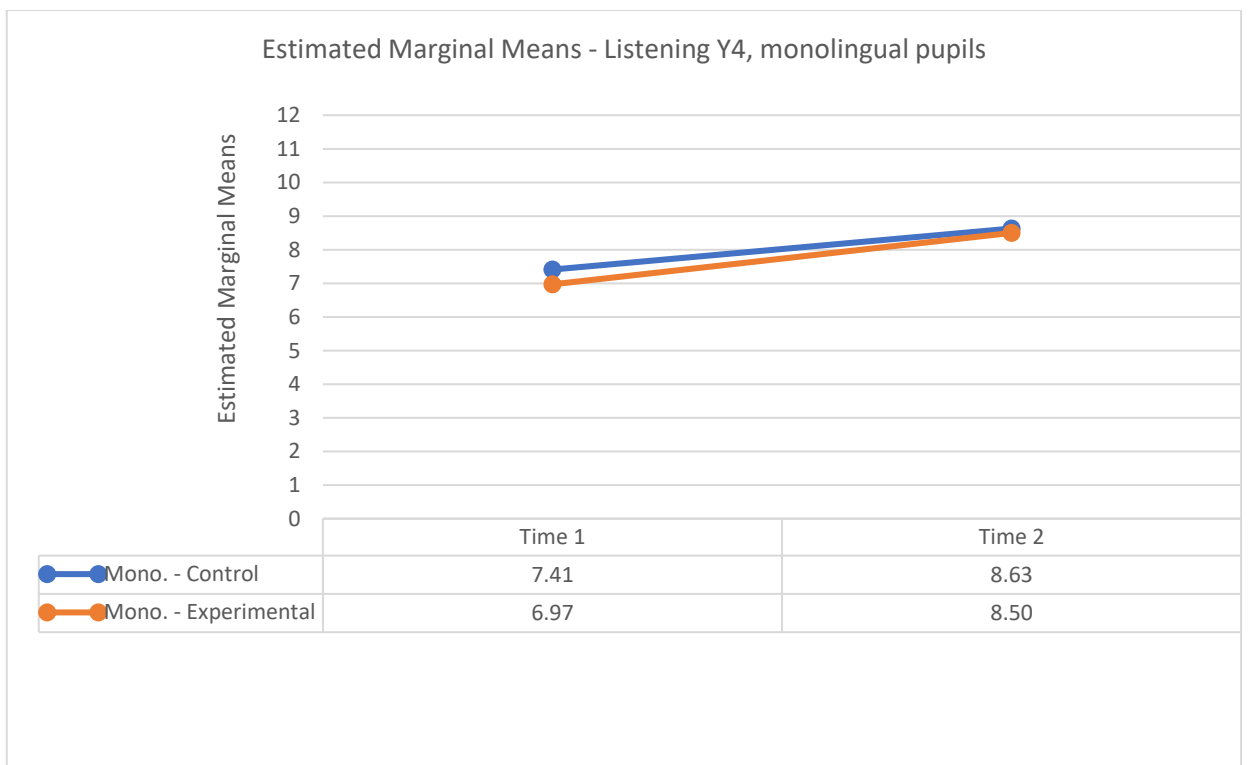
Figure 4.8: Monolingual pupils' listening scores at pre-test and post-test in Year 4

4.6 Speaking

The speaking test was only administered to pupils recognised as English as an Additional Language (EAL) learners in their schools, due to time and resource constraints (see section 3.8.1). The sample size was considerably smaller for these tests in Year 1 and Year 4. Pallant (2020) suggests the use of non-parametric tests for smaller-sized samples, and these were adopted for analysing pupils' speaking test data only. Mann-Whitney *U,* followed by Wilcoxon Signed Rank tests, were undertaken for Year 1 and Year 4 speaking test data.

Whilst assumptions for these tests are not as stringent as the parametric tests discussed earlier in this chapter, they do expect random samples and independent observations for analysis (Field, 2018; Pallant, 2020). Further, Mann-Whitney *U* assumes the use of a dependent, ordinal variable and an independent variable with two distinct groups. The Wilcoxon Signed Rank test has similar requirements, although the independent variable can assess the same group over two time points, which is useful for the pre- and post-test design that is central to this study. These assumptions were met for the speaking data.

4.6.1 Speaking test performance in Year 1

Table 4.16 presents descriptive statistics based on control, experimental and all pupils' speaking test performance at pre-test (Time 1) and post-test (Time 2), in which the total available score for this test was 5. At first glance it seems that whilst control pupils initially had higher mean scores at pre-test, this changed at post-test and experimental pupils had the higher mean score for this test. However, non-parametric testing enabled further analysis of pupils' test data.

Table 4.15:

Descriptive statistics for Year 1 speaking test, Time 1 and Time 2

	n	Minimum	Maximum	Mean	Median	Std. Deviation
Time 1						
Control	20	1.00	4.50	2.58	2.33	0.77
Experimental	41	1.00	4.33	2.50	2.50	0.81
Overall	61	1.00	4.50	2.54	2.50	0.79
Time 2						
Control	17	1.83	4.33	3.09	3.00	0.79
Experimental	35	2.00	4.67	3.15	3.00	0.74
Overall	52	1.83	4.67	3.13	3.00	0.75

First, a Mann-Whitney U test was undertaken, and this demonstrated no significant differences in pupils' speaking test performance at time 1 between the control group (Md = 2.33, n = 20) and experimental group (Md = 2.50, n = 41), U = 400, z = .154, p = .88, r = .01. Similarly, at time 2, a Mann-Whitney U test demonstrated no significant differences in pupils' speaking test performance between the control group (Md = 3.00, n = 17) and experimental group (Md = 3.00, n = 35), U = 283, z = .284, p = .78, r = .03.

Next, Wilcoxon Signed Rank tests were conducted to ascertain whether control and experimental pupils progressed differently in their speaking over two time points, namely between pre- and post-test. For control school pupils, a statistically significant increase in speaking test scores was found, z = 2.199, n = 16, p = .03, with a medium effect size (r = .55). Speaking test median scores increased from pre-test (Md = 2.33) to post-test (Md = 3.00).

For experimental school pupils, a significant increase in speaking test scores was also revealed, z = 4.402, n = 32, p = <.01, with a large effect size (r = .77). Experimental pupils' speaking test median scores increased from pre-test (Md = 2.50) to post-test (Md = 3.00). Therefore, these findings suggest that whilst both control and experimental pupils made significant progress in speaking over time, this effect was greater for experimental pupils who were taught by EPL-trained teachers.

4.6.2 Speaking test performance in Year 4

Table 4.17 below presents descriptive statistics based on control, experimental and all pupils' speaking test performance at pre-test (Time 1) and post-test (Time 2). This table suggests that control pupils had higher mean scores at both time points but that experimental pupils made greater progress. However, non-parametric testing enabled further analysis of pupils' test data.

Table 4.16:

Descriptive statistics for Year 4 speaking test, Time 1 and Time 2

	n	Minimum	Maximum	Mean	Median	Std. Deviation
			Time 1			
Control	20	2.00	4.17	3.23	2.33	0.55
Experimental	24	1.00	4.00	2.51	2.50	0.87
Overall	44	1.00	4.17	2.83	3.00	0.82
			Time 2			
Control	20	2.83	4.67	3.88	2.50	0.47
Experimental	19	1.67	4.50	3.48	3.67	0.80
Overall	39	1.67	4.67	3.68	3.83	0.68

A Mann-Whitney *U* test demonstrated a significant difference in pupils' speaking test performance at time 1 between the control group (*Md* = 2.33, *n* = 20) and experimental group (*Md* = 2.50, *n* = 24), U = 121, z = -2.82, *p* = <.05, with a medium effect size (*r* = -.42).

As such, the gain score from time 1 and time 2 was then calculated, on which a Mann-Whitney *U* test was performed. This revealed that the experimental group performed significantly better (*Md* = .67, *n* = 19) compared to the control group, (*Md* = .50, n = 20) U = 117, z = -2.058, *p* = .041, but with a small effect size (*r* = -.33).

A Wilcoxon Signed Rank test was then conducted to establish whether and to what extent both groups made statistically significant progress over the two time points, namely pre- to post-test. It confirmed that control group pupils made significant progress over time, z = -3.926, *n* = 20, *p* = < .001 with a large effect size (*r* = .88). Similarly, experimental pupils made significant progress over time, z = -3.788, *n* = 19, *p* = < .001, with a near-identical large effect size, (*r* = .87). Both groups therefore made similar progress, and this perhaps is best reflected in the smallness of the effect size for the gain score difference.

4.7 Reading

4.7.1 Reading test performance in Year 1

A 2x2 mixed ANCOVA was first conducted to assess the impact of the EPL intervention on experimental and control group pupils' reading test performance, across two time points: pre- and post-intervention. Pupils' vocabulary score at pre-test was included as a covariate. Both the Box's test ($p = .02$) and Levene's test ($p = .21$) produced non-significant results.

Table 4.17:

Descriptive statistics for Year 1 reading test, Time 1 and Time 2

	n	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
			Time 1		
Control	34	0.00	8.00	3.62	2.26
Experimental	46	0.00	9.00	3.15	1.91
Overall	80	0.00	9.00	3.35	2.06
			Time 2		
Control	30	1.00	12.00	5.67	2.44
Experimental	38	2.00	9.00	4.97	1.76
Overall	68	1.00	12.00	5.38	2.00

Table 4.18 above presents descriptive statistics based on control, experimental and all pupils' reading test performance at pre-test (Time 1) and post-test (Time 2) in which the total available score for this test was 12. Control pupils had a higher average test score than the experimental group at both time points and appeared to make greater progress. Similar to the listening tests previously reported, instances of floor, ceiling and standard deviations are discussed in section 6.1.1.

Table 4.18:

Main within-subjects effects and interactions – Year 1 reading (2x2 mixed ANCOVA)

Source	Df	F	p	Effect size (η_p^2)	Observed Power
Time	1, 65	20.24	<.001	.24	.99
Time* Vocabulary	1, 65	2.90	.093	.04	.39
Time * Condition	1, 65	1.63	.206	.03	.24

Table 4.19 demonstrates there was a significant main effect of time, with non-significant time*vocabulary and time*condition interactions. This suggested that participants in Year 1 made significant gains in their reading test performance at post-test, but neither vocabulary nor condition interacted with the rate of their reading progression over time.

Tests of between subject effects indicated no significant effect of condition, F (1, 65) = .041, p = .84, η_p^2 = .001, power = .06, but there was significant effect of the covariate, F (1, 65) = 19.84, p = <.001, η_p^2 = .23, power = .99.

Furthermore, in spite of the non-significant time*condition interaction, profile plots (figure 4.9) suggested there were slight differences in how the control and experimental pupils progressed over time. Therefore, Bonferroni-corrected post-hoc tests indicated that although both groups made statistically significant progress in their reading test performance over time, control pupils made slightly greater improvement in their reading test scores with a medium effect size (p < .001, d = 1.14, CI 95% [.59 – 1.68]). By contrast, for experimental pupils, this was a slightly smaller effect size (p < .001, d = .90, CI 95% [.42 - 1.37]).
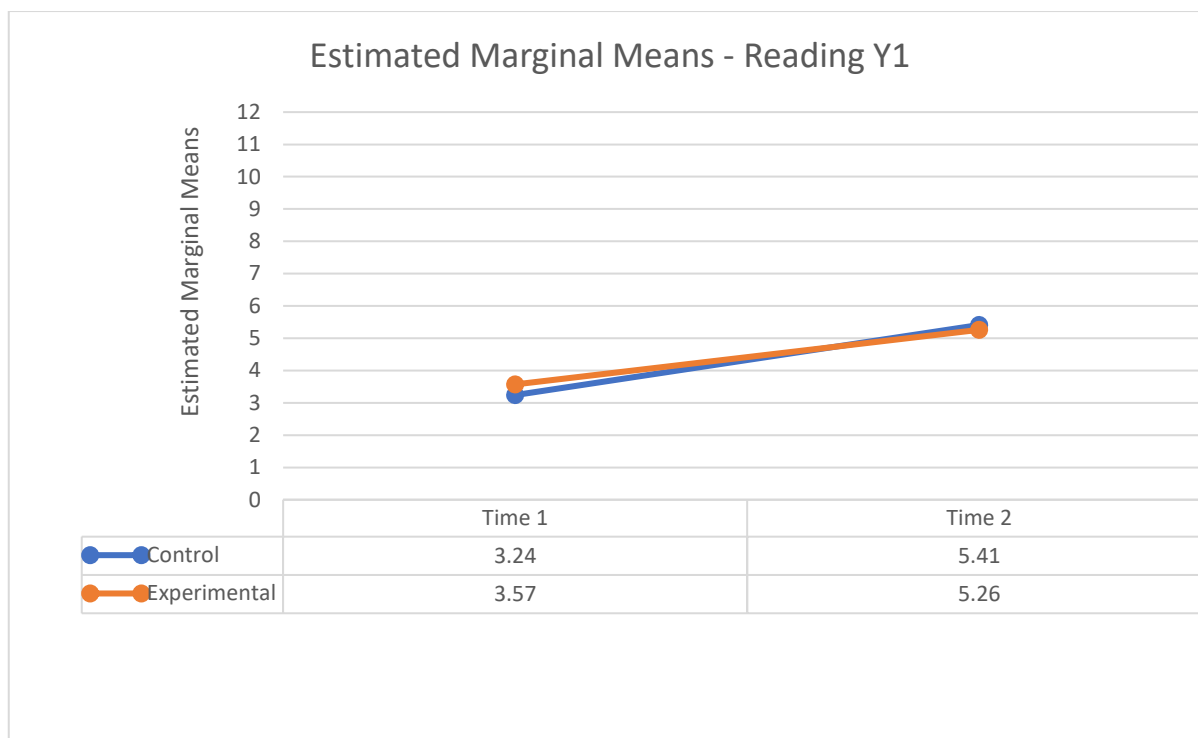
Figure 4.9: Profile plot for Year 1 Reading test: Condition group x time interaction

As was conducted for the listening analyses, the next step was to conduct a 2x2x2 mixed ANCOVA to assess whether there were differences between EAL pupils in each condition. Both the Box's test ($p = .07$) and Levene's test ($p = .33$) produced non-significant results.

Table 4.19:

Main within-subjects effects and interactions – Year 1 reading (2x2x2 mixed ANCOVA)

Source	*Df*	*F*	*p*	Effect size (η_p^2)	Observed Power
Time	1, 63	15.97	<.001	.20	.98
Time* Vocabulary	1, 63	3.34	.07	.05	.44
Time * Condition	1, 63	.10	.75	.002	.06
Time * Language status	1, 63	.43	.51	.007	.10
Time * Condition * Lang status	1, 63	.01	.92	.000	.05

Similar to previous analyses, there was found to be a significant main effect of time as demonstrated in table 4.20. Whilst there were no significant interactions between time, condition

group and language status, a significant effect of the covariate on pupils' listening test performance was detected $F_{(1, 63)} = 19.26$, $p = <.001$, $\eta_p^2 = .23$, power = .99.

Profile plots (figure 4.10) suggested slight differences in how EAL pupils progressed over time and in each condition group. These were therefore explored through Bonferroni-corrected post-hoc tests (see table 4.21 below). These comparisons indicated that EAL pupils in the control group made marginally greater progress in pre-and-post reading test scores, with a medium effect size ($p < .001$, $d = 1.08$). Contrastingly, their EAL experimental peers made slightly less pre- and post-test progress over time, with a small-medium effect size ($p < .001$, $d = 0.88$)

Table 4.20:

Pairwise comparison – Year 1 EAL pupils' reading scores (pre-post test difference)

Condition	Language status	Mean difference over time	Std. error	p	d	95% CI for difference*	
						LB	UB
Control	EAL	+1.995	.36	<.001	1.08	1.28	2.71
Experimental	EAL	+1.657	.26	<.001	0.88	1.15	2.17

Note. CI = confidence interval; *LB* = lower bound; *UB* = upper bound. *Adjustment for multiple comparisons: Bonferroni
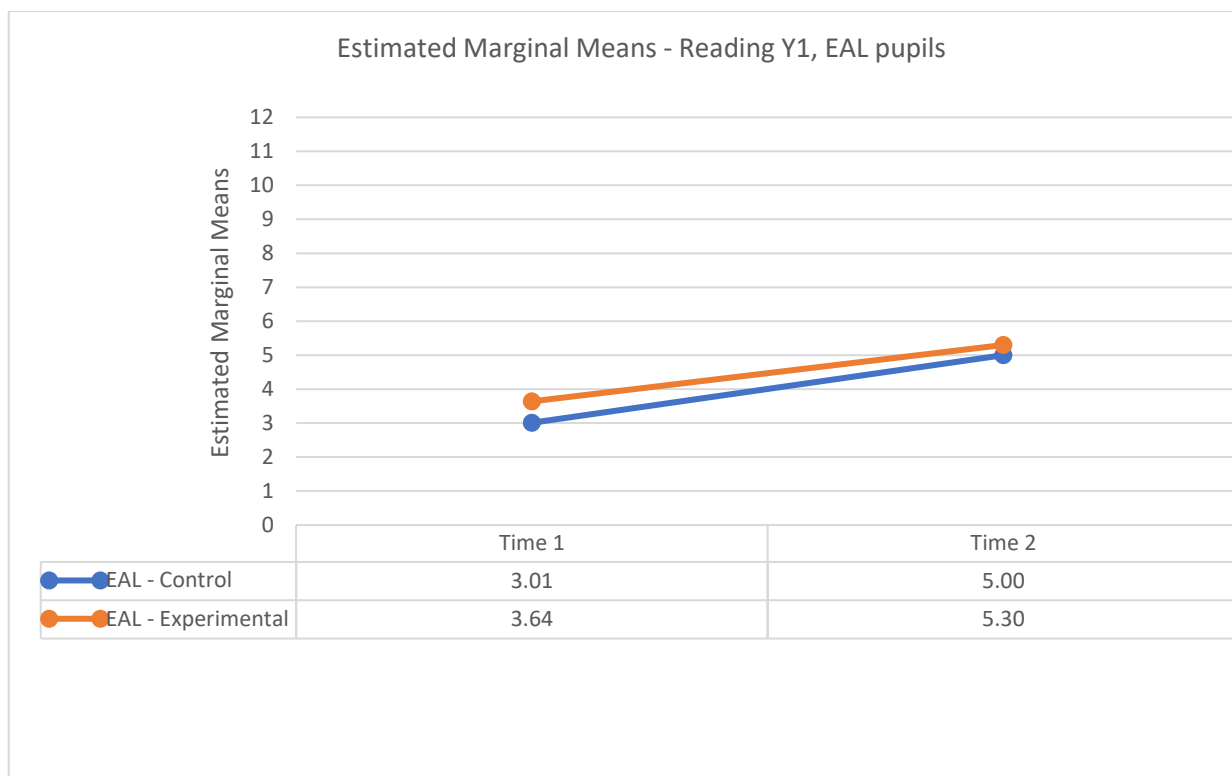
Figure 4.10: EAL pupils' reading scores at pre-test and post-test in Year 1

4.7.2 Reading test performance in Year 4

A 2x2 mixed ANCOVA was first conducted to assess the impact of the EPL intervention on experimental and control group pupils' reading test performance, across two time points: pre- and post-intervention. Pupils' vocabulary score at pre-test was included as a covariate. Both the Box's test ($p = .01$) and Levene's test ($p = .88$) produced non-significant results suggesting the assumptions previously discussed in section 4.4 were met.

Table 4.21:

Descriptive statistics for Year 4 reading test, Time 1 and Time 2

	n	Minimum	Maximum	Mean	Std. Deviation
Time 1					
Control	36	3.00	11.00	7.11	2.30
Experimental	39	0.00	12.00	7.38	3.06
Overall	75	1.00	12.00	7.25	2.71
Time 2					
Control	34	3.00	12.00	7.68	2.33
Experimental	32	2.00	12.00	8.88	2.59
Overall	66	2.00	12.00	8.26	2.51

Table 4.22 above presents descriptive statistics based on control, experimental and all pupils' reading test performance at pre-test (Time 1) and post-test (Time 2). Experimental pupils had a higher average test score than the control school peers at both time points and appeared to make greater progress.

Table 4.22:

Main within-subjects effects and interactions – Year 4 reading (2x2 mixed ANCOVA)

Source	*Df*	*F*	*p*	Effect size (η_p^2)	Observed Power
Time	1, 63	.97	.33	.02	.16
Time* Vocabulary	1, 63	.36	.55	.01	.09
Time * Condition	1, 63	1.73	.19	.03	.25

Table 4.23 demonstrated there were no significant main effects or interactions, suggesting the EPL intervention did not make a statistically significant impact on Year 4 pupils' reading test performance over time. Tests of between subject effects suggested, however, a significant effect of the covariate on pupils' reading test performance F $(1, 63) = 39.43$, $p =$ <.001, $\eta_p^2 = .39$, power = 1.00.

Despite the lack of significant main effects, profile plots (figure 4.11) suggested there were slight differences in how the control and experimental pupils progressed over time for reading. As such, these were followed by Bonferroni-corrected post-hoc tests (table 4.24) that implied both

conditions made statistically significant improvement in pre- and post-test scores. However, the difference in score was larger for EAL pupils in experimental condition, with a small effect size (p = <.001, d = .75) compared with EAL pupils in the control condition (p = .04, d = .40), where the 95% CI also crossed zero.

Table 4.23:

Pairwise comparison – Year 4 pupils' reading scores (pre-post test difference)

Condition	Language status	Mean difference over time	Std. error	P	D	95% CI for difference* LB	95% CI for difference* UB
Control	EAL	+.640	.31	.04	.40	-.23	1.03
Experimental	EAL	+1.226	.32	<.001	.75	.11	1.39

Note. CI = confidence interval; *LB* = lower bound; *UB* = upper bound. *Adjustment for multiple comparisons: Bonferroni

Estimated Marginal Means - Reading Y4

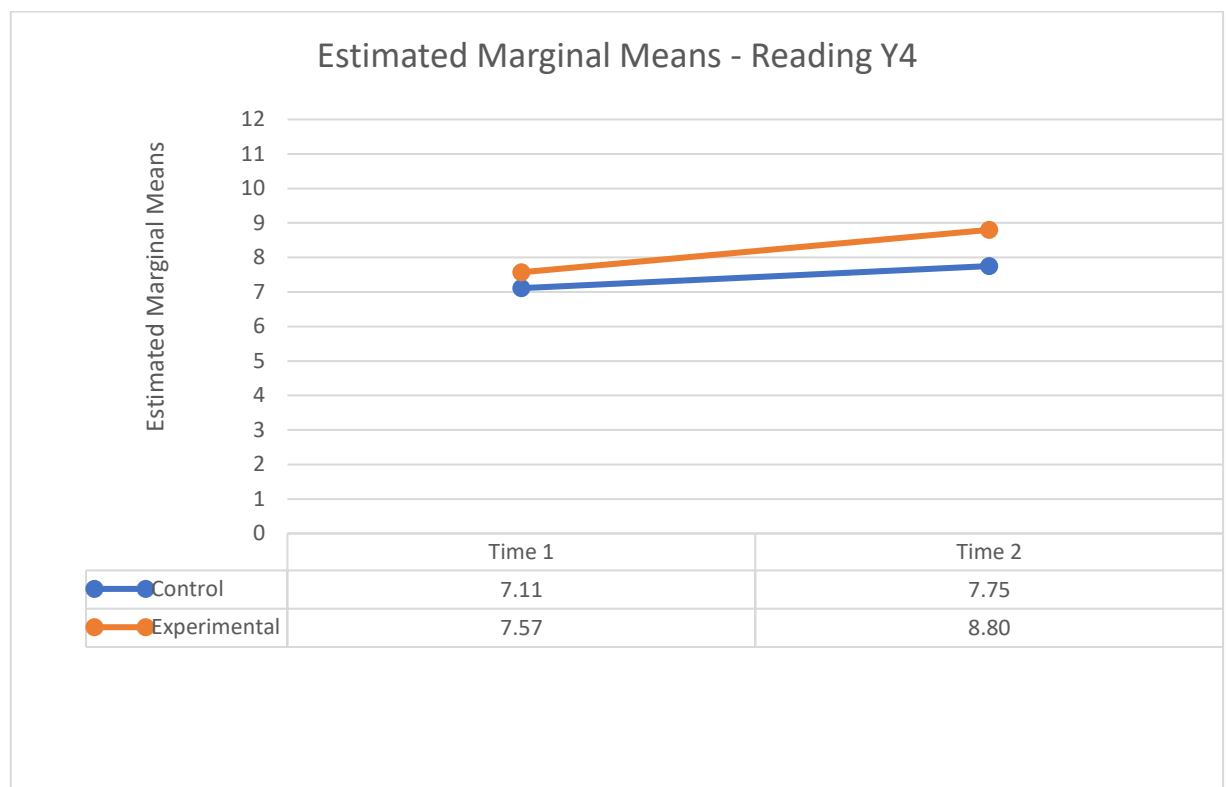|	Time 1	Time 2
Control	7.11	7.75
Experimental	7.57	8.80

Figure 4.11: Profile plot for Year 4 Reading test: Condition group x time interaction

As for Year 1, a 2x2x2 mixed ANCOVA was conducted to assess whether there were differences between monolingual and EAL pupils in each condition. Both the Box's test (p = .13) and Levene's test (p = .49) produced non-significant results.

Table 4.24:

Main within-subjects effects and interactions – Year 4 reading (2x2x2 mixed ANCOVA)

Source	*Df*	*F*	*P*	Effect size (η_p^2)	Observed Power
Time	1, 61	.78	.38	.01	.14
Time* Vocabulary	1, 61	.26	.61	.004	.08
Time * Condition	1, 61	1.08	.30	.02	.18
Time * Language status	1, 61	.06	.82	.001	.06
Time * Condition * Lang status	1, 61	1.23	.27	.02	.19

As table 4.25 demonstrates, non-significant main effects were produced again, in addition to no significant interactions between time, condition group and language status. As before, tests of between subject effects suggested a significant effect of the covariate on pupils' reading test performance F (1, 61) = 33.41, p = <.001, η_p^2 = .35, power = 1.00.

However, profile plots (figures 4.12 and 4.13) suggested differences in how EAL and monolingual pupils in each condition group progressed over time. These differences were therefore further explored through Bonferroni-corrected post-hoc tests. Pairwise comparisons (table 4.26) detected no statistically significant pre- and post-test progress in reading test performance for either control EAL pupils or experimental monolingual pupils. While the comparison for the control monolingual pupils reached significance, confidence intervals crossed zero. Furthermore, experimental EAL pupils made the largest pre- and post-test improvement over time, with a small effect size (p = .001, d = .66), and confidence intervals did not cross zero, impeding the reliability of the effect.

Table 4.25:

Pairwise comparison – Year 4 reading scores (pre-post test difference) according to condition and language status

Condition	Language status	Mean difference over time	Std. error	*p*	*d*	95% CI for difference*	
						LB	UB
Control	Monolingual	+1.008	.49	.04	.48	-.27	1.24
	EAL	+.384	.41	.35	.18	-.44	.80
Experimental	Monolingual	+.973	.54	.08	.46	-.36	1.27
	EAL	+.1.377	.41	.001	.66	.02	1.29

Note. CI = confidence interval; *LB* = lower bound; *UB* = upper bound. *Adjustment for multiple comparisons: Bonferroni

Estimated Marginal Means - Reading Y4, EAL pupils

	Time 1	Time 2
EAL - Control	7.15	7.53
EAL - Experimental	7.18	8.56
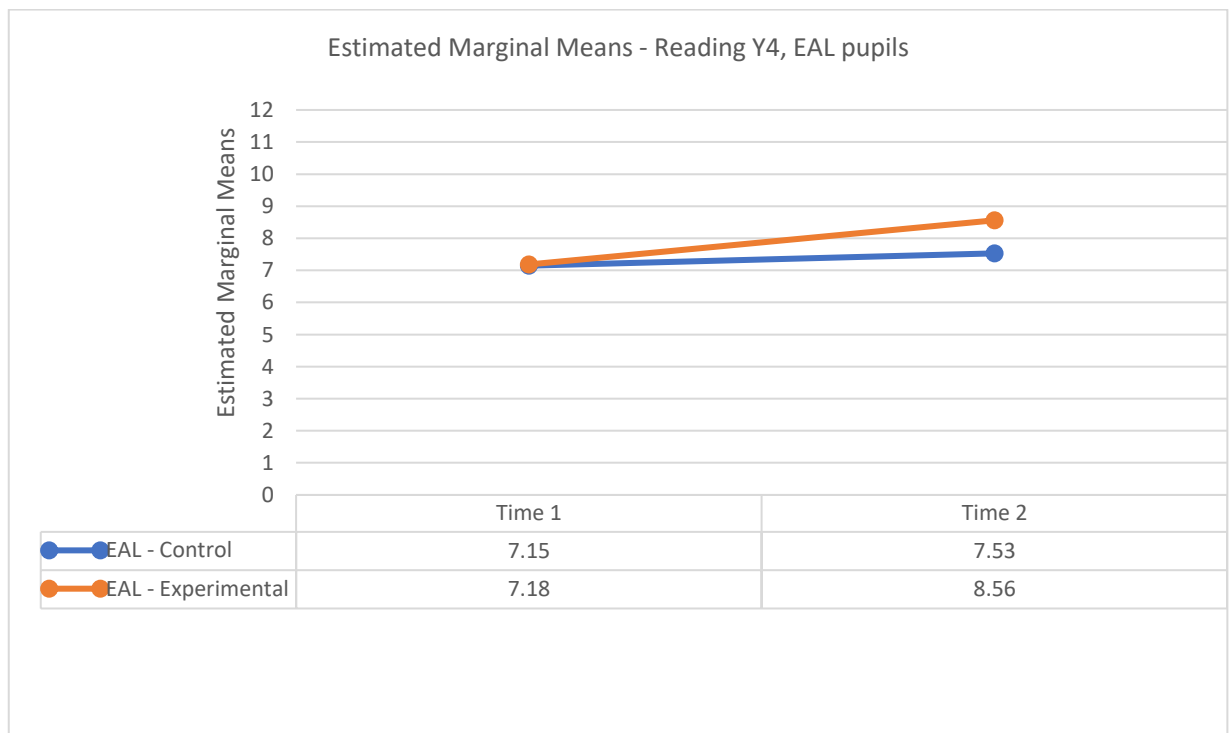
Figure 4.12: EAL pupils' reading scores at pre-test and post-test in Year 4

Estimated Marginal Means - Reading Y4, monolingual pupils

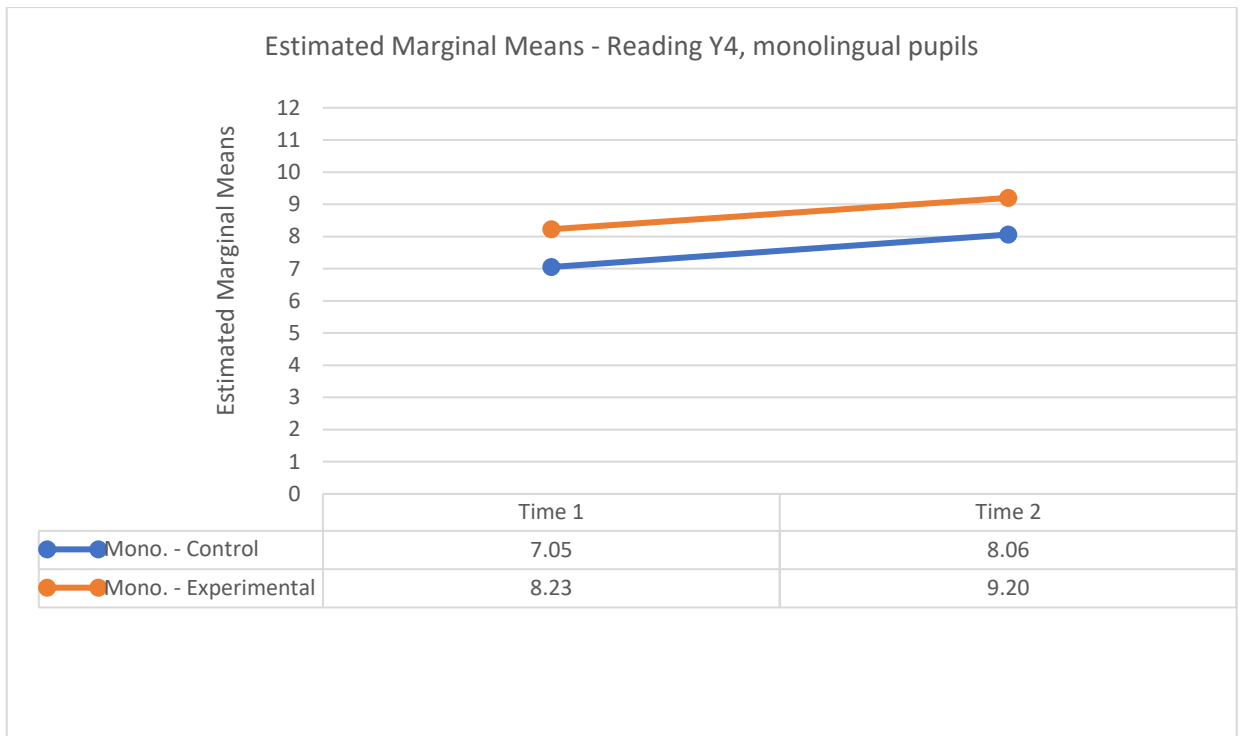|	Time 1	Time 2
Mono. - Control	7.05	8.06
Mono. - Experimental	8.23	9.20

Figure 4.13: Monolingual pupils' reading scores at pre-test and post-test in Year 4

4.8 Writing

4.8.1 Writing test performance in Year 1

As a result of the effects of the pandemic, pupils' writing at Time 1 (pre-test) was very under-developed and was hence scored as zero (see section 3.8.1 for further details). Therefore, to understand the potential impact of the EPL on pupils' writing, a one-way ANCOVA was conducted on Time 2 (post-test) scores to consider whether experimental and control group pupils' writing scores differed, controlling for vocabulary.

As previously discussed in section 4.4, the assumption of linearity, normality of distribution and homogeneity of variance apply for all parametric tests, including ANCOVA (Field, 2018). The use of pupils' pre-test vocabulary score as the covariate also met the additional assumptions put forward by Pallant (2020), which includes measuring the covariate before any intervention, assessing the reliability of the covariate and ensuring it correlates with the relevant dependent variable. Pupils' pre-test vocabulary was measured through the well-established British Picture Vocabulary Scale (see 3.11.4) and this correlated significantly with each of the dependent variables used in this study as previously demonstrated in table 4.4.

Whilst significant results were produced by a Shapiro-Wilk's test (see table 4.3), thus suggesting abnormally distributed data, ANCOVAs are considered robust enough to continue despite this violation (Pallant, 2020). A Levene's test produced non-significant results ($p = .29$) suggesting the assumptions previously discussed in section 4.4 were met.

Table 4.26:

Descriptive statistics for Year 1, Time 2 writing test

	n	Minimum	Maximum	Mean	Std. Deviation
			Time 2		
Control	28	1.00	3.50	2.23	0.51
Experimental	38	1.00	3.33	1.87	0.68
Overall	66	1.00	3.50	2.03	0.78

Table 4.27 above presents descriptive statistics based on control, experimental and all pupils' writing test performance at post-test (Time 2), in which the highest possible score for this test was 6. Control pupils had a higher average test score than their experimental peers. Given the similar means and no observable differences were detected between EAL and monolingual pupils' writing in Year 1 at post-test, these results are not reported.

After controlling for pupils' vocabulary, no statistically significant differences were found between the control and experimental groups' writing scores $F (1, 63) = .60$, $p = .44$, $\eta_p^2 = .01$, power $= .12$. Furthermore, estimated marginal means for each condition were similar, although control pupils had a slightly higher mean score ($M = 2.08$, $SE = .12$, 95% CI [1.85-2.32]) than experimental pupils ($M = 1.96$, $SE = .10$, 95% CI [1.75-2.17]). Vocabulary was significantly related to writing scores, $F (1, 63) = .69.67$, $p = .003$, $\eta_p^2 = .13$, power $= .87$.

4.8.2 Writing test performance in Year 4

As with the listening and reading tests reported in earlier sections, a 2x2 mixed ANCOVA was first conducted to assess the impact of the EPL intervention on experimental and control group pupils' writing performance, across two time points: pre- and post-intervention. Pupils' vocabulary score at pre-test was included as a covariate. Both the Box's test (p = .11) and Levene's test (p = .27) produced non-significant results suggesting the assumptions previously discussed in section 4.6 were met.

Table 4.27:

Descriptive statistics for Year 4 writing test, Time 1 and Time 2

	n	Minimum	Maximum	Mean	Std. Deviation
Time 1					
Control	36	0.00	3.67	2.21	0.69
Experimental	39	0.00	4.00	2.19	0.90
Overall	75	0.00	4.00	2.20	0.80
Time 2					
Control	34	1.50	5.50	2.92	0.75
Experimental	32	0.00	5.33	2.82	1.03
Overall	66	0.00	5.50	2.87	0.89

Table 4.28 demonstrates both conditions had very similar mean scores at pre-test, although at post-test control pupils scored higher on average in their writing.

Table 4.28:

Main within-subject effects and interactions – Year 4 writing (2x2 mixed ANCOVA)

Source	*Df*	*F*	*p*	Effect size (η_p^2)	Observed Power
Time	1, 63	.02	.88	<.01	.05
Time* Vocabulary	1, 63	.60	.44	.01	.12
Time * Condition	1, 63	.60	.44	<.01	.12

Table 4.29 above demonstrated that there were no significant main effect of time or time*vocabulary or time*condition interactions. Tests of between-subject effects suggested a significant effect of the covariate, pre-test vocabulary score, on pupils' writing performance F (1, 63) = 26.11, p = <.001, η_p^2 = .29, power = 1.00. However, there was no significant effect of condition F (1, 63) = .26, p = .61, η_p^2 = .004, power = .08.

Profile plots and means (figure 4.14) indicated negligible differences in how each condition progressed over time with their writing. Comparisons in table 4.30 went on to suggest that control pupils made marginally greater pre- and post-test improvement in their writing with a small-medium effect size (p < .001, d = .94) in comparison to their experimental peers, where the effect was smaller (p < .001, d = .75).

Table 4.29:

Pairwise comparison – Year 4 pupils' writing scores (pre-post test difference)

Condition	Mean difference over time	Std. error	*p*	*D*	95% CI for difference* LB	UB
Control	+.665	.12	<.001	.94	.44	1.44
Experimental	+.528	.13	<.001	.75	.24	1.26

Note. CI = confidence interval; *LB* = lower bound; *UB* = upper bound. *Adjustment for multiple comparisons: Bonferroni

Estimated Marginal Means - Writing Y4

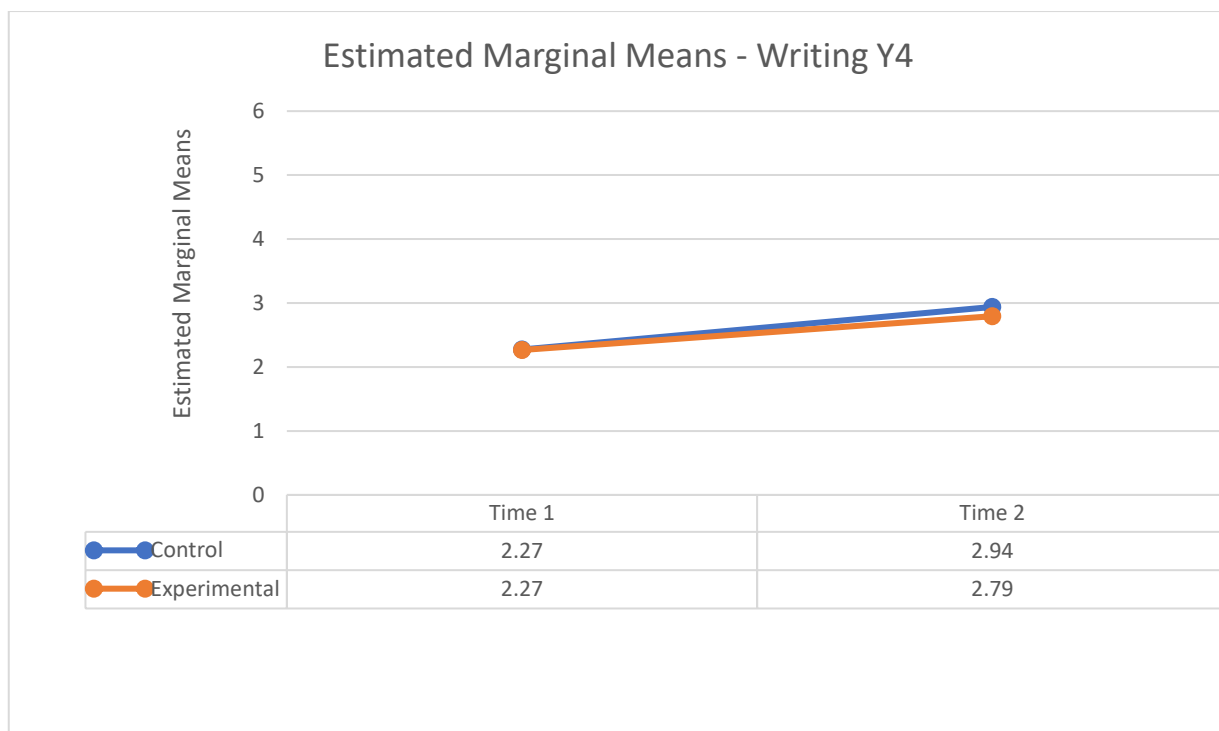|	Time 1	Time 2
Control	2.27	2.94
Experimental	2.27	2.79

Figure 4.14: Profile plot for Year 4 Writing test: Condition group x time interaction

As before, a 2x2x2 mixed ANCOVA was conducted to assess if any difference between EAL and monolingual pupils these conditions existed. Both the Box's test ($p = .13$) and Levene's test ($p = .49$) produced non-significant results.

Table 4.30: Main within-subjects effects and interactions – Year 4 writing (2x2x2 mixed ANCOVA)

Source	*Df*	*F*	*P*	Effect size (η_p^2)	Observed Power
Time	1, 61	.02	.88	<.01	.05
Time* Vocabulary	1, 61	.23	.64	<.01	.08
Time * Condition	1, 61	.23	.63	<.01	.08
Time * Language status	1, 61	.64	.43	.01	.12
Time * Condition * Lang status	1, 61	1.09	.30	.02	.18

Table 4.31 demonstrated a lack of significant main effects and interactions, although tests of between-subject effects suggested, again, a significant effect of the covariate on pupils' writing performance $F (1, 61) = 28.08$, $p = <.001$, $\eta_p^2 = .32$, power = 1.00.

Profile plots (figures 4.15 and 4.16) indicated a slight difference in writing test progress for EAL and monolingual pupils in each condition. These were then further investigated through Bonferroni-corrected post-hoc tests. Pairwise comparisons in table 4.31 detected statistically significant pre- and post-test progress for pupils in each condition. However, experimental pupils who were monolingual made the most improvement in their pre- and post-test writing scores with a medium effect size (p <.001, d = 1.04) in comparison to their EAL counterparts and their control school peers as demonstrated in in table 4.32. Furthermore, confidence intervals crossed zero for the EAL experimental group, indicating that the significant effect night be unreliable.

Table 4.31:

Pairwise comparison – Year 4 writing scores (pre-post test difference) according to condition and language status

Condition	Language status	Mean difference over time	Std. error	p	d	95% CI for difference*	
						LB	UB
Control	Monolingual	+.639	.19	.002	.92	.14	1.70
	EAL	+.681	.16	<.001	.98	.32	1.64
Experimental	Monolingual	+.743	.21	<.001	1.04	.18	1.89
	EAL	+.401	.16	.016	.58	-.06	1.21

Note. CI = confidence interval; *LB* = lower bound; *UB* = upper bound. *Adjustment for multiple comparisons: Bonferroni
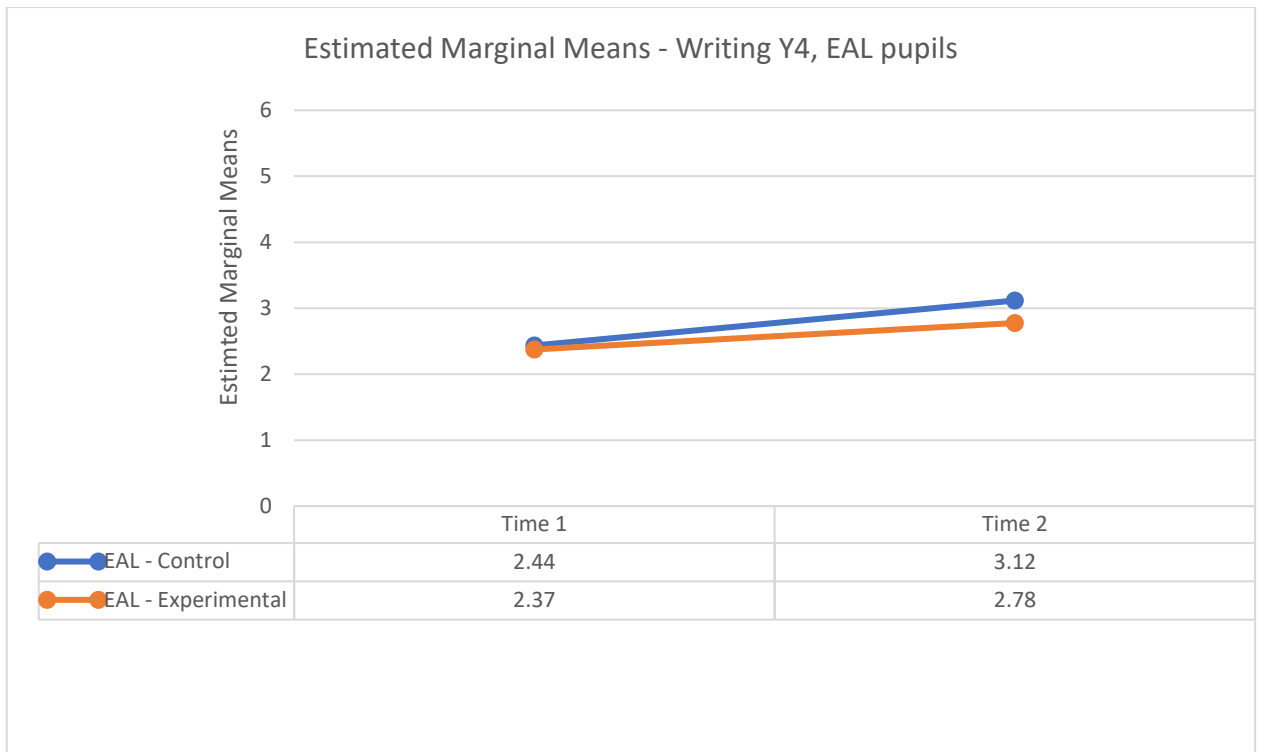
Figure 4.15: EAL pupils' writing scores at pre-test and post-test in Year 4
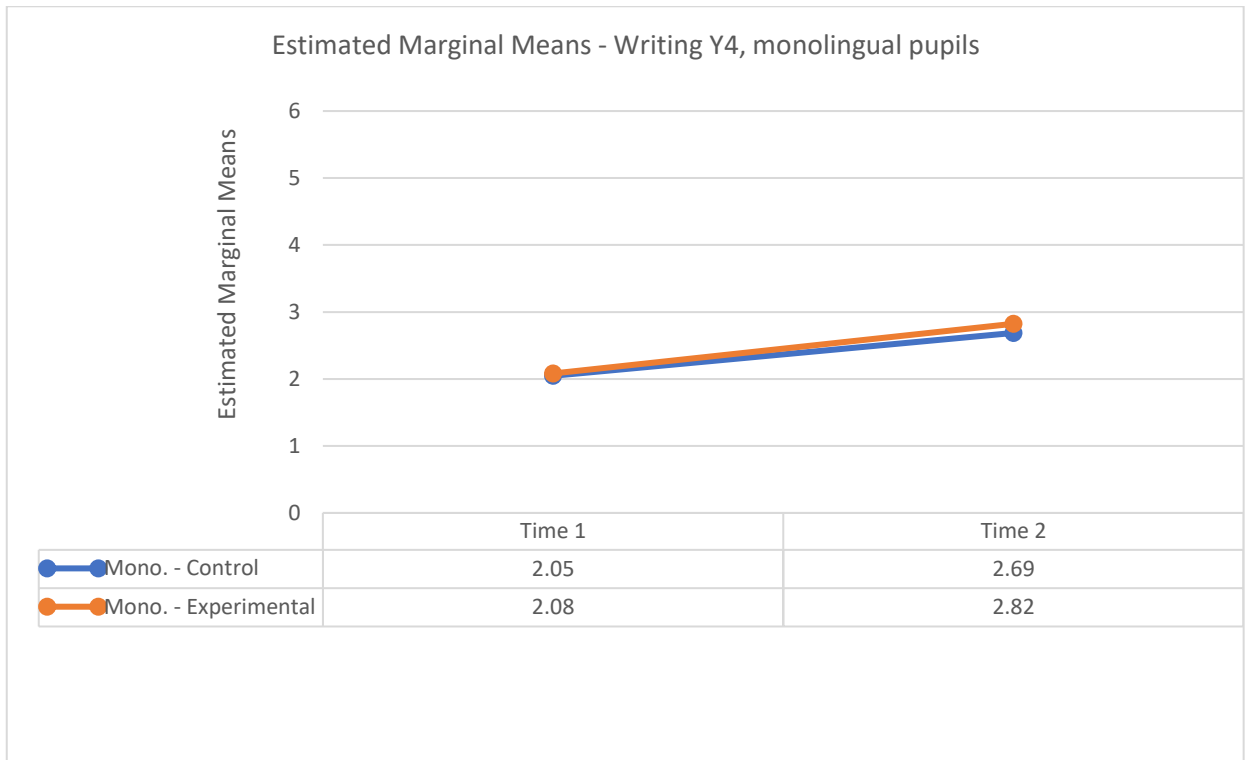

Figure 4.16: Monolingual pupils' writing scores at pre-test and post-test in Year 4

4.9 Chapter summary

This chapter presented quantitative findings that sought to assess the impact of the changes to teachers' practice following professional learning using the Enduring Principles of Learning (EPL) on multilingual pupils' English proficiency. This was measured through listening, speaking, reading and writing which were attempted by pupils before and after their teachers participated in the six-month EPL professional development intervention. From the findings in this chapter, it emerged that the impact of being taught by experimental teachers was not the same across all skill areas nor in each year group.

Benefits from the EPL intervention were greatest for EAL learners for listening, in both Years 1 and 4, where they appeared to make greater pre- and post-test improvement than EAL control pupils. That was also the case for speaking in Year 1 and reading in Year 4. By contrast, the effect of the intervention was marginally greater for EAL control pupils reading in Year 1, although intervention effects did not differ from those of 'business as usual' teaching for Year 4 speaking, nor for writing in both year groups. In fact, in Year 4, EAL experimental learners seemed to make the least progress in the writing test over time. Across skills, the lack of significant between-groups should also be highlighted, however. Likewise, for the majority of analyses, observed power was low meaning that all results need to be interpreted with caution.

Finally, for all skills except speaking (where it was not possible to include a covariate because of the use of non-parametric tests), pupils' pre-test vocabulary had a significant and large effect. This ranged from Year 4 reading: 2x2 ANCOVA ($\eta_p^2 = .39$) to Year 1 writing (one-way ANCOVA) ($\eta_p^2 = .13$). Possible reasons behind these varied findings will be discussed in Chapter 6.

Chapter 5 - Qualitative findings

5.1 Introduction

As a QUAN-qual study, the qualitative data provided insights with which to unpack the pupil experience of the EPL beyond test scores. Section 3.7 provided a detailed rationale for why the format of focus groups with stimulated recall were selected for interviews in this study, whilst section 3.8.2 discussed how these interviews were conducted, including the questions that were put forward to pupils.

First, this chapter presents detailed commentary about how pupils responded to the interview format. This is followed by a summarised structure of the final themes and sub-themes that were derived from data analysis (see section 3.11.5 for a detailed explanation of the iterative coding process). Thematic Analysis, or the process of meaningfully assigning attributes to datasets (Braun et al., 2017; Saldaña, 2015), was integral to developing the themes that emerged in this study. Themes can be conceptualised as the purposeful arrangement of codes which are underpinned by similar concepts relevant to the research question (Braun & Clarke, 2021a). In the context of this research, this meant pupils' focus group interview transcripts were subjected to an iterative process of coding by the researcher in order to generate themes and sub-themes that were able to address the research question below. The chapter goes on to report each of these themes and sub-themes in detail. The related research aim and questions are restated below:

RQ2: What are pupils' responses to the teaching approaches related to the Enduring Principles of Learning (EPL) as part of their classroom experiences?

2a) what is their response to EPL in the classroom?

2b) to which aspects of this approach do they respond positively?

2c) to which aspects of this approach do they find more challenging?

Aim: To interview pupils with a view to harnessing their responses to their teachers' classroom practice resulting from the professional development.

5.2 Setting the context: Pupil interviews

Four groups of pupils (derived from each of the four experimental teachers' classrooms) were interviewed for this part of the study. This meant that each focus group's dynamic, performance and approach to the interview was inevitably different (Morgan et al., 2002; O'Reilly & Dogra, 2017). Collectively, pupils had exposure to a range of home languages. Where possible, pupils with a range of composite scores in the tests they attempted in this study, as well as teacher-assessed attainment levels in English, were sought for interview. A summary table of interviewed pupils, and more information about how these pupils were selected, can be found in section 3.4.2.

In Year 1, participating pupils were based at School A. It was clear there was a shared enthusiasm and eagerness to share thoughts across both focus groups. The pupils were not only largely forthcoming in sharing their views, but there were some instances of pupils beginning to build upon each other's views meaningfully that enabled group conversations to flow. Similarly, older pupils based in School C were able to confidently respond to the interview questions, that often led to pupils naturally holding conversations amongst themselves. Further, the focus group interview format enabled pupils to build upon each other's responses with ease and assertiveness in their views. Their opinions often helped provide multiple perspectives framed around a shared classroom experience. Taken together these observations of pupils' behavioural responses to participating in a focus group interview may have been in part, due to their exposure and engagement with the dialogic nature of the EPL intervention, in which encouraging pupils' talk was a central tenet to developing teachers' practice.

However, for pupils from School B, the focus group interview was a considerably different experience. This is because these pupils had recently experienced the sudden passing of their teacher, S. This undoubtedly had an impact on each of S's pupils, as well as the wider school community who mourned the loss of a teacher and colleague. There is limited literature on how schools in England best support children dealing with grief (Holland, 2008; Lowton & Higginson, 2003) However, it is acknowledged that schools are uniquely placed to provide a consistent, safe and secure space for grieving children (Holland, 2008; Lowton & Higginson, 2003). In the context of this study, senior staff members from School B wished to carry their participation in this study on to completion. This was achieved by regular correspondence with staff to ensure only pupils who would feel comfortable enough to engage with the interview were considered for participation. There were far fewer instances of free-flowing conversations, and this particular focus group interview was a more subdued discussion.

Across all four focus groups, there were moments of hesitation and reluctance to answer questions that were identified, particularly pertaining to aspects of classroom learning that pupils found difficult. This behaviour is perhaps to be expected, considering that interviews can be unusual for pupils, who are unlikely to have had a similar experience before (O'Reilly & Dogra, 2017). In spite

of this, pupils still shared some of the challenges they faced in the classroom which are explored later in this chapter. Their readiness to talk about negative experiences may be due to the format of focus group interviews which enabled pupils to feel confident enough to share and build upon each other's experiences (Hennink, 2014).

In exploring pupils' perceptions to the change in classroom experiences (as a result of the EPL intervention), figure 5.1 presents a summarised diagram of the four final themes, and related sub-themes that emerged from the Thematic Analysis of the focus group interviews. Each of these are discussed in the remaining sections of this chapter.
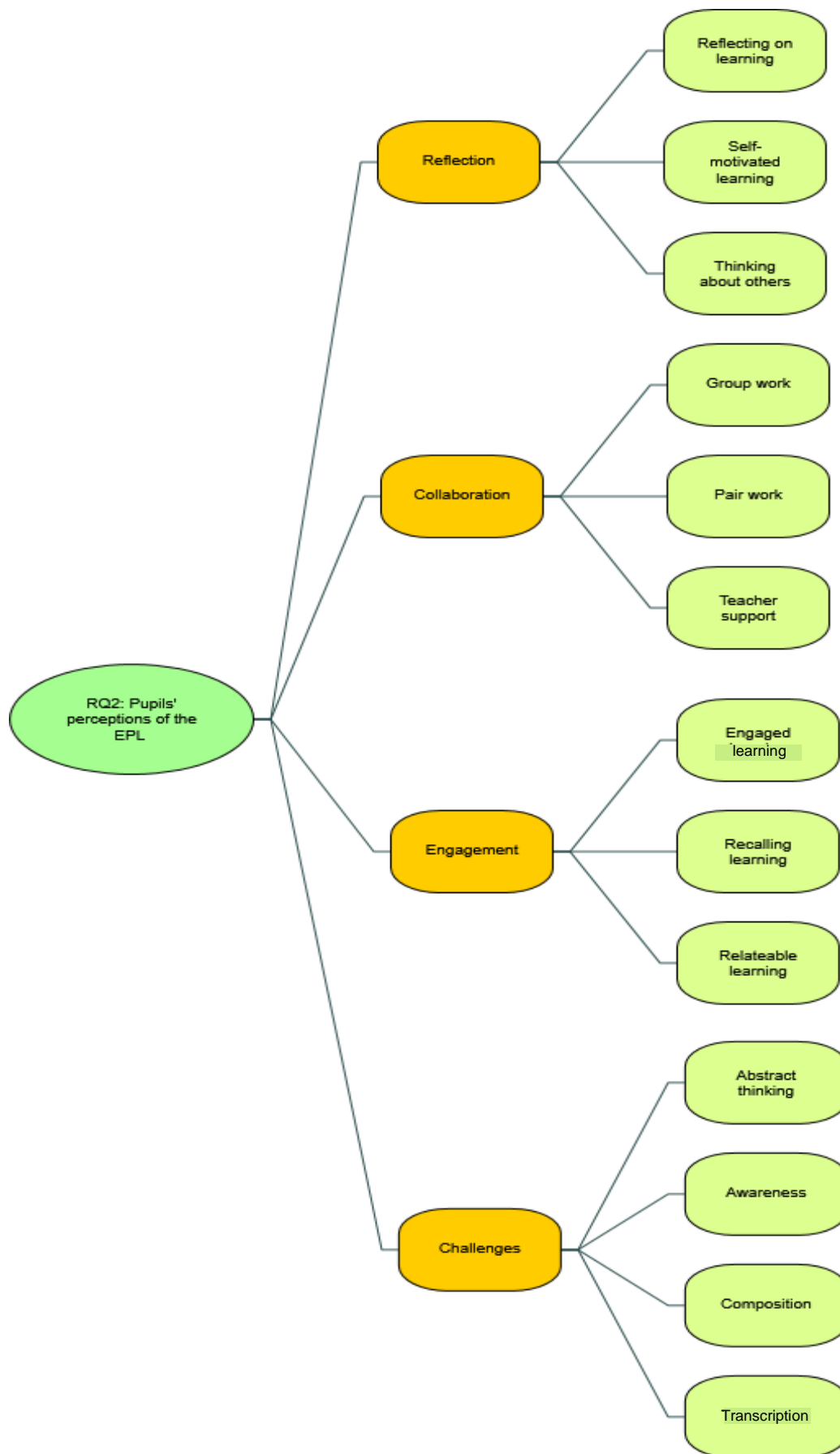
Figure 5.1: Summary of final themes and sub-themes

5.3 Reflection

The change in classroom practice enabled by teachers' use of the EPL, may have contributed to how pupils responded in each focus group interview, and could perhaps explain how the theme of reflection emerged in this study. This is because pupils expressed awareness of their own learning or of others by considering meaningful classroom conversations and experiences they had shared with peers and teachers, echoing elements of the EPL. This theme could be further broken down into how pupils were able to clarify previous learning experiences, share their motivated attitudes towards classroom learning and how their learning helped them think about others.

5.3.1 Pupils as reflective learners

In Year 1, pupils were exposed to books from Shirley Hughes' *Alfie* series. *Alfie* is a fictional character who as a young boy, has a range of stories which depict everyday life with his family and friends. Therefore, *Alfie* acted as an anchor that was drawn upon by their teachers in planning learning across the curriculum (English; Design and Technology; Personal, Social and Health Education). As such, the pupils were very familiar and fond of this fictional character and during the interviews, pupils talked about their learning related to pancake-making for *Alfie*.

> AL
>
> OK so I know you read a story about a boy called Alfie [refers to story book] and then you designed some pancakes [points to child's design in book], and then you made them right [refers to photograph of children in cooking class]? So what did you like about these lessons?
>
> Hafsa
>
> Well, no, we were doing their toppings. I really want to do more.
>
> Hanna
>
> [Flicks through her book] Pancakes!
>
> Virat
>
> No, not pancakes doing some cakes or desserts, making desserts.

Pupils were able to reflect on the conversations they had with each other and their teachers in the classroom and referred to their own work to use subject-specific vocabulary appropriately: "Oh so I forgot. It's made out of batter*"* (Yusuf, Teacher L). This may be an example of how the principle 'Language and Literacy Development,' supported teachers in generating opportunities for pupils to meaningfully express and connect unfamiliar curriculum content to build upon pupils' existing knowledge and experiences (Viesca et al., 2022). These exchanges perhaps highlight that in reflecting on their classroom experiences, pupils could make clarifications about their own learning confidently.

It is clear that the *Alfie* text was used to drive classroom dialogue. Coupled with practical learning opportunities (making pancakes), this helped pupils not only gain exposure to specific vocabulary but apply this to their own conversations with ease and understanding. Pupils made clarifications based on what their peers were saying, and this reflected sociocultural theories in which learning is derived from interactions with others. (Gibbons, 2015; Vygotsky, 1978; Wells, 1999).

5.3.2 Self-motivated learning

Through their reflections on classroom experiences, pupils demonstrated a desire to further develop their own learning. In Year 1, pupils indicated that when working independently on tasks, this gave them the opportunity to challenge themselves in pushing their learning further: "I like working on my own because I find that hardest*"* (Virat, Teacher A). Additionally, pupils' aspiration to succeed was evident "I working on my own because then I persevere more*"* (Natalia, Teacher L). These comments seem to reflect much of the 'Challenging Activity' principle, in which pupils are supported to develop complex cognitive thinking through classroom activities and teachers' use of clear expectations and guidance.

When asked whether there was anything they would like to change in their classrooms to help with their learning, some Year 4 pupils responded with changes they would make within themselves in relation to their previous learning: "Maybe I should've done like a bit more details of lots of stuff. Like how they do their stuff*"* (Kiran, Teacher S). Whereas other pupils in Year 4 reflected on strategies they could implement to help develop their learning further: "I would think what I want to do first and then write it down" (Lana, Teacher J).

These comments may indicate that their teachers' use of the EPL may have encouraged pupils to develop their self-awareness. For example, use of the 'Modelling' principle, in which teachers demonstrate what pupils are expected to produce as an outcome to their learning more explicitly (Teemant, 2020) may have supported these older pupils in understanding how they might build upon their learning. Although it is also possible pupils may have demonstrated motivation to develop these areas without the change in teaching practice.

5.3.3 Thinking about others

Pupils' engagement with their classroom experiences provided them with opportunities to consider others beyond themselves in a meaningful way, perhaps echoing elements of 'Critical Stance,' or how learning can be designed to address societal inequities (Teemant et al., 2014).

In Year 4, pupils in School B had learnt about the history of the Titanic and were able to have thoughtful conversations about the tragic loss of life on board. However, pupils were able to go beyond this and recognise the difference in conditions for passengers travelling in first, second and third class:

Yusra

Yeah, that's why lots of people like was more, like, wanted to book third class because it wasn't that much money.

AL

Oh, I see, OK.

Ingrid

I kinda just want it like it to be like 1 pound? 'Cause I feel too bad for them.

AL

That's true.

Yusra

I kind of feel, I want them to like have one like first class or like one third class because it's not fair like people in third class like they don't have luxury stuff like first class.

Yusra and Ingrid's conversation began to touch upon issues surrounding fairness and affordability. Their empathy for third class passengers, coupled with the group's knowledge that this class of passengers suffered the most loss of life, was evident. As such, pupils were able to look back on their learning about this topic, and could begin to critically reflect on how they may have made different choices:

> "There's a lot of people that died, and the third class passengers didn't have a lot of money. So if I was the captain, I would change the price of the tickets" [Ingrid, Teacher S].

Pupils' knowledge of this topic allowed them to display maturity and sensitivity in their discussions. By doing so, their subsequent reflection of their learning experiences had led to a somewhat profound consideration of others beyond themselves. It may well be the case that they would have done this without the EPL intervention, but it is also possible that the teachers' consideration of Critical Stance might have shifted perspectives. It is also important to acknowledge that these pupils were in teacher S's class and given the unique circumstances they were in with the sudden passing of their teacher, it is difficult to ascertain to what extent their responses were teacher-impact related.

In Year 1, pupils thought about others in a different way appropriate to their younger age. Staying with *Alfie,* pupils shared how they tried to make healthy eating choices when creating their pancakes and how these could be shared amongst themselves and with the fictional character: "It

would be nice if we shared all of our pancakes with Alfie. We could taste them with Alfie" (Virat, Teacher A). Furthermore, by learning the pancake-making process in the classroom, one pupil was keen to share the recipe with his family: "Now I can go home and make a pancake for my mum and my dad…" (Jamal, Teacher A). Virat and Jamal's comments demonstrate how their learning in the classroom had led them to think about others beyond themselves.

5.4 Collaboration & Engagement

In addition to references to the EPL already made in this chapter, a more explicit discussion of 'Joint Productive Activity' (JPA), or how teachers and pupils collaborate to make meaning (Teemant, 2014), could be traced throughout the interviews. Collaboration emerged as a key theme because pupils were keen to talk about shared classroom learning experiences, in which they were able to elaborate on how they worked with their peers or their teachers in meaningful ways. Engagement was also another theme that was identified in the interviews, as pupils shared how they actively participated in their classroom learning and in what ways this related to their own lives.

5.4.1 Working with others

Pupils enjoyed working with their peers and collaborating with them in small groups, which was a part of all four experimental teachers' change in practice. Whilst all teachers had previously used groups of desks to arrange the children, they often tended towards whole class teaching rather than facilitating small group discussion (Baines et al., 2009; Kutnick et al., 2002). A key distinction of the EPL was supporting teachers to make this shift from traditional classroom practice. Pupils in both year groups indicated that where genuine group collaboration was enabled, they were able to build a supportive environment that allowed for mistakes, and subsequent corrections, to be made with ease:

> "I like working in a big group because then then we can check which answer right or which answers wrong. But I wish all them answers right and then we can, we can learn all together about science and math" [Imran, Teacher L].

Imran's comments help capture a sense of camaraderie pupils shared when they explained why they enjoyed working with their peers as part of their classroom learning in Year 1. His reference to subjects beyond English was unprompted, and perhaps reflects how elements of the EPL were embedded across the curriculum (see 3.5: *The intervention* for the range of subjects participating teachers were observed in).

Pupils in Year 1 also mentioned how working closely with a peer could sometimes help alleviate apprehension, particularly when faced with difficult tasks: "…when I feel a bit worried I can tell my friend" [Hafsa, Teacher A] and "…I don't know but Yusuf help me that much better*"*[Filip, Teacher L]. These comments suggest that pupils in both groups were in classroom environments that nurtured supportive and collaborative relationships among peers, and may begin to explain their test performance, particularly in the listening test, where both year groups outperformed their control school peers.

However, pupils also made explicit mention of how they enjoyed working with their teachers and receiving their support, often through verbal discussions. For instance, pupils' comments indicated that their teachers' use of the principle 'Challenging Activity,' may have been useful to them building complex thinking skills. In particular, pupils noted that their teachers' abilities to ask questions in ways that stretched their thinking was welcomed: "I always like when [Teacher J] like ask questions 'cause we kind of go into detail," [Julia, Teacher J]. Whereas in Year 1, pupils appreciated being able to seek clarification from teachers: "I love it because when I'm like I don't know the question, she helped me all the time" [Sita, Teacher L]. This could perhaps also be reflective of teachers' use of the 'Modelling' principle, in that the feedback Sita is consistently receiving from her teacher is building her knowledge and understanding over time.

5.4.2 Memorable learning

Across the interviews, pupils shared their enjoyment and involvement in their learning. In each of these instances, pupils were actively involved in the creation and understanding of new knowledge. As such, this often helped them recall their previous learning related to these experiences. It is clear that EPL-trained teachers in this study tried to create opportunities for contextualised learning, to allow for scaffolded growth in pupils' understanding of new curriculum content (Gibbons, 2015). For instance, Year 4 pupils based in School C discussed several memorable classroom experiences in which they felt like active participants in their learning. Interestingly, Maya began talking about a unit of work on rocks and volcanoes, which prompted additional responses from her peers:

> Maya
> …But before that this one was my favourite. We learned, we learned about rocks and-
>
> Michal
> Volcanoes
>
> Maya
> Yeah, and volcanoes yeah. And then we made this project on Chromebooks!
>
> […]
>
> Fahad
> Oh yeah. We did these [refers to materials on table]
>
> Julia
> Yeah, and kind of like a presentation.

Having access to technology gave pupils the freedom to work in groups to research, design and present their own presentations related to volcanoes. The pupils enjoyed the opportunity to co-

construct new knowledge with peers their comments reflect Vygotsky's (1978) sociocultural theories of learning, as discussed previously in the Literature Review (see section 2.4.2).

Maya's classmates went on to discuss other memorable topics they had learnt about, such as the Romans and World War II. This included discussing the opportunities they had to actively participate in their learning by re-enacting Roman shield formations and creating an evacuation experience. Their engagement with these topics often led to learning beyond the classroom, in which their creativity was encouraged. Engaged by the various topics covered in school, Amir particularly enjoyed taking time to create various relics at home, which he later brought into the classroom to include as part of a display.

> Amir
> It was fun 'cause we done Roman stuff, I bought in a spear and it was fun 'cause we did a topic on Iron Giant, oh Iron Man
>
> Michal
> Oh yeah, that was fun.
>
> Amir
> Yeah oh and war, '[Location] at War'. I built a Spitfire.
>
> AL
> That's really cool. Wait, out of what?
>
> Amir
> Paper, but it didn't fly!

Teachers also considered how off-site trips could be planned to add value to pupils' classroom learning experiences, although this could have been organised before their engagement with the EPL. For instance, based on their learning surrounding the Titanic, Year 4 pupils in School B visited a museum that had a dedicated exhibition related to the Titanic. Pupils enjoyed the immersive experience available at the museum, as they could explore recreations of the different travel class cabins, look at objects recovered from the ship and hear stories about some of the passengers.

For pupils in Year 1, the tactile experiences of preparing and making their own pancakes were particularly enjoyable. Pupils could select their own ingredients, chop, mix and eat their own food. They felt a sense of ownership in their learning, in that each creative decision was theirs to make: "My ingredients I I had a special recipe, I, my special recipe was yoghurt and jam" [Yusuf, Teacher L].

Taken together, it emerged that pupils valued the opportunity to work with their peers and teachers in ways that encouraged discussion and collaboration, in activities framed around topics that motivated them.

5.4.3 Learning related to pupils' lives

Across the focus groups, pupils welcomed instances where classroom learning had some application to their own lives. This is reflected in the principle 'Critical Stance,' which aims to develop teachers' abilities to create culturally sustaining curricula that are related to their pupils and their home communities. For example, through their continued engagement with *Alfie*, Year 1 pupils could explore social themes such as helping others and understanding why balanced diets are important:

> "I liked about it because it's healthy […] I learned from, we have to share"
> [Nina, Teacher A].

Pupils were supported in discussing and modelling social skills through *Alfie* stories, and coupled with engaging hands-on classroom experiences, pupils were actively involved in making choices that they could later draw upon in their own lives, such as eating well and sharing.

Year 4 pupils from School C enjoyed applying their learning about traditional fairy tales to their home lives. For some of these pupils, it was their first time reading these stories. Lessons included asking and discussing questions about the characters, plot, and context of fairy tales in detail, which may have given them confidence to share these stories at home: "When I read Hansel Gretel, I read it to my sister and she likes it" [Lana, Teacher J]. Lana's pride in applying her knowledge of fairy tales in class and sharing this with family at home, was clearly evident particularly as her younger sister had just started school.

Furthermore, Year 4 pupils across both schools also enjoyed discovering the local historical links they had whilst learning about topics such as the Titanic and World War II. Framing their learning of these topics around locations familiar to the pupils added a rich, contextual layer to their learning:

> "Yeah we saw like on the floor. There was like a map of [xxxx] and some people on the Titanic use to like, live around us like around the screen. I mean, they like basically lived here" [Ingrid, Teacher S].

Ingrid's comments help illustrate that when pupils were able to directly relate and recognise specific areas as spaces they use today, this helped them recognise the gravitas of such events and deepen their own understanding of the topic.

Focus group interviews clearly demonstrated pupils' sustained engagement and investment into the various topics they had been learning about in their respective schools. Opportunities to work collaboratively and discuss learning were welcomed, as were topics that were interesting, meaningful and in some way could be connected to pupils' lives. It may be that teachers' planning and delivery of these sessions, which were guided by the EPL intervention, may have contributed to pupils' positive response to their learning experiences.

5.5 Challenges

Whilst previous sections in this chapter noted pupils' positive responses to their classroom learning experiences that were related to the EPL intervention, this section explores the aspects that pupils found more difficult. First, pupils' awareness of some of the challenges they face as part of their classroom experiences are presented. Then, pupils' difficulties with writing are shared. The process of writing is complex (Alamargot & Fayol, 2009; Zimmermann, 2000) and for multilinguals, the production of writing may be further impacted by additional demands or constraints (Schoonen et al., 2009). More specifically, issues related to composition and transcription that were raised by pupils are explored, which is perhaps unsurprising given that this largely mirrors National Curriculum objectives (DfE, 2014) and because this is what participating teachers used to inform their own planning and assessment of writing in their classrooms.

5.5.1 Pupils' awareness of classroom difficulties

Pupils were able to recognise the varying levels of challenge they faced in the classroom. However, each focus group initially gave similarly measured but ambiguous responses in relation to challenges in the classroom: "some was difficult, and some was easy" [Salma, Teacher S]. This initial hesitation may have been because the pupils were familiar with each other, and so they may not have wanted to share their personal difficulties so openly (Hennink, 2014). However, over the course of each interview pupils were able to build upon each other's responses, often adding their own perspective to shared challenges.

For instance, the pace of learning could be difficult to follow, particularly if pupils were still learning how to work in small groups without constant adult supervision. Although older pupils could navigate working together with less explicit support from teachers, for Year 1 pupils, their responses suggested that group work was a skill that needed to be developed over time.

> "It's hard because then they just carry on and then they just. I don't know what they're doing because they're all doing it in a different way." [Hafsa, Teacher A]

Hafsa's comment captured the multitude of thoughts pupils may have as they attempt to 'keep up' with the pace of teaching and learning in the classroom. Such challenges could be further amplified for pupils who are still developing their language and literacy skills, as they attempt to learn new content through an additional language (Lucas & Villegas, 2013).

Pupils went on to share specific areas of the curriculum where they faced difficulty. In Year 1, pupils perceived mathematics as challenging and sometimes difficult to understand: "all the numbers are muddled up" [Hafsa, AN]. The application of grammar and punctuation was highlighted as an additional area of challenge in Year 1 that required regular review: "it looks tricky

and it it and it has like question marks and then we need to sort it out" [Sita, Teacher L].

Whereas in Year 4, reference to specific skills as part of their English curriculum were made instead. This included particular difficulty in developing abstract thinking skills, which required them to imagine, question and describe intangible concepts as part of their English lessons. Pupils were also aware that sometimes, gaps in their own subject knowledge exacerbated these challenges "…'cause some of this stuff, I don't know" [Amir, Teacher J].

Taken together, these comments help demonstrate pupils' awareness of challenges they face, but it is important to note such difficulties may not always be easily mitigated by EPL pedagogy. Some of the difficulties mentioned by pupils, such as keeping up with the pace of group work, could perhaps be addressed through sustained engagement with the EPL. However other areas mentioned by pupils, such as difficulty understanding concepts and subject knowledge gaps, perhaps reflect the broader range of challenges pupils face, that arguably go beyond the remit of the EPL intervention. Despite this, the focus group interviews provided pupils with an opportunity to discuss their classroom experiences, perhaps highlighting the need for more conversations between teachers and pupils in understanding and addressing these difficulties that are present in the classroom.

5.5.2 Challenges with composition

As part of the EPL intervention, teachers received support in designing activities that encouraged 'Language and Literacy Development'. This encompasses activities that are designed to encourage pupils' expression of language, development of vocabulary and literacy skills (Teemant, 2014). Whilst pupils did not make explicit reference to the EPL, pupils across both year groups identified aspects related to writing (such as composition and transcription) as a challenging part of their classroom experiences.

In the context of this study, composition refers to how pupils can formulate ideas to help with the structuring of their speech and writing (DfE, 2014). Pupils across both year groups referred to the process of finding ideas to start writing considerably difficult. This included describing the internal thoughts they would have when attempting to generate ideas, which often left them feeling unsure about what to write. Much of these thoughts are mirrored in the Murphy et al. (2015) study which found monolingual pupils' idea-generating and organisational aspects of writing were considerably stronger than their multilingual peers.

It is perhaps unsurprising then, that pupils across both year groups in this study referred to reliance on their teachers' support with the composition of their writing. In Year 1, this meant pupils valued explicit discussion with their teachers to help with composition, despite the challenging nature associated with writing:

"I looked hard when [Teacher L] said try 2 sentences of fish. Does have legs or does fish have beak?" [Sita, Teacher L].

By engaging in dialogue with their teachers, pupils' thinking was scaffolded, and the use of questions could assist with their composition. Whereas for Year 4 pupils, composition was likely to be supported through teachers' modelling clear expectations: "making the sentence like properly like so [Teacher J] can see it like properly made good" [Lana, Teacher J]. Sita and Lana's comments encapsulated the role teachers can play in making their pupils feel reassured and supported with the composition stage of their writing, with pupils expressing that their teachers' approval of their writing was important to them.

Year 4 pupils were able to elaborate further on the difficulties they faced within this part of the writing process. They were able to recognise that they may sometimes need additional time to think through their ideas before committing to writing them down. This may be partly because they are aware of mistakes that they make in their writing if they do not do so, "cause sometimes I make a lot of crosses" [Amir, Teacher J] or because it takes time to find ideas to help structure their writing, "cause sometimes I don't know what to write down" [Maya, Teacher J]. However, pupils were still committed to improving the composition of their writing, despite its difficulty.

5.5.3 Challenges with transcription

In this study's context, transcription relates to the development of pupils' spelling and handwriting skills (DfE, 2014). When considering the role of the EPL in relation to writing, it may be that its focus on creating opportunities for talk may conflict with pupils developing their confidence and skills in writing. Whilst both Year 1 and Year 4 pupils made references to difficulties they encountered with handwriting, younger pupils had challenges that were slightly different to the older pupils.

For instance, in Year 1, pupils referred to the physical difficulties associated with transcription, which was a skill they were still developing. The use of 'finger spaces,' or the process of placing a finger after writing a word to encourage spacing, was considered difficult for pupils to remember. Furthermore, pupils found consistently maintaining the formation of letters in their writing another area of challenge: "…I keep doing it wrong. My my Zedd was too big so it accidentally go to my writing" [Imran, Teacher L]. Imran's comment captures the frustration and persistence some pupils felt in developing their transcription skills.

For Year 4 pupils, the issues surrounding transcription were slightly more nuanced. Perhaps being older, pupils felt there was an expectation that they should be able to write more whilst in the classroom. This mirrors National Curriculum (DfE, 2014) objectives in which pupils' handwriting at this year group should be able to write "fast enough to keep pace with what they want to say" (p.

35). However, this came at odds with what some Year 4 pupils were able to produce, with some indicating physical strains when writing too much, and others struggling to maintain letter formation at speed. Furthermore, pupils felt there was a greater emphasis placed on them to produce 'enough' writing to be considered acceptable, but they would often leave the classroom feeling "like I could write a bit more" [Kiran, Teacher S].

As the amount of writing that pupils were expected to produce was perceived to be as unmanageable at times, this inevitably led to some strong feelings towards writing:

> Fahad
> The hard bit was writing 'cause I hate writing
>
> Michal
> Same!
>
> AL
> OK.
>
> Fahad
> And easy bit was just… reading or listening or looking.

Fahad's comments suggest that some pupils' may have other preferences as part of their classroom experiences, despite writing being primarily used to record learning. The writing process is a cognitively demanding activity (Berninger & Amtmann, 2003; Dockrell, 2009) and the difficulties associated with writing perhaps highlight the need for EPL-trained teachers to consider how learning related to 'Language and Literacy Development' could be evidenced in other ways, to alleviate some of the challenges pupils face in this area. By conducting these interviews, pupils' difficulties with writing could be amplified, and could begin to explain both year groups' writing test performance in the tests, as reported in the previous chapter.

5.6 Chapter summary

A subsample of multilingual experimental pupils in Years 1 and 4 participated in focus group interviews after attempting the post-intervention suite of tests. Conducting these interviews provided insights into pupils' classroom experiences with the EPL, in a way that added additional context to the test data reported in the previous chapter. Pupils' responses to elements of the EPL, such as working collaboratively, contextualised learning and teaching that encouraged pupils to think beyond themselves (Teemant, 2020) were received positively. Whilst not directed explicitly towards the EPL, pupils in both year groups expressed difficulties with aspects of the writing process, which may begin to explain pupils' test performance. The connections between the

quantitative findings, qualitative findings and the EPL, and related implications for theory and practice, are discussed in the following chapter.

Chapter 6 – Discussion

6.1 Introduction

This study investigated the effect of a teachers' professional development programme, the Enduring Principles of Learning (EPL), on multilingual pupils' English language and literacy development. A QUAN-qual sequential explanatory design (Creswell & Plano Clark, 2017) was used in this study. For the quantitative phase a quasi-experimental, pre- and post-test design was employed. Four classroom teachers (two based in Year 1, at the same school, and two in Year 4, across two different schools) engaged with the EPL pedagogical intervention over six months, receiving a series of targeted coaching sessions in developing critical, socio-cultural and linguistically responsive teaching practises. This pedagogy helped teachers essentially draw upon a Vygotskyan framing of socio-cultural practice, in which elevating and empowering pupils' voices in the classroom were key. Four additional teachers in the same year groups but based at another school served as control. All pupils in each condition were tested before and after the intervention, with a range of language and literacy tests. The qualitative phase of the study centred on focus group interviews with a subsample of 20 multilingual pupils who were taught by EPL teachers, in both year groups (see section 5.2).

Despite efforts to match participating schools on several aspects (see section 3.4), classroom-based research is inherently complex, and it can therefore be difficult to match participant groups perfectly (Newby, 2014). Whilst a larger sample size would have been particularly advantageous in generating greater statistical power in this study, in addition to potentially demonstrating statistically significant interactions, this was difficult to achieve due to the wider difficulties and pressures schools were facing during the pandemic, which remained a challenging backdrop during data collection for this study (as discussed in section 3.4).

For research involving multilingual pupils in England, there is an added layer of complexity in that pupils are likely to have a range of English proficiency (Demie, 2018b). As previously discussed in section 2.1, the monolingual/EAL binary is complex and creates an opaque picture of pupils' English language and literacy skills. Therefore, it was important to include a qualitative aspect to the current study, to provide further insights and explanations of the quantitatively driven test data that features prominently in this research.

Taking these challenges into account, the following chapter discusses the quantitative and qualitative findings together, allowing us to unpack the pupils' test scores in greater depth, and reflect the study's mixed methods design. The chapter also reflects on two central elements of this study: how proficiency was conceptualised and measured and the impact of a critical socio-cultural pedagogy on pupils' proficiency in the classroom context. The research questions addressed in this chapter are restated below:

RQ1: Does teacher professional development in the pedagogical approaches related to the Enduring Principles of Learning (EPL) have an impact on the English proficiency of pupils with English as an additional language?

1a) what is the impact of this approach on pupils' speaking skills?

1b) what is the impact of this approach on pupils' listening skills?

1c) what is the impact of this approach on pupils' reading skills?

1d) what is the impact of this approach on pupils' writing skills?

RQ2: What are pupils' responses to the teaching approaches related to the Enduring Principles of Learning (EPL) as part of their classroom experiences?

2a) what is their response to EPL in the classroom?

2b) to which aspects of this approach do they respond positively?

2c) to which aspects of this approach do they find more challenging?

The above research questions are accompanied by the following research aims:

- To develop reliable, teacher-oriented test materials for measuring the English language proficiency of pupils with EAL.

- To measure the English proficiency of EAL pupils in Years 1 and 4 before and after their teachers have experienced professional development intervention.

- To interview pupils with a view to harnessing their responses to their teachers' classroom practice resulting from the professional development.

6.1.1 Measuring proficiency in this study

This study's first research question sought to investigate the impact of the EPL on multilingual pupils' language and literacy skills, which meant accurately measuring pupils' proficiency was a central element to addressing this research question. However, measuring pupils' proficiency can come with its own challenges, in that language is relied upon to observe the construct of proficiency (Bachman, 2007). Therefore, it is important to critically reflect on how proficiency was measured in this study to emphasise caution when interpreting pupils' scores.

First, it is perhaps unsurprising that this study found variation in pupils' test scores. From the outset, it was clear that there were differences in experimental and control pupils' starting points. At pre-test, control pupils in both year groups had consistently higher mean test scores than their experimental peers in all four language and literacy tests, with the exception of the reading test in

Year 4. Furthermore, there were instances of pupils scoring at floor and ceiling at both time points, as well as wide standard deviations. In Year 1, this included pupils scoring at floor in listening and reading at time 1, and at ceiling in reading at time 2. Whereas in Year 4, there were instances of pupils scoring at floor in reading at time 1 and at ceiling at time 2, in addition to scoring floor in writing at both time points. These findings are perhaps reflective of the intensely heterogeneous nature of EAL pupils, which is further compounded by learners with limited to advanced control of English being recognised by the same 'EAL' label in England's school system (Demie, 2015; Strand & Lindorff, 2020). The variation in scores could also be attributed to the inherently complex nature of language proficiency assessments, which can be difficult to avoid (Swain, 1993).

Whilst pupils' receptive vocabulary was essentially a proxy measure in this study (with the use of an adapted version of the British Picture Vocabulary Scale) this is a narrow measure that only partially considers one aspect of proficiency. Therefore, caution is required when interpreting its associated results, because of the risk of applying a singular area of proficiency score to a monolingually-oriented sample with an inherently diverse, multilingual population (Grüter & Paradis, 2014; Paradis, 2005). As such, only raw scores were used in analyses, and the standardised scores provided by the BPVS were not applied in this study because the original administration procedures were not followed. This may explain why no significant correlations between pupils' vocabulary scores and gain scores in each test could be identified.

In the context of this study, it is also important to note that experimental pupils in both year groups had lower starting points across the majority of tests, and the differences in pupils' progress over time may partly be explained by the Matthew effect, in that control school peers may have benefitted from making larger gains over time because they had stronger language and literacy skills from the outset. The Matthew effect stems from the biblical idea that those who have more continue to benefit from more, whereas those who start with little continue to be disadvantaged (Merton, 1968; Walberg & Tsai, 1983). Transferred to the educational context, it can mean that pupils with greater knowledge and ability are likely to make more progress in comparison to their peers who are less skilled from the outset (Hindman et al., 2012). Whilst it is difficult to ascertain to what extent the Matthew effect may have influenced the current study's findings, it is worth remembering that this effect has been found to persist in other educational intervention studies (Bakermans-Kranenburg et al., 2005; Pretorius & Currin, 2010).

It may have been the case that access to pupils' English proficiency data previously held by schools would have benefited analyses. However, this would have been challenging, even assuming that schools had kept these optional data. This is because the proficiency scales of A to E provided by the government to schools, to assess multilinguals' English proficiency (see section 1.1) were subjective in its nature. Schools did not need to provide any indication of who and how pupils' proficiency might have been assessed (DfE, 2020). This subjectivity also meant schools could

assess their pupils' proficiency differently, in which a child at a level 'C' or 'developing competence' may be viewed as a level 'D' or 'competent' by another school. Furthermore, the removal of assessing and reporting pupils' proficiency data to the government has meant that schools do not necessarily hold or collect these data anymore (Strand & Hessel, 2021; Ullmann, 2018). Therefore, pursuing this proficiency data, whilst interesting, may not have been available nor reliable for use in the current study.

Instead, pupils' attainment in English (based on each of their participating teachers' assessment of their reading and writing skills) was collected for this study (see section 3.4) to provide additional contextual data on participating pupils. However, in a similar vein to the proficiency data schools were previously obliged to collect, this was also a relatively subjective and blunt measure, that gives limited indication of multilingual pupils' potentially differing abilities across the four domains of speaking, listening, reading and writing (Hasselgreen, 2012; Lenski et al., 2006a). Therefore, the use of the WIDA materials was particularly useful in measuring pupils' progress in each of these domains, allowing for the first research question to be addressed. The use of interviews not only provided a response to the second research question but also, helped provide further explanation of the results derived from the WIDA test materials.

6.2 The impact of the EPL on multilingual pupils' language development

This section addresses the first research question that examined to what extent the teacher professional development programme, the Enduring Principles of Learning (EPL), impacted the development of multilingual pupils' English proficiency. The following subsections consider pupils' performance over time in the speaking, listening, reading and writing tests. The focus group interviews conducted in this research are also drawn upon throughout this section to help contribute towards a more nuanced understanding of the pupils' test performance.

6.2.1 Pupils' listening skills

The impact of the EPL on pupils' listening skills, as demonstrated through their progress in listening tests, is discussed in this subsection. In relation to Year 1 pupils' starting points for the listening test, control pupils had higher mean test scores than experimental pupils. A significant main effect of time with a large effect size was detected, indicating that Year 1 pupils made gains in their listening test performance over time, yet no further significant interactions with condition groups could be detected. It seems possible that this was due to the sample size not being large enough in order to identify statistically significant interactions.

However, pupils' vocabulary score, which was used as a covariate, was identified as having a significant effect on the pupils' listening test performance in each condition. Nevertheless, a difference in how EAL pupils in both groups progressed over time was detected graphically through profile plots, which was then further investigated with post-hoc tests. These findings suggested that greater pre- and post-test improvement was made by EAL experimental pupils in Year 1, with a medium effect size in comparison to the small effect size for their control school peers.

Similarly in Year 4, control pupils had higher mean test scores at pre-test in comparison to experimental pupils. The analysis mirrored Year 1 pupils' test performance, with time and the covariate alone detected as significant effects on pupils' listening test performance. Profile plots, however, suggested differences in how control and experimental pupils progressed over time, and these were then further examined with post-hoc tests. These results revealed that although both groups made statistically significant progress, experimental pupils who were taught by EPL teachers made greater progress in their pre- and post-test scores with a near medium effect size. This contrasted with a considerably smaller effect size for improvement in pre- and post-test scores made by control pupils.

Both Year 1 and Year 4 experimental pupils made significant progress in their listening test performance over time, with the effect of the intervention greater than for the control condition in

both year groups. The experimental pupils' relative success in this test could be due to several factors. First, the nature of the EPL intervention, in which teachers were encouraged to create collaborative, dialogue-driven classrooms, may have contributed to the development of pupils' language skills. Interviews with pupils suggested that there was a particular sense of enjoyment in collaborating with peers in small groups. EPL-trained teachers encouraged and planned for pupils to work collaboratively during this intervention. Learning in groups helped pupils feel more comfortable with making mistakes and learning from them, because they could rely on support from their peers. The pupils' comments might point towards how children are able to co-construct new knowledge through sustained interactions with each other (Vygotsky, 1978).

Whilst not a direct intended outcome of the EPL, younger pupils reported that the regular use of group work also provided an additional layer of emotional support in the classroom, which nurtured a safe and reassuring space to ask questions with confidence. Such comments from pupils may be indicative of the safe and welcoming classroom environments that the EPL encourages teachers to create, through the sustained development of their linguistic and culturally responsive teaching practice (Lucas & Villegas, 2013; Sherman & Teemant, 2022). However, older pupils felt that the opportunity to collaborate with peers on group tasks made them more engaged in learning. This could be because their participation went beyond the traditional nature of classroom talk, which is typically dominated by the teacher, and instead moved into more dialogic spaces where the expansion of thinking through talk drove learning forward (Alexander, 2008; Bakhtin, 1981; Mercer & Littleton, 2007).

Furthermore, the design of the listening test may have helped facilitate pupils' outcomes with this particular assessment. The style of the listening test featured in this study was designed to assess pupils' local comprehension with a reduction in pupils' cognitive load, which is considered favourable for the assessment of multilingual learners' proficiency in this skill area (Shohamy & Inbar, 1991). This was implemented by providing only pictorial representations of the answers, with no need for pupils to read or write their responses for this test. This is important because listening plays a central role in supporting the development of language and literacy skills, and where tests are used to specifically measure an individual's listening ability, it is important to avoid the use of reading and writing answers because this tests other skills (Vandergrift, 2007). Therefore, it may be the case that the design of the WIDA tests has something to offer UK practitioners looking for EAL-sensitive testing materials.

6.2.2 Pupils' speaking skills

This subsection considers the impact of the EPL on pupils' speaking skills, as demonstrated through their progress in corresponding tests taken before and after the EPL intervention. Only

multilingual pupils (recognised as EAL learners by their respective schools) took part in the 1:1 speaking test, which meant that non-parametric tests were conducted because of a smaller sample and non-normal distribution (see section 3.8.1). For Year 1 pupils, both control and experimental groups had similar starting points in relation to mean speaking pre-test scores. No statistically significant differences were detected for either condition at pre-test (Time 1) or post-test (Time 2). However, Wilcoxon-signed rank tests confirmed a significant increase in test scores for both groups, in which the effect size was identified as large for the experimental group who were taught by EPL-trained teachers, and medium for control pupils who were not.

Moving on to Year 4 pupils, it was found that control pupils had a higher mean speaking score at pre-test than experimental pupils, which was confirmed as statistically significant. Mann-Whitney U tests were applied on calculated gain scores, which revealed that the experimental group performed better than their control peers with a small effect size. Together these results demonstrated the effect of the EPL intervention had on improving both Year 1 and Year 4 pupils' speaking test performance.

For the advantages of the intervention, especially in Year 4, a possible explanation for these results might be that the EPL helped pupils develop their confidence to speak about issues that were important to them and their lives. The intended nature of the EPL is one that is culturally sustaining, in which teachers are supported in creating highly contextualised lessons that connect to pupils' experiences related to their home lives and wider communities (Sherman & Teemant, 2021). This seemed to be particularly powerful when combined with the principle 'Critical Stance,' in which pupils could go beyond the surface of content knowledge and begin questioning the status quo. This was perhaps best illustrated among pupils in Year 4 who reported learning about local history related to the Titanic, where a key feature of their learning was classroom discussions in which pupils could challenge the inequities among passengers, in terms of differing conditions they received on board the ship, as well as which passengers were more likely to be rescued. Despite the difficulties associated with embedding the 'Critical Stance' principle into teachers' practice (Teemant et al., 2014), the Year 4 teacher in this instance appeared to have embraced the principle and, as a result, promoted powerful discussions among pupils.

Another possible explanation for pupils' speaking test results in both year groups at post-test is that experimental pupils spent half the year with their teachers in classrooms in which talk was at the heart of classroom learning. As such, these findings seem to be consistent with previous studies that place emphasis on the advantages of creating environments for multilingual pupils to develop their oral language skills through quality input, interactions and opportunities to formulate meaningful responses (De Wilde et al., 2020; Gass & Mackey, 2015; Swain, 2000). However, it is

clear that there were nuanced differences between how pupils in Year 1 and Year 4 performed in the speaking test over time, with the effect of the intervention being more pronounced among Year 1 pupils. This was surprising, given that other UK classroom-based studies focussing on developing dialogic practice have demonstrated improvement in outcomes among older primary school pupils such as those in Year 5 (Jay et al., 2017) and Year 6 (Howe et al., 2019).

The reasons for these unexpected outcomes may have been that Year 1 pupils benefitted more from the talk-rich nature of the EPL intervention in their classrooms. First, the environment can play an important role in developing multilingual pupils' language development (Baker, 2011). The use of the EPL's sustained and intentional opportunities to build dialogue among pupils may have helped redistribute the amount of talk in the classrooms that teachers were saying less and their pupils were saying more (Mercer & Littleton, 2007). Second, the use of frequent group work, as mentioned by pupils during interviews, may have encouraged pupils to develop greater confidence in speaking and to both make and learn from errors alongside peers (Verplaetse, 2000). This echoes much of Vygotsky's (1978) notion of a 'more knowledgeable other,' which when framed within a classroom context, may have meant that the intentional dialogue between teachers and pupils in the classroom helped extend pupils' learning and development of speaking skills.

It is possible that differences relate to teacher effects and to the impact of the pandemic, which may have more negatively impacted the older children in the sample. For example, there was anecdotal evidence from the external collaborative supervisor that teachers of older children in primary school reverted to more teacher-led pedagogy post-pandemic in an effort to 'catch up' on literacy skills. This may have made their practice much less dialogic than may have been the case for younger children in Year 1.

In Year 4, there were significant differences in gain scores in which experimental pupils showed better pre- and post-test improvement but with a small effect size. The magnitude of the effect may have been more pronounced if pupils had similar levels of subject knowledge. This is because the speaking test for Year 4 assumed pupils had sufficient content knowledge related to the life cycle of a ladybird; but this may have not been the case. Pupils in England typically begin to cover curriculum content related to living things and processes from Year 2 onwards (aged 6-7) (DfE, 2014). Yet the vast heterogeneity of EAL pupils' language and schooling backgrounds (Sharples, 2023) may mean that some EAL pupils in this study did not have exposure to the background knowledge required to demonstrate their speaking ability in relation to the specific topic area of the test. This variation in exposure to curriculum content may therefore have affected the magnitude of the effect size detected for this test.

Furthermore, vocabulary consistently appeared as a significant covariate in the quantitative aspect of this study, demonstrating its salient role it plays in language development. However, the findings from the qualitative interviews suggest that multilingual learners faced challenges with vocabulary. For instance, pupils in Year 4 were cognisant of gaps in their own subject knowledge, which again may have affected the extent to which they could contribute to class discussions. When considering the sociocultural nature of the intervention, in which new learning and knowledge is framed as a social and cultural endeavour rooted in interactions with others (Daniels, 2008; Wells, 1999), the challenges of limited subject-related vocabulary and content knowledge have implications that could potentially have impacted pupils' engagement and experiences in class.

To summarise, the subsequent enhanced development of speaking and listening skills as part of classroom practice may begin to explain why pupils' language skills appeared to develop most effectively in relation to being the skill area where the EPL intervention seemed to have the strongest effects in this study. Experimental teachers actively developed language skills in their classroom pedagogy related to the EPL approach, which had a demonstrably positive impact on experimental pupils' speaking and listening test performance. This illustrated the potential power oral language skills can have on pupil outcomes. In line with previous studies investigating the impact of dialogic teaching, the findings from this study confirm that opportunities to incorporate dialogic practices as part of the EPL approach (such as questioning, building upon responses and intentional exchanges) (Alexander, 2018; Mercer & Littleton, 2007; Wells, 2007) can have a positive, measurable impact on pupils' language skills.

6.3 The impact of the EPL on multilingual pupils' literacy development

6.3.1 Pupils' reading skills

Thus far, this chapter has focused on the impact of the EPL on developing pupils' language skills. The following subsections will discuss to what extent the EPL impacted pupils' literacy skills, namely reading and writing. First, let us consider the differences detected in Year 1 and Year 4 pupils' development of reading skills over time. Control pupils in Year 1 had higher mean pre-test scores in the reading test in comparison to the experimental pupils. It was found that pupils made significant gains in their test performance over time, but the EPL was not specifically detected as having an impact on pupils' progression in the reading test, as there was no significant time*condition interaction. This is again likely, to be due to the sample size not being large enough to allow for interactions to be detected. Mirroring pupils' listening test performance, vocabulary as a covariate was also identified as having a significant effect on pupils' reading test performance. Profile plots were examined and these suggested, however, slight differences in how the EAL pupils in each condition progressed over time. These were further investigated with post-hoc tests, revealing that EAL pupils in the control group made marginally greater progress in pre- and post-reading test scores than their experimental school peers, with a medium effect size. This compares with a small-medium effect for EAL pupils who were taught by teachers who received the EPL intervention.

In Year 4, experimental pupils had a slightly higher mean pre-test score than in comparison to control pupils. Whilst the covariate was detected as having a significant effect on pupils' reading, the lack of significant main effects or interactions suggested that it was unlikely that the EPL approach to teaching had a significant impact on pupils' reading test performance in Year 4, reflecting similar findings in Year 1. However, profile plots indicated that there were some differences in how multilingual pupils in each condition progressed over time, suggesting that there was an impact from the EPL approach specifically for multilingual learners. Further post-hoc tests confirmed that both groups made improvement in their reading pre- and post-test scores, but for EAL experimental pupils the effect size was larger than that for their control school peers, in which a non-significant effect was identified with confidence intervals crossing zero, indicating an unreliable effect.

The greater benefits seemingly gained by the Year 4 intervention group, may be explained with reference to several of the principles that make up the EPL that were implicitly reflected on during focus group interviews. For instance, teachers' intentional use of the principle 'Joint Productive Activity,' which allowed pupils to work in small groups to discuss, question and understand texts with greater confidence, was particularly welcomed by pupils as part of their classroom experiences. Furthermore, the impact specifically on multilingual pupils may be related to teachers' use of the

'Contextualisation' principle, in which teachers meaningfully situated the introduction of new knowledge with pupils' experiences of home and community. This was perhaps best highlighted through interviews with Year 4 pupils from School C, in which pupils appreciated the time taken to build their background understanding of traditional fairy tales, which for some pupils, was their first encounter with such stories. It may have been that monolingual pupils may not have necessarily needed this additional input as they are likely to have been exposed to fairy tales before, and therefore, may partly explain the impact of the EPL on reading test performance, particularly for multilingual pupils.

Moving on to Year 1 pupils' reading test progress over time, it could be that the magnitude of the effect of any teaching received was smaller for Year 1 experimental pupils in comparison to their control school peers for several reasons. First, it is important to understand that these findings are not necessarily unusual when considering the complexity of developing L2 reading skills (Bialystok, 2007; Koda, 2007) and inherent variance in multilingual learners' development of L2 reading skills (Bernhardt, 2011). The difference in impact on developing pupils' reading skills for both year groups align with similar findings from the Ouelette and Beers (2010) study, which involved Grade 1 pupils (aged around six) and Grade 6 pupils (aged around eleven). The authors acknowledged that as emerging readers were still developing their word recognition skills, the overall assessment of younger pupils' reading comprehension skills was less reliable and subject to more variation as they developed their skills, compared to older pupils where more detailed measures could be more readily applied (Ouelette & Beers, 2010). This may explain why the effects of the EPL might take longer to emerge in findings relating to Year 1 pupils' reading skills, particularly when comprehension skills take longer than decoding skills to develop among both monolingual and multilingual learners (Raudszus et al., 2021). Another explanation for the difference in both year groups' progress in reading may be related to the short circuit hypothesis (Clarke, 1980) in that pupils must have sufficient L2 linguistic knowledge before they can draw upon their L1 literacy skills to support their reading skills. Yet this assumes that multilingual learners are literate in their L1, which may not be the case for some multilingual learners who may never fully acquire their L1 because of the potential dominant use of the majority language (Murphy, 2019). Therefore, for some multilingual learners in this study, it may be that they could not draw upon their L1 literacy skills to assist in their reading test performance over time, although without data on pupils' L1 literacy it is difficult to make this judgement.

The reading test in this study focussed on assessing pupils' linguistic comprehension of the texts, drawing more specifically upon retrieval and inference skills (see section 3.6.2). As such, another possible explanation for the difference in progress between Year 1 and Year 4 pupils may be because of the difficulty associated with developing pupils' inference-making skills (Castles et al.,

2018). Therefore, more time may be required, particularly for younger pupils, to develop this skill sufficiently before it is reflected in subsequent test performance. Lastly, the interplay between oral language and reading skills cannot be ignored (Language and Reading Research Consortium et al., 2019; K. Nation & Snowling, 2004), and it is perhaps unsurprising that language skills need to be developed before they can be drawn upon to support literacy skills.

6.3.2 Pupils' writing skills

The analysis of Year 1 pupils' writing scores was based on post-test scores only (see section 4.8.1). It was found that at that point control pupils had a higher mean score in comparison to their experimental peers. After controlling for pupils' vocabulary, the findings suggested no statistically significant differences between each group's writing performance in Year 1. However, mirroring the tests previously discussed, vocabulary was also found to be significantly related to pupils' writing scores. It is unfortunate that post-test scores alone could be drawn upon in analyses in Year 1, due to underdeveloped writing caused by the effects of the pandemic or because of the nature of the WIDA tests (see section 3.8). Given their tumultuous school and home learning experiences prior to data collection at pre-test, it was perhaps unsurprising that pupils' writing had been particularly impacted, in that the lack of examinable writing produced at this time, across both experimental and control schools, which ultimately resulted in the scoring of zero at time 1.

In Year 4, data from pre-test and post-test could be analysed using the same procedures for the listening and reading tests. Both control and experimental groups had similar starting points in relation to mean writing test scores. There were, however, no significant main effects detected, indicating that the EPL did not appear to have an impact on pupils' writing test scores during the project term, nor did learners in either condition make significant progress over time. This lack of progress in either condition likely relates to some of the loss of progress in writing among primary pupils during the pandemic (Moss et al., 2020). Reflecting the previous tests already discussed in this section, a significant effect of the covariate on writing test performance was also identified. Profile plots went on to suggest negligible differences in how each group in Year 4 progressed over time, although interestingly, post-hoc tests indicated that monolingual pupils who were taught by EPL-trained teachers made the most pre- and post-test improvement over time, with a medium effect size. A possible explanation for this may be related to monolingual and multilingual pupils' differing vocabulary sizes in English (Bialystok et al., 2010; Cattani et al., 2014; Murphy, 2017). This is an important area to explore because language and communication are central to the creation of new knowledge and the development of problem-solving skills (Vygotsky, 1978). Vocabulary can play a particularly crucial role in oral language (Brabham & Villaume, 2002), and it is therefore perhaps unsurprising that this was found to be significant in the quantitative findings as well as an area of discussion in the qualitative findings.

For instance, pupils in Year 4 reflected on the challenge of finding the right words to visualise, question and describe concepts as part of classroom discussions. This is perhaps reflective of the typically smaller vocabulary sizes multilingual pupils may have in comparison to their monolingual peers (Cattani et al., 2014; Murphy, 2017) which can have an impact on the development of multilinguals' literacy skills in English (Bialystok, 2007; Conteh et al., 2008; Miller et al., 2006; Murphy, 2017; K. Nation & Snowling, 1998). This may explain why the intervention seemed to be least effective for EAL pupils in the Year 4 experimental group, with the smallest gains made over time that are likely to be unreliable due to confidence intervals crossing zero. This finding was unexpected but perhaps could be attributed to the difficulty pupils reportedly face when writing in class.

While the quantitative findings suggested that multilingual pupils made the least progress in writing performance over time, the qualitative interviews with pupils helped unpack why this may have occurred. The multilingual pupils did not make explicit reference to activities that may have been EPL-related in the focus group interviews, but pupils in both year groups were considerably vocal about challenges related to writing. This included issues broadly related to composition and transcription. During interviews, pupils mentioned that they benefitted from teacher support consistent with the EPL approach, whether through explicit questioning to challenge pupils' thinking or modelling outputs to provide pupils with clear expectations. When considering pupils' writing test performance, teachers could not intervene with their pupils' outputs. This may further explain why there were non-significant findings in pupils' writing test performance.

Like the other tests that feature in this study, the writing test demands that no teacher support be provided, which may have meant that pupils found this test difficult to fully engage with, particularly if they had become accustomed to receiving tailored teacher support for developing literacy skills, as highlighted during the interviews. As such, these results reinforce the importance of creating classroom climates that encourage open discussions between adults and pupils (Bauer et al., 2017; Reyes, 2006) in addition to targeted feedback (Hartshorn et al., 2010) and explicit teaching of writing skills (Forbes, 2019), which together can help multilingual pupils navigate the challenges associated with writing.

However, it is important to examine why, in this part of the study, no measurable differences were detected between experimental pupils who were exposed to EPL classroom practice, and their control school peers' writing performance. A possible explanation might be that the coaching and implementation of the EPL and its subsequent effects on pupils' outcomes may not have been tracked long enough for pupils' development of writing to be fully appreciated in either year group. This is recognised as central to evaluating professional development interventions and the impact they may have on pupil outcomes (Borg, 2018). This is consistent with that of Hartshorn et al.

(2010), who reflected that their semester-long intervention may have impacted students' writing further, had more time been allocated for the delivery of the intervention.

Furthermore, pupils' writing performance in this study may have been affected by other methodological constraints, in that the test materials used for pupils' writing may not have been nuanced enough to identify changes in pupils' writing performance. More precisely, differences in the writing process, such as the organisation and formulation of pupils' ideas, which are known to be different among multilingual and monolingual pupils (Murphy et al., 2015), were not explicitly measured in the materials used in this study and are worthy of further exploration in future research.

Additionally, as part of the writing test in this study, pupils wrote stories based on comic book-style picture prompts. Cameron and Besser (2004) found that, similar to this study's findings, there were no significant differences between EAL and monolingual pupils in the overall construction of their written stories, which also required pupils to follow picture prompts and produce writing of the same genre. However, more nuanced differences emerged, such as the increased likelihood of EAL learners making errors related to the use of prepositions and appropriate clause structures in their writing in comparison to their monolingual peers (Cameron & Besser, 2004). It could be possible that such detailed differences may have been observed in the current study, had the WIDA test materials been designed to assess pupils' writing at a similarly fine-grained level.

Both Cameron and Besser (2004) and Murphy et al. (2015) provided pupils with two genres of writing: narrative and expository. The latter genre provided an opportunity for pupils to write a radio advertisement for a new toy (Cameron & Besser, 2004) or a persuasive letter to their headteacher to recruit their dream teacher (Murphy et al., 2015). In the current study, the use of different genres may have produced differences in EAL and monolingual pupils' writing outputs, although replicating the use of different genres went beyond the scope of what the WIDA materials could provide. That being said, it may have been that the format of the WIDA writing tests played more to the monolingual pupils' strengths and therefore progress in this particular test was slightly more apparent for this group of learners compared with their multilingual peers. The outcomes from the current study therefore highlight the need and value of test materials based on differing genres, which are sensitive enough to track nuanced differences in pupils' writing outputs.

6.4 The use of critical socio-cultural pedagogy in classrooms

The EPL rests on a critical sociocultural pedagogical framework that encapsulates the purposeful use of collaboration, language, context, challenge, dialogue, social engagement and modelling between and among teachers and pupils. These principles are largely Vygotskyan in nature, in that learning is derived from interactions and pupils' voices are a central feature of the classroom. This redistribution of talk, enabled by the critical socio-cultural pedagogy approaches such as the EPL, challenge the traditional imbalance of power between teachers and pupils, viewing both as co-contributors to learning rather than teachers who simply 'deposit' knowledge to passive pupils (Freire, 1970). The outcomes from this intervention fostering teachers' professional development with the EPL, and with a demonstrable impact on pupils' outcomes, contribute evidence towards fostering a generation of critically and socio-culturally engaged teachers, pupils and classroom spaces (Sherman & Teemant, 2022).

Experimental teachers in this study were exposed to all seven principles during the six-month intervention phase. This meant that teachers were supported in challenging their own ideologies and practices to create equitable and contextualised learning environments for their pupils (Viesca et al., 2022). In considering how the principles have been designed to be ambitious in their aims, it is therefore worth reflecting on how far the wide range of principles can truly be implemented within a single academic year. Future research might consider a prolonged intervention phase in order to allow for sufficient time to learn, practise and embed changes in teaching practice, as was the case in the Portes et al. (2018) study, who developed teachers' practice over a two-year period. However, unlike Portes et al. (2018), the current study was able to demonstrate measurable pre- and post-test differences that the EPL had contributed to, particularly in multilingual pupils' speaking and listening test performance, despite a considerably shorter timeframe and challenging contextual factors.

It is somewhat surprising that a more prominent link between teachers' implementation of the EPL (demonstrated by their scores in observed lessons, as discussed in section 3.5) and pupils' outcomes were not observed in this study, as was the case with Doherty and Hilberg (2007). Furthermore, for each experimental teacher who was scored using the SPC Plus (Teemant, 2014), no identifiable pattern of scores could be found related to the subject/lesson they were observed in. The absence of significant relationships between teachers, their scores and their pupils' outcomes can perhaps be explained by the current study having a small number of teachers for which any detection would be unlikely. This might mean that the effect of any intervention study designed in this way may, to an extent, be diffused (Pituch et al., 2009). Additionally, the impact of a pedagogical intervention measured in this way can be particularly hard to capture, because of the indirect nature of the intervention linking teachers' practice with pupils' achievement (Borg, 2018; Timperley & Alton-Lee, 2008). This was further compounded by the relatively short time frame that was available to

implement and embed changes in teaching practice, which may have affected to what extent differences in pupils' outcomes could be observed.

Having said that, the intentional change in teaching practice may have helped pupils grow into reflective and communicative learners, in ways that were simply not captured in the assessment tools that feature in this study. Pupils were able to demonstrate an unexpected maturity in some of their answers at interview, particularly when reflecting on their own learning. Their ability to express themselves was perhaps unsurprising, given that critical socio-cultural pedagogical approaches such as the EPL, fundamentally encourage pupils to talk more and for teachers to talk less in order to extend learning (Teemant, 2020; Tharp, 2006). However, what was particularly illuminating is that in the current study, pupils were also able to convey the challenges they faced in the classroom, such as those associated with writing, which were unequivocally reflected in their test performance. Incorporating a mixed methods design into this study was therefore advantageous in further contributing to our understanding of specific challenges multilinguals face in the classroom that go beyond the information provided by numerical test scores.

6.5 Chapter summary

To summarise, this chapter addressed the research questions stated at the beginning of this chapter, drawing upon the quantitative and qualitative data produced by this study. It was found that the impact of a critical sociocultural pedagogical approach such as the EPL on multilingual pupils' language and literacy skills is varied and not same across year groups or skill areas.

The impact of the EPL was more evident in multilingual pupils' language skills. The pre- and post-test improvement in pupils' listening skills were compared using mixed ANCOVA tests. It was found that experimental pupils in both year groups made significant progress in their listening skills over time, with the effect of the intervention greater than for control pupils. More specifically a main effect of time was found in both year groups, with further analysis suggesting differences in how multilingual pupils in each condition progressed. Post-hoc tests revealed that in comparison to their control school peers, EAL pupils in Year 1 and in Year 4 who were taught by EPL-trained teachers made greater progress in their pre- and post-test scores with medium and near-medium effect sizes respectively.

Due to non-normal distribution and a smaller sample of pupils (recognised as EAL) taking part in the 1:1 speaking test, non-parametric tests were undertaken to assess pupils' progress in speaking over time. in Year 1, Wilcoxon-signed rank tests confirmed significant increases in test scores for both conditions, although a larger effect size was observed for experimental pupils. Similarly, in Year 4, Mann-Whitney U tests applied to pupils' gain scores suggested that pupils taught by EPL-trained teachers made greater progress in their speaking skills than control pupils.

On the surface, it seemed that the EPL had less of an observable impact on pupils' literacy skills. For instance, pupils' reading skills, which were compared using mixed ANCOVA tests, suggested a lack of significant interactions. Whilst the sample size may have limited observable interactions, profile plots revealed slight differences in how EAL pupils in each condition progressed with post-hoc tests indicating that experimental pupils in Year 4 made more progress in their pre- and post-test reading scores over time with a larger effect size than their control school peers. In Year 1 however, EAL pupils in the control school made marginally greater progress in their pre- and post-test reading scores than their experimental school peers with a medium effect size. This finding was unexpected, although not necessarily unsurprising, given previous research with similar aged pupils (Ouelette & Beers, 2010) and the time taken to fully develop reading comprehension skills being considerably longer than other reading skills such as decoding (Raudszus et al., 2021).

Pupils' progress in writing across both year groups also produced surprising results. In Year 1, a one-way ANCOVA was conducted on post-test scores only (as discussed 4.8.1) which revealed no significant differences between the control and experimental pupils' writing. Similarly in Year 4, mixed ANCOVA tests demonstrated no significant main effects or interactions. However slight differences in profile plots suggested that there were differences in how each condition progressed over time, with monolingual pupils who were taught by EPL-trained teachers making the greatest pre and post-test improvement over time. Qualitative findings were able to shed light on multilingual pupils' challenges with writing, with pupils citing issues related to composition and transcription during interviews. An additional explanation for the lack of observable differences between pupils' writing progress over time may also be explained by the limited time that was available to track the implementation of the EPL approach and its effect on pupils' writing, which in this case, may not have been long enough for any measurable differences to emerge.

There seemed to be a greater observable impact on pupils' language skills in Year 1 and Year 4, whereas the impact of the intervention was not as strongly apparent in literacy skills across both year groups. There were several reasons for why such results may have been produced, that were explored in this chapter. The qualitative findings provided further insights regarding pupils' reading and writing progress over time, with interviews contributing towards our understanding of the wider challenges pupils face in developing their literacy skills, and the considerable time it takes for these skills to become secure.

In considering the findings of this study and its impact on theory and pedagogy, it may be that the EPL's explicit focus on developing pupils' language use in the classroom, underpinned by critical sociocultural theories of learning, linguistically responsive teaching and dialogic practices, contributed to pupils' progress in the speaking and listening tests over time, thus aligning with findings related to the EPL elsewhere (Teemant et al., 2011; Teemant & Hausman, 2013; Wells, 2007). With these theoretical underpinnings in mind, the current study's findings suggested that purposeful change in teachers' practice to redistribute the balance of talk in their classrooms could in particular, support multilingual pupils' listening and speaking skills. An increase of collaborative, co-constructed and contextualised learning in an environment that fostered pupils' confidence to engage in conversations with each other through group activities may explain in part, the subsequent impact the intervention had on pupils' language skills. The findings also highlight the seemingly interdependent nature of pupils' speaking and listening skills as was demonstrated in both year groups making greater pre-post-test progress in these two areas, in comparison to their control school peers in this study. Whilst the impact of the EPL was not as readily observable in relation to pupils' reading and writing skills, there remains further scope for more compelling findings with a larger sample size and longer period of time to measure outcomes. This may have allowed for greater clarity in illustrating how pupils' progress in language skills could feed into the development of their literacy skills, which is known to take considerably more time to develop fully (Hartshorn et al., 2010; Raudszus et al., 2021).

It is also important to consider the pivotal role vocabulary can play in pupils' language and literacy outcomes and their ability to engage with broader classroom learning (Bialystok, 2007; Conteh et al., 2008; Miller et al., 2006; Murphy, 2017; K. Nation & Snowling, 1998). At a pedagogical level, the findings indicate that a sustained and targeted change in teachers' practice with the use of an approach such as the EPL can begin to support aspects of pupils' language proficiency, albeit at different rates of progress and impact. The EPL essentially provided a framework for teachers and pupils to develop understanding and application of vocabulary through intentional classroom dialogue and is one approach in addressing the dearth of explicit language-oriented classroom practice that can support multilingual' language and literacy skills (Murphy & Unthiah, 2015; Oxley & de Cat, 2019). This study demonstrated that using the EPL to underpin teachers' professional learning design may go beyond what is currently available to teachers of multilingual pupils in England.

The following chapter goes on to present in more detail how this study has contributed towards new knowledge, including methodologically and pedagogically, as well as the significance of the context within which this study sat.

Chapter 7 – Conclusion

The overarching aim of this quasi-experimental, mixed methods study was to examine if a US-designed professional development (PD) intervention, known as the Enduring Principles of Learning (EPL), could influence teaching practice in ways that improved primary-aged multilingual learners' English language and literacy skills in England. The EPL is an established framework that includes a total of seven principles focussing on collaboration, language, context, challenge, dialogue, social engagement and modelling, that teachers work to embed within their classroom practice over time. The EPL primarily draws upon critical socio-cultural pedagogical approaches (Freire, 1970; Vygotsky, 1978) through which teachers engage intentionally with student-led classroom dialogue (Alexander, 2020). Whilst previous studies elsewhere have demonstrated the positive impact EPL can have on multilingual learners' attainment when teachers receive targeted cycles of professional development (Teemant, 2014; Teemant & Sherman, 2022) this study was the first time the impact of the EPL on pupils' outcomes was being investigated within the context of primary schools in England.

7.1 Contribution to new knowledge

This study contributes new knowledge to what is known about effective professional development for pedagogy for multilingual learners in the following ways. First, the test materials used in this research were designed to take into account the language and literacy development needs of multilingual learners and thus provided measurable insights into pupils' language and literacy progress over time in ways that have the potential to be teacher and pupil friendly. For example, a number of accommodations were made in the tests, such as 1:1 structured conversation to aid speaking tests, no demands to transcribe responses to assess pupils' reading and listening skills, as well as prompts to assist with writing outputs. All of these elements go beyond what is currently available for primary schools in England, in which all pupils, irrespective of language background, are typically assessed using the same monolingually-oriented materials in which no affordances are given to multilinguals (Coyle et al., 2023).

In addition to finding measures that were appropriate for assessing multilingual leaners' language and literacy development, the current study also found practical applications for the use of such test materials that have the potential to be used beyond a research context. The understanding gained from this study in using these test materials may be of interest to practitioners working in linguistically diverse settings, because the tests hitherto unavailable finer-grained data related to the pupils' domains of speaking, listening, reading, and writing in English. Such application of the tests could therefore be particularly advantageous in identifying multilinguals' strengths and areas for development in each of the domains and for teachers to provide support accordingly.

The current study, from a UK perspective, is one of the first attempts to examine to what extent pupils who were taught by teachers who received EPL-oriented training, were measurably impacted by this change in teaching practice in relation to the development of their language and literacy skills. The present study placed an emphasis on establishing the impact of the EPL in relation to pupil outcomes, which is often considered a difficult but important approach to evaluating the efficacy of PD programmes (Borg, 2018). Therefore by taking an approach that evaluated the EPL intervention in a way that specifically focused on pupil outcomes, a key contribution was made towards the wider field of teachers' PD in England. Furthermore, this study not only provided an example of evaluating the effectiveness of a PD programme through the lenses of pupil impact, but also, the nature of the PD in question was designed to address the lack of multilingually-oriented pedagogical practices that remain persistently underexplored in England (Oxley & de Cat, 2019). The study therefore lays the groundwork for future research in this domain, with perhaps a greater number of participants to further assess how PD programmes such as the EPL might benefit multilingual learners' progress and attainment across different age groups and language backgrounds.

The explicit inclusion of pupils' voices was also a novel contribution towards research related specifically to the EPL. The current study presented an important but oft-missing aspect of evaluating PD programmes: pupils' perspectives regarding changes in classroom practice. By interviewing a subsample of pupils, insights into what pupils valued as part of their classroom experiences shed light in understanding more about effective pedagogy for multilingual learners. Furthermore, the interviews demonstrated the power of group discussions, highlighting the need to listen to what children find challenging as part of the learning experiences. Garnering pupil insights also went some way towards enhancing our understanding of the current study's quantitative data, in which pupils' difficulties associated with writing could be seen reflected in the outputs produced. Further research might explore in more detail, the challenges multilingual learners' face regarding writing, and how they could be better supported in this area.

An interesting finding that emerged from this study was the depth of unexpected impact some of the EPL-influenced change on teachers' practice, may have had on pupils. Findings suggest that the change in teaching practice therefore not only benefitted academic outcomes, but also supported a sense of confidence among pupils to speak more whilst in their classrooms. This included the use of regular and purposeful group work which nurtured a safe space to ask questions for younger pupils and for older pupils, lessons surrounding historical and social inequities often encouraged mature and reflective responses to sensitive subject matter. These were unintended outcomes related to the use of the EPL approach in classrooms, yet these findings highlight that whilst the development of multilingual pupils' language and literacy skills is important, the nurturing of a

generation of pupils who are socially engaged and able to collaborate with others irrespective of language background, is of equal importance.

7.2 Reflections on the research context

It is important to consider the EPL intervention within the wider context of this study and what implications this has for future research. The data collected for this research began in late autumn 2021, in which schools were under immense pressure to navigate the safety of pupils and staff in the aftermath of the Covid-19 pandemic. Schools had already experienced mandated closures earlier that year, and further interruptions to schooling, such as high levels of absence and varied home learning experiences had created a challenging climate for teachers to operate in. This was worsened by the ad-hoc amalgamation of class and/or year groups, more commonly referred to as 'bubbling' to prevent local school closures from occurring (Gurdasani et al., 2022). For the Year 1 pupils that featured in this study, they were of a national cohort who had entered the education system overshadowed by the pandemic with atypical schooling experiences from the outset (Bowyer-Crane et al., 2021; Moss et al., 2020). As such, it is important to consider the disruption that the pandemic may have had on pupils' progress in this study, and to what extent this could be captured or accounted for.

The fact that the external supervisor had extensive experience with the EPL from a practical perspective, was particularly valuable in providing an additional layer of context, and future research would likely benefit from establishing such working relationships from the outset. The EPL was seen as a tool that encouraged authenticity, both in learning opportunities and developing pupils' sense of identity, and this was recognised more formally in the external supervisors' school's most recent Ofsted inspection (June 2023), which was graded as 'outstanding,' the highest rating available.

However, the headteacher noted that the impact of the pandemic was inescapable, with writing being an area that was flagged as requiring significant attention after pupils were able to return to school. This is because during the state-mandated closures, remote learning was implemented and this lent itself more readily towards literacy tasks that built pupils' reading skills, and less so towards writing, which, in line with the EPL ideology, is usually taught with considerable teacher feedback and pupil interaction at school. A move towards developing reading skills (such as comprehension and reading for pleasure) during this period of school closures was also reflected nationally as teachers attempted to strike a fine balance between delivering curriculum content and ensuring families could assist pupils in completing tasks successfully (Moss et al., 2020). It was therefore unsurprising that pupils' writing skills took considerably longer to build and remains an area of concern for the headteacher of the training school and of all the schools involved in this project.

School closures also resulted in pupils being subjected to varying home learning experiences which meant that many did not have consistent exposure to English. This can have a particular impact on multilingual learners who are already likely to receive differing levels of language input in comparison to their monolingual peers (Grüter & Paradis, 2014; Unsworth, 2016). When considering the influential role oral language has on developing pupils' reading and writing skills (Bialystok, 2007; Conteh et al., 2008; J. Miller et al., 2006; Murphy, 2017; K. Nation & Snowling, 1998) it is perhaps unsurprising that the absence of in-classroom experiences impacted multilingual pupils' English language and literacy skills, as was observed from a practitioner's perspective.

7.3 Methodological contributions and limitations

This study contributes methodologically to the limited literature available related to understanding multilingual pupils' learning needs, framed within England's classroom context. Its main contribution is a possible model going forward for an adaptation of existing US standardised test materials for use in England for multilingual learners. First developed by a US-based consortium, WIDA, the test materials in this study were carefully reviewed and adapted to ensure these were suitable for primary school audiences based in this country. Therefore, the present study appears to be the first to use adapted WIDA materials to assess multilingual pupils' proficiency in England in this way.

With the materials not requiring specialist training and fundamentally designed for teaching professionals to use, this study suggests there is scope for the wider application of such tests in UK schools serving linguistically diverse populations in order to address the gap of potentially providing teachers a greater understanding of their pupils' abilities in each of the language and literacy domains. As discussed previously in section 3.10, the WIDA tests were deemed to demonstrate sufficient reliability as a measurement tool and have high ecological validity, as these materials are already used by schools worldwide for the testing of multilingual learners' language proficiency (Grapin & Lee, 2022; Osborne-Crowley, 2020). However, as the results that emerged from this study are directly linked to the nature of the tests, it is important to situate any findings within the wider context of this study.

First, it is important to consider the effects of the pandemic on both the delivery of the tests and pupils' test performance, particularly at Time 1 (pre-test). The tests were pen-and-paper in design and therefore were required to be administered onsite at each of the participating schools. Whilst access to schools was granted during this period, classrooms were under immense pressure to continue operating under challenging circumstances, as discussed at the beginning of this chapter. On reflection, online versions of the listening, reading, and writing tests may have helped with the delivery and scoring of these tests, whereas the speaking test could have perhaps been administered through online video calls. Switching to an online format as opposed to traditional pen-and-paper

may have been better in adapting to the pandemic, and possibly saved time and resources. Future research in this area may consider moving towards delivering tests in this way.

Additionally, the inclusion of a delayed post-test would have been particularly advantageous in assessing the potential long-term effects of the EPL intervention on pupils' language and literacy skills. Data collection had to be completed within an academic year, however, as participating pupils' progress would have been operationally difficult to track due to moving to different year groups and teachers beyond this time period.

Further research would likely benefit from tracking pupils' progress beyond this timeframe in observing to what extent EPL-oriented changes in teaching practice can lead to sustained pupil progress, and thus contribute to the growing evidence base. There were also several factors that were not considered but could have potentially strengthened this study's findings. For instance, understanding pupils' language backgrounds in greater detail, such as potential L1 literacy skills or proficiency in additional languages may have provided contextual information on pupils. This could have extended to ascertaining pupils' socioeconomic status, parental language backgrounds, and teacher-related factors which may have contributed to our understanding of the potential impact of pupils' individual differences. Furthermore, the use of by-item, by-participant linear mixed effects analyses may have given a more detailed picture of the effect of the intervention.

The development of language and literacy skills can be confounded by pupils' working memory (Cain et al., 2004; Schoonen et al., 2009; Vandergrift, 2007). However, the suite of tests in this study did not include a measure of this variable. Whilst this could be considered as a limitation, the inclusion of a working memory test would not have aligned with the research aims, in that this study intended to draw upon teacher-oriented test materials that could later be used in classrooms to assess pupils' proficiency. Assessments that are designed to measure working memory typically require specialist training or are purely verbal and rely on pupils' ability to remember number sequences (Gathercole & Alloway, 2008). Therefore, whilst future research may consider including a measure of working memory, this study instead opted to use materials with higher ecological validity and potential applicability to school contexts in the future.

Furthermore, in this study, pupils' vocabulary was measured through an adapted version of the British Picture Vocabulary Scale (BPVS), in which the test was administered in groups as opposed to on an individual basis. This change in administration could be considered a limitation because it meant that the BPVS stopped at a certain point for all pupils in Year 1 and Year 4 and therefore there was a maximum score pupils could achieve (see section 3.6.5). Despite this the current study repeatedly identified pupils' pre-test vocabulary score as a significant covariate in each of the tests across the year groups, although the effect of vocabulary was largest for Year 4 pupils' reading test performance $F(1, 63) = 39.43, p = <.001, \eta_p^2 = .39$; thus reflecting the literature which confirms the salient role vocabulary plays in the development of pupils' language and literacy skills (Bialystok,

2007; Conteh et al., 2008; Miller et al., 2006; Murphy, 2017; K. Nation & Snowling, 1998). From a more qualitative perspective, not having sufficient vocabulary emerged as a reported challenge for some multilingual pupils which could impact to what extent they could truly engage in classroom learning and might therefore be a fruitful area for further research.

It is therefore important to question to what extent test materials can truly capture an individual's language proficiency in its entirety (Shohamy, 2001), and as such, this study calls for continued efforts to seek creative and equitable approaches in assessing multilinguals' proficiency. This may include re-designing assessments that do not penalise multilinguals' ability to draw upon languages beyond English (Shohamy, 2011), making accommodations for test takers (such as those featured in the WIDA materials) or perhaps creating standardised tests that draw from a linguistically diverse pupil population. It is clear that there is a pressing need for appropriately designed test materials that are suitable for measuring multilingual learners' proficiency, particularly when considering how strongly it can predict pupils' outcomes (Hessel & Strand, 2021; Strand & Lindorff, 2020). However, it is also important to remember that the construct of proficiency should arguably not be limited to a singular measure of vocabulary, but rather, should consider a more holistic view of an individuals' language and literacy skills (Hamp-Lyons, 2016; Lado, 1961) in which opportunities are provided for meaningful demonstrations of the language through purposeful tasks (Bachman & Palmer, 2010).

Whilst the tests used in this study measured pupils' proficiency, data on contextual factors such as proficiency in other languages, prior schooling experiences and age of entry to the UK (if applicable) was difficult to source. The inclusion of additional background information may have helped provide, from a qualitative perspective, a greater understanding of pupils' circumstances and thus provide further direction towards effective support (Hasselgreen, 2012; Lenski et al., 2006b; Poehner, 2007). It is therefore important to recognise that assessment tools, and the results that are derived from it, should be centred around pupils' contexts. This is arguably of greater importance for multilingual learners given the vast language backgrounds, identities and histories EAL learners in England represent (Arnot et al., 2014).

7.4 Implications for multilingual pedagogy and practice

The results of this study indicate that a transatlantic transfer of pedagogical ideas can be successful and begin to contribute to the lack of multilingually-orientated PD that is available for teachers in this country, provided that teachers are supported adequately to begin making changes to the classroom practice with a sense of flexibility. This is an important contribution because prior to this study, the transfer of US-designed teaching interventions to UK classroom contexts were extremely limited and were to be approached with caution (Murphy & Unthiah, 2015). However, this study found that when teachers engaged in critical socio-cultural approaches such as the US-developed

EPL, this produced measurable impact on areas of multilingual pupils' English proficiency, as evidenced by their progress in test scores over time.

Furthermore, this study's findings – when shared with the sister study - begin to address the lack of national guidance afforded to teachers in supporting the needs of multilingual learners (Flynn & Curdt-Christiansen, 2018). This was achieved by providing a critical socio-cultural framework to develop classroom practice, in tandem with a series of targeted, one-to-one coaching and classroom observations. Moreover, the applicability of the test materials used in this study support the idea of practitioner-friendly assessment tools to pinpoint areas of pupils' strengths and weaknesses that go beyond what is currently available for teachers of multilingual learners. Therefore, going forward, the EPL is an example of an approach that may have the potential to address the twin issues of limited teacher professional development and the risk of multilingual pupil underachievement. Potentially it provides both teachers and pupils the support they need in developing aspects of multilinguals' English language and literacy skills.

This work contributes to existing knowledge of the EPL by providing additional insight related to how the principles might be implemented and received in the classroom, from a UK perspective. The comments made by pupils during interviews indicated that their teachers may have embedded some principles more than others. In particular, teachers' use of the principles 'Contextualisation,' 'Modelling' and 'Language and Literacy Development' were reflected in pupils' comments, because such practices may have been more accessible and familiar to teachers and pupils alike. However, there were instances of other principles that their teachers used, such as 'Joint Productive Activity' and 'Critical Stance,' in which pupils' responses indicated support for working collaboratively together and a readiness to approach sensitive topics, such as social inequities, with maturity and understanding.

Future research related to the EPL may benefit from longitudinally designed studies that assess the effectiveness of the principles on pupils' outcomes over a longer period of time. This might include focussing on developing teachers' practice with a smaller number of principles at a time, as opposed to exposure to all seven. Upscaling research related to EPL with a larger number of schools, teachers and pupils across the primary school phase and beyond, would also likely yield interesting results.

An issue that was not addressed in this study was that, currently, the EPL does not explicitly focus on teachers' use of home languages as part of developing their multilingual pedagogy and practice. Rather, it is implicitly part of the overarching principle 'Language and Literacy Development,' in which teachers might model language - heritage or English - as required. On the one hand, the absence of drawing upon home languages explicitly could be a source of criticism related to the EPL, given the role oral language skills in the L1 can play in developing pupils' literacy skills (Bowyer-Crane et al., 2017; Dockrell & Connelly, 2009; Kirkland & Patterson, 2005; Lervåg et al.,

2018). On the other hand, the EPL is essentially designed for teachers who are typically monolingual (Demie & Huat See, 2023) so it is therefore difficult to expect teachers to draw upon other languages if they themselves do not have access to them. As such, it may be that future developments of the EPL might include reference to the use of home languages.

Concluding thoughts

The multilingual learners that make up our linguistically diverse classrooms across England each bring with them their own interesting language histories, culture and ideas that enrich the wider school communities that they are a part of. This should be considered a strength, an asset, that is worth celebrating and cultivating. Contrastingly, our workforce of largely monolingual teachers, do not necessarily have the tools to understand where their multilingual pupils might need the most support in order to achieve expected outcomes. There is arguably very little accountability related to multilingual learners, demonstrated through scant references in the monolingually-oriented National Curriculum, pre- and in-service teacher documentation and school inspection frameworks.

Without the materials to make accurate assessments about pupils, how can we expect teachers to 'know' what each learner, with their individual language backgrounds, truly needs to succeed? And with pre-service teachers not receiving adequate training related to multilingual pedagogy, that is further exacerbated by no further opportunities to develop professionally in this area, is it fair to assume in-service teachers will simply absorb effective practice through their careers?

There is therefore a need for explicit direction, particularly from a Governmental level, to address the needs of this growing pupil community: this might include greater funding, national guidance and/or professional development opportunities, that go beyond 'awareness' and better equip teachers to understand and target the development of multilinguals' skills. More importantly, there is a need to foreground multilingualism as an asset and promote positive orientations to diversity. Yet such requests are, at best, implicit in nature and at worst, vehemently ignored (Anderson et al., 2017; Cushing, 2023; Flynn & Curdt-Christiansen, 2018; Foley et al., 2013; Leung, 2016; Safford & Drury, 2013). This study took an applied approach with multiple collaborators to measure the impact of a professional development programme on multilingual pupils' outcomes, but there remains an urgency for more research of this kind to support teachers and their multilingual learners in England.

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Appendices

Appendix A: Ethical approval paperwork

Appendix B: Pupil data including teacher-assessed attainment in English

Appendix C: Standard Performance Continuum Plus

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Appendix G: Test material amendments

Appendix H.i: WIDA Screener Writing Score Scale

Appendix H.ii: WIDA Screener Writing Score Scale (annotations)

Appendix I: WIDA Screener Speaking Scoring Scale (annotations)

Appendix J: Transcript School B, Year 4

Appendix K: Transcript School C, Year 4

Appendix L: Transcript School A, Year 1 (Teacher A)

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Appendix N.i: Codebook – first round of coding

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Appendix P: Information letters and consent forms – school staff

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Appendix R: Pupils' assent

Appendix A: Ethical approval paperwork

University of Reading, Institute of Education
Ethical Approval Form A (version May 2019)

Tick one:

Staff project: _____   PhD ✓   EdD _____

Name of applicant (s): **Aniqa Leena**

Working title of project: **Raising EAL learners' attainment**

Name of supervisor (for student projects): **Naomi Flynn/Suzanne Graham**

	YES	NO
Have you prepared an Information Sheet for participants and/or their parents/carers that:		
a) explains the purpose(s) of the project	x	
b) explains how they have been selected as potential participants	x	
c) gives a full, fair and clear account of what will be asked of them and how the information that they provide will be used	x	
d) makes clear that participation in the project is voluntary	x	
e) explains the arrangements to allow participants to withdraw at any stage if they wish	x	
f) explains the arrangements to ensure the confidentiality of any material collected during the project, including secure arrangements for its storage, retention and disposal	x	
g) explains the arrangements for publishing the research results and, if confidentiality might be affected, for obtaining written consent for this	x	
h) explains the arrangements for providing participants with the research results if they wish to have them	x	
i) gives the name and designation of the member of staff with responsibility for the project together with contact details, including email. If any of the project investigators are students at the IoE, then this information must be included, and their name provided	x	
k) explains, where applicable, the arrangements for expenses and other payments to be made to the participants	N/A	
j) includes a standard statement indicating the process of ethical review at the University undergone by the project, as follows: 'This project has been reviewed following the procedures of the University Research Ethics Committee and has been given a favourable ethical opinion for conduct'.	x	
k) includes a standard statement regarding insurance: "The University has the appropriate insurances in place. Full details are available on request".	x	
Please answer the following questions		
1) Will you provide participants involved in your research with all the information necessary to ensure that they are fully informed and not in any way deceived or misled as to the purpose(s) and nature of the research? (Please use the subheadings used in the example information sheets on blackboard to ensure this).	x	
2) Will you seek written or other formal consent from all participants, if they are able to provide it, in addition to (1)?	x	

	YES	NO	N.A.
3) Is there any risk that participants may experience physical or psychological distress in taking part in your research?		x	
4) Staff Only - have you taken the online training modules in data protection and information security (which can be found here: http://www.reading.ac.uk/internal/humanresources/PeopleDevelopment/newstaff/humres-MandatoryOnlineCourses.aspx Please note students complete a Data Protection Declaration form and submit it with this application to the ethics committee.	N/A		
5) Have you read the Health and Safety booklet (available on Blackboard) and completed a Risk Assessment Form (included below with this ethics application)?	x		
6) Does your research comply with the University's Code of Good Practice in Research?	x		
	YES	NO	N.A.
7) If your research is taking place in a school, have you prepared an information sheet and consent form to gain the permission in writing of the head teacher or other relevant supervisory professional?	x		
8) Has the data collector obtained satisfactory DBS clearance?	x		
9) If your research involves working with children under the age of 16 (or those whose special educational needs mean they are unable to give informed consent), have you prepared an information sheet and consent form for parents/carers to seek permission in writing, or to give parents/carers the opportunity to decline consent?	x		
10) If your research involves processing sensitive personal data[1], or if it involves audio/video recordings, have you obtained the explicit consent of participants/parents?	x		
11) If you are using a data processor to subcontract any part of your research, have you got a written contract with that contractor which (a) specifies that the contractor is required to act only on your instructions, and (b) provides for appropriate technical and organisational security measures to protect the data?			x
12a) Does your research involve data collection outside the UK?		x	
12b) If the answer to question 12a is "yes", does your research comply with the legal and ethical requirements for doing research in that country?			x
13a) Does your research involve collecting data in a language other than English?		x	
13b) If the answer to question 13a is "yes", please confirm that information sheets, consent forms, and research instruments, where appropriate, have been directly translated from the English versions submitted with this application.			x
14a. Does the proposed research involve children under the age of 5?		x	
14b. If the answer to question 14a is "yes": My Head of School (or authorised Head of Department) has given details of the proposed research to the University's insurance officer, and the research will not proceed until I have confirmation that insurance cover is in place.			x
If you have answered YES to Question 3, please complete Section B below			

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[1] Sensitive personal data consists of information relating to the racial or ethnic origin of a data subject, their political opinions, religious beliefs, trade union membership, sexual life, physical or mental health or condition, or criminal offences or record.

- Complete **either** Section A **or** Section B below with details of your research project.
- Complete a risk assessment.
- Sign the form in Section C.
- Append at the end of this form all relevant documents: information sheets, consent forms, tests, questionnaires, interview schedules, evidence that you have completed information security training (e.g. screen shot/copy of certificate).
- Email the completed form to the Institute's Ethics Committee for consideration.

Any missing information will result in the form being returned to you.

A: My research goes beyond the 'accepted custom and practice of teaching' but I consider that this project has **no** significant ethical implications. (Please tick the box.)	X

Please state the total number of participants that will be involved in the project and give a breakdown of how many there are in each category e.g. teachers, parents, pupils etc.

Pilot study (n = 20):	**Full study (n = 240):**	**Focus group interviews (n = 16):**	Pupils to be recruited through 'xxxxx', a network of schools in 'xxxxx', who are also collaborative partners in this research project.
Undertaking reading/writing tests	*Control group*	*8* pupils in Year 1	
10 pupils in Year 1	60 pupils in Year 1	*8* pupils in Year 4	
10 pupils in Year 4	60 pupils in Year 4		
	Experimental group		
Undertaking spoken language test	60 pupils in Year 1		
3 pupils in Year 1	60 pupils in Year 4		
3 pupils in Year 4			

Working title: Raising EAL Learners' Attainment (REAL) Project

Project aims:
The REAL Project aims to analyse the relationship between changes in EAL pedagogy and the English-related academic outcomes of EAL pupils in primary and secondary schools. Part of the broader REAL project involves delivering professional development using a systematic approach called the Enduring Principles of Learning (EPoL) to teachers; this is undertaken by my supervisor Dr Naomi Flynn. The part of the project for which I am seeking ethical approval aims to evaluate the effectiveness of EPoL by assessing the impact it has on pupils' language and literacy skills. The project involves: 1) measuring the success, or otherwise, of the professional development on EAL pupils' outcomes in speaking, listening, reading and writing; 2) interviewing focus groups of pupils to explore their

personal responses to the teaching techniques involved in the EPoL. A new set of tests assessing pupils listening, reading, writing and speaking skills will be developed and piloted with pupils. These tests are being developed for the purposes of this study because such materials, that are both designed with EAL pupils in mind and are practitioner-friendly, currently do not exist in the UK. The tests draw on the recognised successful testing programme developed in the US by WIDA, and we have consent from them to adapt the tests for use in the UK (appendix A.1). To complement these bespoke tests, a whole-class version of the British Picture Vocabulary Scale (BPVS) will also be administered to indicate the size of pupils' receptive vocabulary.

Methods/instruments to collect data:

i.   Bespoke tests assessing all participating pupils' reading, writing, listening and speaking in English, to be administered before and after teachers receive EPoL training.
ii. Whole-class version of the BPVS assessing pupils' understanding of words (receptive vocabulary) to be administered before teachers receive EPoL training.
iii. Focus group interview with a selection of EAL pupils from each of the experimental classes.
iv. Background data on pupils held by schools, if applicable (EAL status, End of Key Stage attainment, Pupil Premium, Special Educational Needs).

Procedures and duration of project:

i.   Pilot study (summer term 2021)

Tests assessing language and literacy (link to test folder) will be administered to all pupils over two sessions (appendix A.2). The listening, reading, writing and vocabulary tests, should take no longer than 75 minutes to be administered in the classroom and are all pen-and-paper in style/response.

The speaking test should take no longer than 15 minutes to be administered on a 1:1 basis, and would require a quiet area within the school. The pupils' responses to the speaking test would be audio recorded.

Based on the pilot study, tests will be revised if necessary. Should there be another national lockdown at any point during the data collection period, the pen-and-paper tests would be administered by teachers and the speaking test would move online. It is acknowledged that this may require an amended ethics application.

ii. Full study (autumn term 2021 – summer term 2022)

The language/literacy tests will be administered to pupils at two time points, before and after the training period for the teachers (Nov/Dec 2021 and June/July 2022). On both occasions, the testing procedure will remain the same as before: all participating pupils will undertake the reading/writing/listening tests in class, and take part in a speaking test outside the classroom on a 1:1 basis. It is envisaged that the sample size for each year group undertaking the speaking test will be ~50 pupils, although this is dependent on participant schools' demographic. This will therefore require requesting EAL status data held by schools. All participants will also complete a whole-class version of the BPVS to inform the size of pupils' receptive vocabulary. This will be administered in class, in addition to the suite of language/literacy tests previously stated. Further data, such as KS1/2 attainment,

language spoken at home, Pupil Premium/SEND status, will also be requested to provide further contextual background on all participating pupils.

There will be 2 class groups in the experimental and 2 class groups as control per year group (8x class groups in total). Focus group interviews with up to 4 EAL pupils from each of the 4x experimental class groups will be conducted in summer term 2022. These will take place in a quiet area and pupils will be asked about their classroom experiences based on stimuli presented to them (appendix B). Responses will be audio recorded and later transcribed for analysis, with pseudonyms applied to maintain anonymity.

Ethical considerations:

The intended research will take into consideration guidelines issued by the British Educational Research Association (BERA, 2018). As such, information letters and consent forms will be provided for headteachers, class teachers and pupils' parents (appendices C-J). We will follow each participating school's policy regarding the translation of letters, if this is required and is standard practice. Pupils will also be provided with an information leaflet and their assent will be sought (appendix K-L). Furthermore, participants' paper data (namely their task results) will be identifiable but locked away in a filing cabinet after these have been marked by the researcher. Their resulting scores will be recorded against a unique participant code which will then be referred to throughout the data analysis, and securely stored on the University's OneDrive network. Participants' speaking test data will also be identifiable through audio recording, but will be subject to the same process, namely their score will be recorded against their participant code. Both identifiable paper data and audio recordings will be securely destroyed/deleted once scoring and anonymised transcription takes place. Lastly, the audio data from interviews will also be stored on OneDrive, and deleted once transcribed and anonymised. Information on the University's data protection procedures will be attached to each information letter (appendix M).

B: I consider that this project **may** have ethical implications that should be brought before the Institute's Ethics Committee.	
Please state the total number of participants that will be involved in the project and give a breakdown of how many there are in each category e.g. teachers, parents, pupils etc.	

RISK ASSESSMENT: Please complete the form below

Brief outline of Work/activity:	Administrating reading and writing tasks at classroom level.
	Administrating speaking tests on a 1:1 basis.
	Conducting interviews with small groups of pupils.

Where will data be collected?	It is envisaged data will be collected in classrooms and quiet areas within primary schools, with COVID-19 protocols adhered to.

	Should another national lockdown occur, teachers will administer literacy tests and speaking tests would move online – it is acknowledged this may require an amended ethics application.

Significant hazards:	The schools themselves have a duty to maintain a safe area of work within the school, although there are COVID-19 related risks.

Who might be exposed to hazards?	Participants and researcher

Existing control measures:	The rooms/spaces fall within the school's Health & Safety responsibilities. In reducing the risk of COVID-19 transmission, the researcher will adhere to protocols such as wear a face cover, keep a 2m distance between participants and regularly sanitize hands/surfaces.

Are risks adequately controlled:	Yes þ No ☐

If NO, list additional controls and actions required:	Additional controls	Action by:

C: SIGNATURE OF APPLICANT:

Note: a signature is required. Typed names are not acceptable.

I have declared all relevant information regarding my proposed project and confirm that ethical good practice will be followed within the project.

Signed: Print Name: Aniqa Leena   Date 30.4.21

STATEMENT OF ETHICAL APPROVAL FOR PROPOSALS SUBMITTED TO THE INSTITUTE ETHICS COMMITTEE

This project has been considered using agreed Institute procedures and is now approved.

Signed   Print Name……Holly Joseph.   Date…28/5/2021

(IoE Research Ethics Committee representative)*

Appendix B: Pupil data including teacher-assessed attainment in English

0: No data available
1: Below age-related expectations (ARE)
2: At ARE
3: Above ARE

ID	Gender	Home language	Year group	Teacher	Attainment
1	Male	Somali	1	L	1
2	Female	Urdu	1	L	1
3	Male	Romanian	1	L	1
4	Female	Urdu	1	L	1
5	Male	Dari	1	L	1
6	Male	Urdu	1	L	2
7	Female	Panjabi	1	L	3
8	Male	Urdu	1	L	2
9	Male	Panjabi	1	L	2
10	Female	Panjabi	1	L	1
11	Female	English	1	L	1
12	Female	Luganda	1	L	0
13	Female	Polish	1	L	1
14	Female	Dari	1	L	0
15	Male	Urdu	1	L	0
16	Male	Pashto	1	L	1
17	Female	Panjabi	1	L	2
18	Female	Panjabi	1	L	1
19	Male	Igbo	1	L	1
20	Male	Somali	1	L	2
21	Male	Urdu	1	L	3
22	Male	Urdu	1	L	1
23	Female	Arabic	1	A	1
24	Male	Romanian	1	A	1
25	Male	Bengali	1	A	1
26	Male	Bengali	1	A	1
27	Female	Urdu	1	A	1
28	Male	Urdu	1	A	1
29	Male	Pashto	1	A	1
30	Female	Pashto	1	A	1
31	Female	Romanian	1	A	1
32	Male	Portuguese	1	A	1
33	Male	Pashto	1	A	1
34	Female	Hindi	1	A	0
35	Male	Bengali	1	A	2
36	Female	Polish	1	A	2
37	Female	Panjabi	1	A	3
38	Male	Hindi	1	A	3
39	Male	Bengali	1	A	1
40	Female	Romanian	1	A	1
41	Female	Panjabi	1	A	0
42	Female	Urdu	1	A	2
43	Male	Fula	1	A	2
44	Male	Romanian	1	A	1
45	Male	Romanian	1	A	0
46	Female	Chinese	1	A	0
86	Male	English	1	D	2
87	Female	Urdu	1	D	2
88	Male	Spanish	1	D	2
89	Male	Polish	1	D	2
90	Female	English	1	D	1
91	Male	Russian	1	D	2
92	Female	English	1	L-C	1
93	Female	English	1	L-C	3
94	Female	English	1	L-C	2
95	Female	English	1	L-C	2
96	Female	Other	1	L-C	2
97	Female	Hindi	1	L-C	1
98	Male	Urdu	1	D	1
100	Female	Hindi	1	D	3
101	Male	Other	1	D	2
102	Male	English	1	D	2
103	Male	Other	1	D	2
104	Male	Arabic	1	D	1
105	Male	Urdu	1	D	1
106	Male	English	1	D	2
107	Female	Chinese	1	L-C	2
108	Male	English	1	L-C	2
109	Female	Chinese	1	L-C	1
110	Male	Other	1	L-C	2
111	Male	Hindi	1	L-C	2
112	Male	Portuguese	1	L-C	1
113	Female	Other	1	L-C	1
114	Male	English	1	L-C	3
115	Female	Urdu	1	L-C	3
116	Male	English	1	L-C	1
117	Female	Panjabi	1	L-C	1
118	Male	Cantonese	1	L-C	1
119	Male	Arabic	1	L-C	1
47	Female	Urdu	4	J	2
48	Male	Bengali	4	J	1
49	Male	English	4	J	2
50	Female	Russian	4	J	2
51	Male	English	4	J	2
52	Male	Urdu	4	J	2
53	Male	English	4	J	2
54	Female	Pashto	4	J	2
55	Male	Urdu	4	J	2
56	Male	Cantonese	4	J	3
57	Female	English	4	J	2
58	Male	Panjabi	4	J	2
59	Male	English	4	J	1
60	Male	English	4	J	2
61	Female	Bengali	4	J	2
62	Female	English	4	J	3
63	Female	Polish	4	J	2

64	Male	English	4	J	2	130	Female	English	4	M	3
65	Female	Arabic	4	J	2	131	Male	English	4	M	3
66	Female	English	4	J	1	132	Male	English	4	H	1
67	Male	English	4	J	2	133	Female	Nepali	4	H	2
68	Female	Bengali	4	J	2	134	Male	Nepali	4	H	3
69	Male	Russian	4	J	2	135	Female	Bulgarian	4	H	1
70	Male	English	4	S	1	136	Female	Hindi	4	H	2
71	Male	Farsi	4	S	2	137	Male	Urdu	4	H	1
72	Female	English	4	S	3	138	Female	Urdu	4	H	1
73	Male	Polish	4	S	2	139	Female	Italian	4	H	1
74	Female	Kurdish	4	S	2	140	Male	Chinese	4	H	3
75	Female	Romanian	4	S	1	141	Male	English	4	H	1
76	Female	Farsi	4	S	1	142	Female	English	4	H	2
77	Female	Polish	4	S	1	143	Male	Other	4	H	2
78	Male	English	4	S	1	144	Male	English	4	H	2
79	Female	Other	4	S	0	145	Female	Panjabi	4	H	2
80	Female	Farsi	4	S	2	146	Male	Portuguese	4	H	1
81	Female	Bengali	4	S	2	147	Female	English	4	H	1
82	Female	English	4	S	2	148	Male	English	4	H	3
83	Female	Italian	4	S	1	149	Male	Panjabi	4	H	2
84	Female	Farsi	4	S	1	150	Female	English	4	H	1
85	Female	Farsi	4	S	2	151	Male	English	4	H	1
121	Female	Urdu	4	M	3	152	Female	Urdu	4	M	1
122	Male	English	4	M	2	153	Male	Panjabi	4	M	3
123	Male	English	4	M	2	154	Female	Urdu	4	M	3
124	Male	Uzbek	4	M	2	155	Male	Romanian	4	M	1
125	Male	English	4	M	1						
126	Male	Indonesian	4	M	1						
127	Female	English	4	M	1						
128	Male	English	4	M	2						
129	Female	English	4	M	3						

A rubric for observing classroom enactments of critical sociocultural teaching practices

	NOT OBSERVED	EMERGING	DEVELOPING	ENACTING	INTEGRATING
General Definition:	*The principle is not observed.*	*One or more elements of the principle are enacted.*	*The teacher designs and enacts activities that demonstrate a partial enactment of the principle.*	The teacher designs, enacts, and assists in activities that demonstrate a complete enactment of the principle.	*The teacher designs, enacts, and assists in activities that demonstrate skillful integration* of multiple principles simultaneously.*
Joint Productive Activity *Teacher and Students Producing Together*	Students work independently of one another.	Students are seated with a partner or group, AND (a) collaborate* or assist one another, OR (b) are instructed in how to work in groups, OR (c) contribute individual work, not requiring collaboration, to a joint product*.	The teacher and students collaborate on a joint product in a whole-class setting, OR students collaborate on a joint product in pairs or small groups.	The teacher and a small group of students collaborate on a joint product. (Teacher does not float and is a full participant with group.)	The teacher designs, enacts, and collaborates in joint productive activities that demonstrate skillful integration* of multiple principles simultaneously.
Language & Literacy Development *Developing Language and Literacy Across the Curriculum*	Instruction is dominated by teacher talk.	(a) The teacher explicitly models appropriate language; OR (b) students engage in brief, repetitive, or drill-like reading, writing, or speaking activities; OR (c) students engage in social talk while working.	The teacher provides structured opportunities for academic language development in sustained* reading, writing or speaking activities. (Sustained means at least 10 minutes. If it is a whole class arrangement, then more than 50% of the students are participating. No turn taking.)	The teacher designs and enacts instructional activities that *generate* language expression and development of 'content vocabulary,'* AND *assists* student language use or literacy development* through questioning, rephrasing, or modeling. (Teacher can float.)	The teacher designs, enacts, and assists in language development activities that demonstrate skillful integration of multiple principles simultaneously.
Contextualization *Making Meaning – Connecting School to Students' Lives*	New information is presented in an abstract, disconnected manner.	The teacher (a) includes some aspect of students' everyday experience in instruction, OR (b) connects classroom activities by theme or builds on the current unit of instruction, OR (c) includes parents or community members in activities or instruction, OR (d) connects student comments to content concepts.	The teacher makes incidental* connections between students' prior experience/ knowledge from home, school, or community and the new activity/academic concepts.	The teacher integrates* the new activity/academic concepts with students' prior knowledge from home, school, or community to connect everyday and schooled concepts. (Teacher does not have to be present. This can be about activity design.)	The teacher designs, enacts, and assists in contextualized activities that demonstrate skillful integration of multiple principles simultaneously.

Challenging Activities *Teaching Complex Thinking*	Activities rely on repetition, recall, or duplication to produce factual or procedural information.	The teacher (a) accommodates students' varied ability levels, OR (b) sets and presents quality standards* for student performance, OR (c) provides students with feedback on their performance.	The teacher designs and enacts 'challenging activities'* that connect instructional elements to academic content OR advance student understanding to more complex levels.	The teacher designs and enacts challenging activities with clear standards/expectations and performance feedback AND assists* the development of more complex thinking. (Teacher can float.)	The teacher designs, enacts, and assists in challenging activities that demonstrate skillful integration of multiple principles simultaneously.
Instructional Conversation *Teaching Through Conversation*	Lecture or whole-class instruction predominates.	With individuals or small groups of students, the teacher (a) responds in ways that are comfortable for students, OR (b) uses questioning, listening or rephrasing *to elicit student talk*, OR (c) converses on a nonacademic topic.	The teacher converses with a small group of students on an academic topic AND *elicits student talk* with questioning, listening, rephrasing, or modeling.	The teacher designs and enacts an instructional conversation* (IC) (at least 10 minutes) with a clear academic goal*; listens carefully to assess and assist student understanding; AND questions students on their views*, judgments, or rationales. Student talk occurs at higher rates than teacher talk. (Teacher does not float.)	The teacher designs, enacts, and assists in instructional conversations that demonstrate skillful integration of multiple principles simultaneously.
Critical Stance *Teaching to Transform Inequities*	Instruction reflects appropriate content-area standards.	The teacher designs instruction using variety*, which includes a) multiple sources of information*; *OR* b) values and respects multiple perspectives*; *OR* c) supports learning through multiple modalities*.	Using variety*, the teacher designs instruction that positions students to *generate new knowledge* resulting in a) original* contributions, products, or expertise OR b) students' questioning and reflecting* on issues from multiple perspectives*.	The teacher designs or facilitates instruction that consciously* engages learners in a) interrogating* conventional wisdom and practices; AND b) reflection upon ramifications* of such practices; AND c) actively seeks to transform* inequities within their scope of influence* within the classroom and larger community.	The teacher designs, enacts, and assists in critical stance activities that demonstrate skillful integration of multiple principles simultaneously.
Modeling *Learning Through Observation*	Students begin working immediately following a verbal explanation.	The teacher, or student, models behaviors, thinking processes, or procedures, but does not provide an opportunity for students to practice.	The teacher provides a model of a completed product that students then make, or models the behaviors, thinking processes, or procedures necessary for the task.	The teacher provides a model of a completed product that students then make, or models the behaviors, thinking processes, or procedures necessary for the task, and assists students during practice.	The teacher designs, enacts, and assists in modeling activities that demonstrate skillful integration of multiple principles simultaneously.
Student Directed Activity *Encouraging Student Decision Making*	Students work on tasks designed and assigned by the teacher.	Students choose the subject or topic for an assigned task.	Students select from among activities developed by the teacher.	Students generate learning topics or develop learning activities.	The teacher designs, enacts, and assists in student directed activities that demonstrate skillful integration of multiple principles simultaneously.

Glossary for the Modified SPC-Plus [Sources: Teemant, Leland, & Berghoff (2014) for Critical Stance; Doherty, Hilberg, Epaloose, & Tharp, 2002 and Tharp (2006) for the remaining principles of learning.]

- **Academic goal:** In an Instructional Conversation, the academic goal is the development of thematic or conceptual understanding.
- **Academic Language:** Language development should occur across the curriculum and in every subject area as well as in specific English language lessons. Therefore, we broadly define academic language to include (a) word, sentence, and discourse level language and literacy conventions in every discipline, and (b) standard English when that is the goal of instruction.
- **Assist:** Assistance is a two-part process in which the teacher first assesses student knowledge and skills, then responsively assists development. Types of assistance may include: (a) Modeling—Providing a demonstration; (b) Feeding Back—Providing information about student performance as compared with a standard; (c) Contingency Management—Providing rewards or punishments contingent on student performance; (d) Questioning—Providing questions that guide students to advance their understanding; (e) Instructions—Providing clear verbal directions for performance; (f) Cognitive Structuring—Providing explanations or rules for proceeding; or (g) Task Structuring— Providing assistance by segmenting or sequencing portions of the task.

- **Challenging Activities - Activities that advance student understanding to more complex levels:** (a) the 'why' is addressed, not merely the 'what' or the 'how to;' (b) the activity requires that students generate knowledge, or *use* or *elaborate on* information provided (apply, interpret, categorize, order, evaluate, summarize, synthesize, analyze, explore, experiment, determine cause and effect, formulate and solve problems, explore patterns, make conjectures, generalize, justify, make judgments); (c) the teacher connects the content or activity to a broader concept or abstract idea to advance student understanding; or (d) the teacher provides instruction in critical thinking, or problem solving or metacognitive strategies.

- **Collaborate**: Joint activity that results in shared ownership, authorship, use, or responsibility for a product. It can also include division of labor for coordinated sub-sections. However, mere turn taking does not constitute division of labor and, to be considered collaboration, an activity must include interaction between participants. Coordinated activities such as morning message or calisthenics are rated at the Emerging level for JPA.
- **Consciously engages learners:** The student is positioned to take ownership of his or her learning when learning tasks invite them to reflect on academic concepts with real-world applications in mind.

- **Incidental connections:** The teacher (a) makes connections between students' experience or knowledge from home, school, or community and the new activity/information on an ad hoc basis to assist understanding, or (b) prompts students to make connections.

- **Inequities:** Injustice or unfairness having to do with gender, ethnicity, culture, economic status, or learning differences that result in different access to opportunities, *or* inequities resulting from unequal power relationships inside and outside the classroom.

- **Integrates the new activity/academic concepts with what students already know from home, school, or community**: (a) students' knowledge or experience is integrated with new academic content, (b) the basis of the instructional activity is personally relevant to students' lives; or (c) students apply school knowledge in an authentic activity.

- **Instructional Conversation (IC):** ICs are inclusive of all participants whose contributions are connected to, or extend, the comments and ideas of other participants. In contrast, directed-discussions focus less on developing conceptual understanding and more on known-answer questions and skill development. Instructional conversation focuses on broad topics, main ideas, themes or concepts, is responsive to student contributions, includes participation structures that are familiar to students, and includes open-ended questions and sustained dialogue on a single topic. A precondition or precursor of conversation is discourse between teacher and student(s) that is extended to at least two speech turns each, with each turn consisting of more than just providing an answer or providing a fact (responses to convergent teacher questions).

- **Interrogating conventional wisdom and practices:** Students critically analyze content and viewpoints from multiple perspectives considering such things as equity, fairness, or relationships of power and privilege.

- Multiple sources of information: The teacher provides for students to use multiple texts and/or genres, computer programs, websites, or search engines, other students' work, or bilingual resources that provide students with a range of reading abilities access to content through different levels of text difficulty.

- Original contributions, products, or expertise: Students are positioned to make original contributions or products when learning tasks go beyond completing a worksheet and require them to use complex thinking skills, such as application, analysis, synthesis, or evaluation of content and processes, to represent learning.

- Product: Products may be tangible or intangible. Examples of tangible products: worksheet, essay, report, pottery, word-web, a math problem solved on the blackboard, play, skit, game, debate. Intangible products may be found in such activities as 'story time,' introductory lectures, or some ICs (the product is an accurate or elaborated understanding of a concept, procedure, idea), or some PE activities (increased physical fitness is the product, though not joint). The intangible products are an achieved physical, psychological, or social state that integrates a series of actions.

- Reflection: Students make connections between content, personal experiences, and the broader community to situate and deepen their learning of content. In other words, students make text-to-self, text-to-text, or text-to-world connections.

- Reflection upon ramifications: Students reflect and focus upon the implications of maintaining or changing how things are done in learning or life. Students ask "why" questions, and "what if" scenarios to understand the rationale behind concepts.

- Students are positioned to generate new knowledge*: A student is positioned to generate new knowledge when a teacher provides clear expectations, rich materials, and adequate time for students' creativity and innovation in making meaning.

- Standards for student performance: performance standards go beyond *what* to do and address the *quality* of student work. Standards may be in the form of a checklist or a rubric, or they may also be implicitly expressed through teacher expectations.
- Supports learning through multiple modalities: Instructor provides or uses strategies that allow for alternative ways of knowing to be valued, for example visual representations or kinesthetic performance. Teachers also use multiple modalities when they ask students to read and write or read and draw.

- Sustained (reading, writing or speaking activities): "Sustained" reading, writing or speaking requires ten minutes or more of *connected* language use. Worksheets for which students write for 10+ minutes but for which the writing comprises brief responses rather than a single, extended, connected response, or speaking for which contributions are brief responses to multiple questions but are not connected to one another and built upon, are not considered sustained. Extended, structured listening activities for ELLs with very limited English proficiency qualify for the Developing level of LLD.
- Transform inequities in their scope of influence: Students demonstrate awareness that academic learning impacts the individual school or community life by using knowledge to address issues of inequality. This demonstration may include publishing, performances, or presentations to inform or influence a wider audience.
- Values and respects multiple perspectives: Instructors teach appropriate content standards using different points of view. The teacher values student voice or perspectives, strives to affirm diverse student identities, and/or encourages multilingualism.

- Variety in instruction: Teachers utilize instructional variations by employing multiple sources of information, perspectives, or modalities.

- Views (IC, "questions students on their views"): In an Instructional Conversation, questioning students on their views is inclusive of students' prior knowledge or experience related to the goal of the conversation.

Materials were used during the cycle of classroom observation and coaching conversations as part of the EPL intervention period.

Pre-Observation Reflection Between Coach and Teacher

Teacher: Coach: Naomi Flynn

Date: Lesson content:

What is/are the learning intention (s)?	What is/are the learning outcome(s)? (the product)
What will evidence of learning be?	What essential questions will you ask?
What feedback and assistance will you give pupils?	How are you working with the EPL? Which is/are your focus?
What are the next steps from this lesson?	

TALK RICH TEACHING PROJECT LESSON OBSERVATION PRO-FORMA

Date:	School:	
Teacher:	Year group:	Subject:
Observer name: Naomi Flynn		Start/End times:

Guiding questions:
Which elements of the EPL are evident in the teacher's practice? (annotate rubric)
How are these manifested?
How is the teacher working towards their pre-lesson intentions?

	What is the teacher doing and saying?	What are the children doing and saying?
3'		
6'		
9'		
12'		
15'		
18'		
21'		
24'		
27'		

Post Observation Reflection

Teacher: **Coach:**   **NAOMI FLYNN &** ▓▓▓▓▓▓▓▓

Date: **Lesson content:**

Teacher Reflection: What's going well? What did you learn? What surprised you?
Teacher Reflection: What challenges, concerns or issues emerged during this lesson?
Teacher Reflection: What's working well with the EPLs you are focussed on? What do you need help with? What needs to change?
.
Coach Reflection
Date for next observation and coaching
TBC for May and June
Preparation for next session

From: Mark ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮
Sent: 10 February 2021 18:45
To: Naomi Flynn <n.flynn@reading.ac.uk>; Aniqa Leena <a.t.leena@pgr.reading.ac.uk>
Cc: Jon ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮
Subject: RE: Using WIDA test materials in England

Hi Naomi,

Thank you for responding. We're sorry to be so cautious but we need to make sure that our assessments are used for the right reasons. I'm happy to approve you to order and utilize WIDA assessments as part of your research project.

I'll follow up with our sales vendor and put you in touch.

Best regards,

Mark

Appendix F.i: Test materials – listening

Year 1 listening test

Year 4 listening test

Appendix F.ii: Test materials – speaking

Year 1 Speaking Task

I will guide you through this Speaking task. You will look at pictures and listen to me talk. Then you will answer my questions. We will practice before you start the task.

This box is blue. That means it's your turn.

When you hear my question, say your answer clearly. When you hear this sound, finish your answer.

Wait for my question.

Now tell me, what's your name?

This is Ava. I will ask Ava questions, too. Ava, what year group are you in?

Now it's your turn.

When you hear my question, say your answer clearly. Remember, when you head this sound, finish your answer.

Tell me, what year group are you in?

When I ask you questions, you will have time to answer. It's ok if you finish speaking before you hear this sound. Just wait for me to go on. When it's your turn, remember to…

Listen to Ava's answers - they will help you know how to answer my questions.

Try to use your best English and speak as clearly as possible.

We are going to talk about counting things. Look at the picture. The boy's name is Sam. One day, Sam and his sister, Mia go for a walk with their dad. Let's count and describe what they see.

Now look at this picture. Sam and Mia are picking flowers. They each pick two flowers.

Ava, you said Sam and Mia picked the same number of flowers. Now, tell me how you knew that.

Let's talk more about the flowers they picked. Sam has two red flowers. Mia has one red flower and one yellow flower.

1a Now it's your turn.
Tell me, who has more red flowers?

1b It's your turn again.
Tell me how you knew that.

Look at this picture. Whilst on their walk, Sam and Mia find a bird's nest. Every week they look up at the bird's nest. In week 1, they see that one egg has hatched.

Week 1

In Week 2, they see all the eggs have hatched. The small baby birds are in the nest. The mother bird feeds them, so they can grow big and strong.

Ava, describe how the birds changed from Week 1 to Week 2.

Week 2

Ava talked about how the birds changed from Week 1 to Week 2.

Now look at how the birds changed in Week 4 and Week 6. By Week 4, the baby birds have grown bigger. Soon they will be too big for the nest.

By Week 6 the baby birds have grown and changed. Now some of the birds can fly, and there are fewer birds left in the nest.

Week 1   **Week 4**   **Week 6**

2 Now it's your turn.
Look at the number and size of the birds in the nest.
Describe how the baby birds changed from Week 1 to Week 4 to Week 6.

This is the end of the Speaking task. Thank you for talking with me today.

Year 1 speaking test

Year 4 Speaking Test

I will guide you through this Speaking task. You will look at pictures and listen to me talk. Then you will answer my questions. We will practice before you start the task.

This box is blue. That means it's your turn.

When you hear my question, say your answer clearly.

Wait for my question.

Now tell me, what's your name?

This is Ava. I will ask Ava questions, too. Ava, what year group are you in?

Now it's your turn.

When you hear my question, say your answer clearly.

Tell me, what year group are you in?

When I ask you questions, you will have time to answer. Wait for me to go on. When it's your turn, remember to …

Listen to Ava's answers - they will help you know how to answer my questions.

Try to use your best English and speak as clearly as possible.

Now let's start!

Now we are going to talk about how living things grow and change.

Look at this picture. This is a ladybird. It sits on a leaf.

Look closely at picture A. Ladybirds lay eggs under a leaf to keep them safe.

Now look at picture B. When a baby ladybird hatches out of an egg, it is called a larva.
It has a long, spiny body.
The larva crawls on six legs.
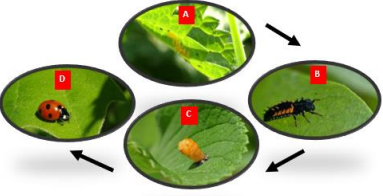It has no wings, so it can't fly.

Now look at these pictures. An adult ladybird is smaller than a larva.
It has a smooth, round body.
Like the larva, it has six legs.
It now has wings, so it can fly.

Ava, tell me how the larva and adult ladybird are the same.

1 Now it's your turn.
Tell me, how are the larva and adult ladybird different?

Now let's talk about each part of the ladybird's life cycle.

Look at part **A**
First, female ladybirds lay a cluster of round, yellow eggs under a leaf.

Look at part **B**
Next, a small larva hatches out of each egg. The larva will eat and grow, shedding its old skin and making a new cover to protect its body.

Look at part **C**
Then, in the pupa stage, the larva attaches itself to a leaf and builds a shell around its body.

Look at part **D**
Finally, the adult ladybird breaks out of its shell and starts looking for food.

Ava, start with the egg, and tell me about the first two stages of a ladybird's life.

2 Now it's your turn. Look at the pictures.
Start with the egg and tell me step by step how the ladybird changes in each part of its life.

Year 4 speaking test

Appendix F.iii: Test materials - reading

Reading practice

Read about the children in the classroom.

R1: The class reads a book.
Which picture shows a book?

A	B	C

R2: The class reads about birds.
What does the class read about?

Cats	Fish	Birds
A	B	C
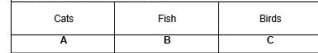
R3: How many children can you see in the picture?

A	Four
B	Three
C	Five

Section A: Class trip to the strawberry farm

Mrs. Smith's class went on a trip to pick strawberries.

1: What does the class see on their trip?

A	B	C

2: It is a sunny day. The child enjoys eating a strawberry outside.
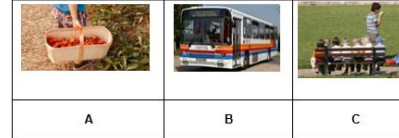**Which picture shows this?**

A	B	C

3: Everyone had so much fun at the strawberry farm, but now it is the end of the day. The children must get on the bus to go back to school.
Which picture shows this?

A	B	C

Section B: When I grow up

The children are thinking about what jobs they want to do when they grow up.

4: Some workers help people when they are sick or their job is to teach others. Other workers make things.

Which worker builds something?

A	B	C

5: Omar and Hannah are different. Omar wants to be a chef. He needs tools to stir, chop and cook. Hannah wants to be a musician. She needs instruments to play songs.

What will Hannah need in her job?

A	Drum and piano
B	Bowl and spoon
C	Hammer and nails
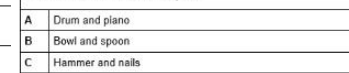
6: Ingrid wants to be an astronaut. She knows that astronauts wear a heavy spacesuit.

Astronauts also wear a helmet with lights to help them work in the dark. Their backpack carries air to help them breathe.

Astronauts need all of these things to do their job safely.

What is this reading mostly about?

| A	What astronauts see in space
B	What astronauts eat in space
C	What astronauts wear in space

Year 1 reading test

Section C: Looking for a home

Read about Sammy the squirrel. He is looking for a home.

7:
Sammy needs to find a home to keep him safe and dry.
First, he sits under a tree and gives that a try.
But when it starts to rain, Sammy wants to hide.
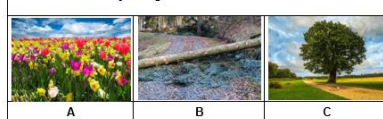So he finds a hollow log and climbs inside.

Once it starts raining, what does Sammy do to stay dry?

A	B	C
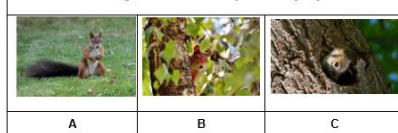
8:
The log looks like a cosy home, but it belongs to toad.
So Sammy keeps running down the road.
Next he sees a big tree that is high off the ground.
Sammy's new home may just have been found!

Where does Sammy first go for his new home?

A	B	C

9:
Sammy needs a home off the ground before he can rest.
So he climbs up the tree, careful not to disturb a bird's nest.
Sammy keeps climbing until he finds a spot high up in the tree,
He loves his new home and settles in happily!

What does Sammy do to find his home?

A	B	C
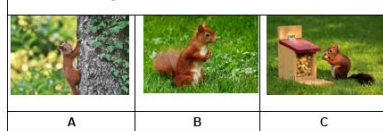
Section D: At the bakery

Read about Sofia and Aunt Kara at the bakery.

10: Sofia needs 10 cupcakes to take to school for a class party. She thinks there are about 12 cupcakes on a tray. So, Sofia buys one tray because 12 cupcakes is more than enough for her class.

Which word shows Sofia is guessing about the number of cupcakes?

A	"About"
B	"More"
C	"Needs"

11: Aunt Kara wants to buy dessert, but she does not want to spend more than £5.00.

A pie costs £4.50, and a cake costs £5.25. Because the pie is less than £5.00, she decides to buy the pie.

Why does Aunt Kara choose to buy the pie?

A	The pie costs £5.00 exactly.
B	The pie costs less than £5.00
C	The pie costs more than £5.00

12:
Sofia and Aunt Kara buy bread to make sandwiches for the family.

Sofia thinks she can make six sandwiches with the big loaf of bread and ten sandwiches with two small loaves of bread.

She must choose either one big loaf or two small loaves. She chooses the bread that makes the most sandwiches.

Which picture shows what Sofia buys?
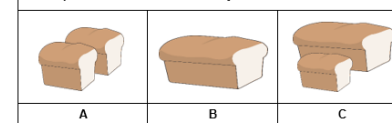
A	B	C

-- End of test --

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Reading practice

Read about the children in the classroom.

R1: The class reads a book.

Which picture shows a book?

A	B	C

R2: The class reads about birds.

What does the class read about?

Cats	Fish	Birds
A	B	C

R3: How many children can you see in the picture?

A	Four
B	Three
C	Five

Section A: Playing together

Read about children taking part in activities together in their classroom.

1: Jamal and Anna use colouring pencils to draw pictures together. Tom helps Sam find the missing pieces to finish their puzzle. Meera and Kim read books at their table.

Which picture shows how Tom and Sam work together?

A	B	C

2: Jamal and Anna now want to play a game together. It needs three players. They ask if Peter wants to play with them. Peter was playing his favourite game, but he puts it down and joins them at the table. The friends tell Peter that they will play his favourite game with him tomorrow.

What does Peter do to show he is a good friend?

A	He stops playing his favourite game.
B	He asks his friends to play another game.
C	He makes his friends play his favourite game.

3: Meera and Kim decide to start playing a game together too. However, both Meera and Kim want to start playing first. To solve their problem, Kim thinks they should ask another friend, Pavel, to decide who should start playing first. Instead of asking Pavel, Meera suggests that they roll a dice to decide who goes first. Kim and Meera agree that the person who rolls the highest number will go first. They decide this is the fairest way to choose who will go first. After they take turns rolling the dice, the friends enjoy their game.

Why did the children decide to roll the dice?

A	To play the game quickly
B	To win the game with Pavel
C	To start the game fairly

Section B: School Shop

At the school shop, children can buy different class equipment.

4: A glue stick costs eighty pence. This is a bit more than seventy-five pence.

Which of these other items costs a bit more than seventy-five pence?

A	B	C

5: Ingrid would like to buy something for her pencil case. She checks the school shop and chooses to be buy a rubber for twenty-five pence. She sees that a pencil has a slightly lower cost of twenty pence. Unfortunately Ingrid does not have enough money to buy a notebook or glue stick. These items cost much more than the rubber. Ingrid decides to come back to the school shop another day.

What has a similar cost to the rubber?

A	A pencil
B	A notebook
C	A glue stick

6: Hannah has two pounds to spend. She would like to buy three notebooks, which cost two pounds and twenty-five pence in total. However, she does not have enough money to buy three notebooks. Instead, Hannah decides to buy two notebooks and spend one pound and fifty pence altogether.
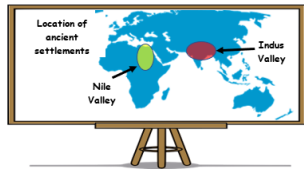
How much did Hannah pay for the notebooks?

A	"two pounds and twenty-five pence"
B	"two pounds"
C	"one pound and fifty pence"

Year 4 reading test

Section C: Ancient settlements

Look at part of this world map below. It shows two ancient settlements, where groups of people lived thousands of years ago.

7: In their free time, people in the Indus Valley enjoyed playing board games. Historians think they were the first to play games with dice. People in the Nile Valley enjoyed storytelling. They would tell stories about Egyptian gods, heroes and adventures. They also enjoyed watching and playing sports such as wrestling.

What picture shows what people in the Indus Valley enjoyed doing in their free time?

A	B	C

8: The people of the Nile and Indus Valleys had some similar and different ways of writing. Both groups considered writing an important skill and used special symbols to write. These symbols are called hieroglyphs in the Nile Valley. We know that when hieroglyphs are put together, they can be translated into sounds, words or ideas. Whilst the people of the Indus Valley also used symbols for writing, no one has been able to translate what these symbols mean yet.

What is one difference between the Nile Valley and Indus Valley?

A	Only the Nile Valley symbols can be translated.
B	Only people in the Nile Valley could write.
C	Only people in the Indus Valley could write.
D	Only people in the Indus Valley thought writing was important.

9: The Nile Valley settlers used the Nile River to grow crops and build bricks for their homes. The river could also be used to transport things such as grain, animals and bricks to other people. At first, small boats were moved using many oars made from tightly wrapped reeds and plants. By 3000 BC, wood was used to build bigger and stronger boats. A single oar would steer the boat and a large, square sail would help move it along the river.

How did boats change after 3000 BC?

A	The boats were moved using many oars.
B	The boats were built with wood.
C	The boats transported animals.
D	The boats were more smaller.

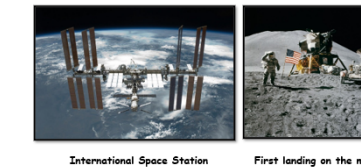**Section D: Trip to the Space Centre**

Alfie's class went on a trip to the Space Centre, where they learnt more about astronauts and the International Space Station. Read what Alfie wrote about the trip.

International Space Station   First landing on the moon

10: Before we could go to the Space Centre in April, we needed to raise money to pay for the trip. We had four events, one each month from December to March. We began with selling Christmas cards in December. We sold so many cards! In January, we held a cake sale. Then we had two more events, a movie night in February and an Easter egg hunt in March. The cake sale raised the most money of all the projects. It was very hard work, but we were proud of raising enough money for our class trip.

In which month did Alfie's class raise the most amount of money?

A	December
B	January
C	February
D	March

International Space Station   First landing on the moon

11: Finally, it was time for our trip to the Space Centre! When we arrived, we found out about the history of the first space projects. In 1969, the first man stepped on the moon. He stayed for two hours, completing experiments and collecting rocks. We learnt that during this time period, many countries were in a competition to reach space first.

We also learned about the International Space Station, which is a structure in space that orbits the Earth. It is a project shared by different countries. One of the first parts of the structure went into space in 1998. Astronauts from around the world continue to spend some months living there and performing experiments as a team.

How is today's space project different to from the first space project?

A	Today, astronauts only spend a few days in space.
B	Today, countries compete to get to space first.
C	Today, different countries work together in space.
D	Today, countries take turns using the International Space Station.

12: The most exciting part of the trip was meeting an astronaut called Stephanie. The astronaut we met told us all about her experiences, and showed us pictures of her time in the International Space Station.

Stephanie said one of the hardest parts of being an astronaut was learning how to walk in a space suit. She explained that on Earth, the space suit weighs over a hundred kilograms, and at first, is difficult to get used to. However, in space, the space suit is a fraction of that weight, and so feels much lighter. Stephanie had to learn how to move around safely wearing the space suit whilst in the Space Station.

One of the things Stephanie enjoyed the most was the view of Earth from space. She told us about how it felt to walk in space. Stephanie also told us the food she ate whilst in space and also what it was like to sleep up there too. We had a fantastic time speaking to Stephanie and visiting the Space Centre.

According to the astronaut in the text, what is the most challenging part of Stephanie's job?

A	Taking pictures in space
B	Moving in the space suit
C	Eating while in space
D	Sleeping in space

-- End of test --

David's Lunch

The pictures tell a story about David at his school.

David's Lunch

Task: Use the pictures to help you write David's story from beginning to end. You may use the words in the word box to help you.

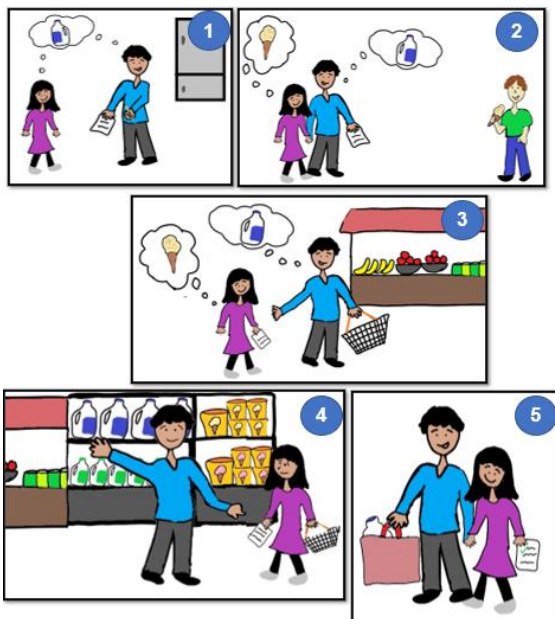| Word Box				
first	after	window	bump	drop
then	finally	playground	slide	tray

Year 1 writing test

The shopping list

Look at the pictures carefully. They tell a story about Tara and her Dad, who are going to do some shopping.

The shopping list

Task: Use the pictures to help you write a story about Tara and her dad's shopping trip. Remember to write the story with a beginning, middle and end. You may use the words in the word box to help you.

Word Box				
first	next	decide	list	buy
then	finally	choose	ice cream	milk

Year 4 writing test

Appendix G: Test material amendments

Year 1: Listening task, Item 8, original	Year 1: Listening task, Item 8, amended– script slightly reworded and reduced.
You're going to draw some pictures with shapes. I'll tell you what to draw listen carefully. 1st draw a shape with four sides and four corners. Remember corners are where the sides of the shape meet. Everyone should now have a shape with four sides and four corners. Next draw 5 circles all around your first shape. **Question: Which picture shows what the pupils draw?**	I will now give some more instructions, listen carefully to what I say. First draw a shape with four sides and four corners. Remember corners are where the sides of the shape meet. Next, draw 5 circles all around your first shape. **Question: Which picture shows what the pupils draw?**
Year 1: Listening task, item 12, original	Year 1: Listening task, item 12, amended – script slightly reworded and reduced.
Teacher: This is a cotton wool ball. Watch as I try to pull it apart. Can you see that it stretches a little bit and then rips into small pieces? Here is an elastic band. What do you think will happen when I stretch it? Mia: Hm, because the cotton wool ball broke maybe the elastic band will too. Teacher: That's an interesting prediction. Now let's see what happens as I pull the elastic band. Can you see that the elastic band is different to the cotton wool ball? The elastic band keeps stretching. But when I stopped pulling, it snapped back to its original shape. The elastic band and the cotton wool ball react differently when you stretch them. This is because they are made from different materials. **Question: Which picture shows what happened to the elastic band?**	Teacher: I am going to pull this cotton wool ball apart and describe it to you. I can see that it stretches a little bit when I rip it into small pieces. Here is an elastic band. What do you think will happen when I stretch it? Mia: Hm, because the cotton wool ball broke maybe the elastic band will too? Teacher: That's an interesting prediction. Now let's see what happens as I pull the elastic band. Can you see that the elastic band is different to the cotton wool ball? The elastic band keeps stretching. But when I stopped pulling, it snapped back to its original shape. This is because they are made from different materials. **Question: Which picture shows what happened to the elastic band?**

Year 1: Reading task, item 10 – additional image of cupcakes provided	

Year 4: Listening task, item 4, original	Year 4: Listening task, item 4, amended – script slightly increased
A: OK first we need to look at the map key, can you see it? B: Yes, I see the key! It's on the bottom corner of the map A: That's right. The map key says that the tree is a symbol for park area. So that means everywhere we see a tree on the map it's part of a park. **Question: Which picture shows the symbol the boy found?**	A: OK first we need to look at the map key, can you see it? B: Yes, I see the key! It's on the bottom corner of the map. A map key can be really useful in helping explain what the different symbols on a map mean. A: That's right. So on this map key, it says that the tree is a symbol for park area. So that must mean everywhere wherever we see this symbol on the map, it is part of a park. **Question: Which picture shows the symbol the boy found?**

Year 4: Reading task, item 3 original
3: Meera and Kim decide to start playing a game together too. Meera and Kim both want to start playing first. To solve their problem, Meera suggests that they roll a dice to decide who goes first. They agree that the person who rolls the highest number will go first. They think this is a fair way to decide who will go first. After they take turns rolling the dice, the friends enjoy their game. **Why did the children decide to roll the dice?** 	A	To play faster
B	To win the game
C	To be fair	

Year 4: Reading task, item 3 amended – increased text and answer choices.
3: Meera and Kim decide to start playing a game together too. However, both Meera and Kim want to start playing first. To solve their problem, Kim thinks they should ask another friend, Pavel, to decide who should start playing first. Instead of asking Pavel, Meera suggests that they roll a dice to decide who goes first. Kim and Meera agree that the person who rolls the highest number will go first. They decide this is the fairest way to choose who will go first. After they take turns rolling the dice, the friends enjoy their game. **Why did the children decide to roll the dice?** 	A	To play the game quickly
B	To win the game with Pavel
C	To start the game fairly	

Year 4: Reading task, item 5 original

5: Ingrid wants to be buy a rubber for twenty-five pence. She sees that a pencil has a slightly lower cost. Unfortunately Ingrid does not have enough money to buy a notebook or glue stick. These items cost much more than the rubber.	

What costs almost as much as the rubber?

A	A pencil
B	A notebook
C	A glue stick

Year 4: Reading task, item 5, amended – increased text and question slightly reworded.

5: Ingrid would like to buy something for her pencil case. She checks the school shop and chooses to be buy a rubber for twenty-five pence. She sees that a pencil has a slightly lower cost of twenty pence.
Unfortunately Ingrid does not have enough money to buy a notebook or glue stick. These items cost much more than the rubber. Ingrid decides to come back to the school shop another day.

What has a similar cost to the rubber?

A	A pencil
B	A notebook
C	A glue stick

The WIDA Screener Writing Scoring Scale, Grades 1-12

5+	**Score Point 6** D: Sophisticated organization of text that clearly demonstrates an overall sense of unity throughout, tailored to context (e.g., purpose, situation, and audience) S: Purposeful use of a variety of sentence structures that are essentially error-free W: Precise use of vocabulary with just the right word in just the right place
4+	**Score Point 5** D: Strong organization of text that supports an overall sense of unity, appropriate to context (e.g., purpose, situation, and audience) S: A variety of sentence structures with very few grammatical errors W: A wide range of vocabulary, used appropriately and with ease
3+	**Score Point 4** D: Organized text that presents a clear progression of ideas, demonstrating an awareness of context (e.g., purpose, situation, and audience) S: Complex and some simple sentence structures, containing occasional grammatical errors that don't generally interfere with comprehensibility W: A variety of vocabulary beyond the stimulus and prompt, generally conveying the intended meaning
2+	**Score Point 3** D: Text that shows developing organization including the use of elaboration and detail, though the progression of ideas may not always be clear S: Simple and some complex sentence structures, whose meaning may be obscured by noticeable grammatical errors W: Some vocabulary beyond the stimulus and prompt, although usage is noticeably awkward at times
1+	**Score Point 2** D: Text that shows emerging organization of ideas but with heavy dependence on the stimulus and prompt and/or resembles a list of simple sentences (which may be linked by simple connectors) S: Simple sentence structures; meaning is frequently obscured by noticeable grammatical errors when attempting beyond simple sentences W: Vocabulary primarily drawn from the stimulus and prompt
	Score Point 1 D: Minimal text that represents an idea or ideas S: Primarily words, chunks of language, and short phrases rather than complete sentences W: Distinguishable English words that are often limited to high frequency words or reformulated expressions from the stimulus and prompt
	D: Discourse Level S: Sentence Level W: Word/Phrase Level

The WIDA Screener Writing Scoring Scale, Grades 1-12

Score Point 6
D: Sophisticated organization of text that clearly demonstrates an overall sense of unity throughout, tailored to context (e.g., purpose, situation, and audience)
S: Purposeful use of a variety of sentence structures that are essentially error-free
W: Precise use of vocabulary with just the right word in just the right place

5+

Score Point 5
D: Strong organization of text that supports an overall sense of unity, appropriate to context (e.g., purpose, situation, and audience)
S: A variety of sentence structures with very few grammatical errors
W: A wide range of vocabulary, used appropriately and with ease

4+

Score Point 4
D: Organized text that presents a clear progression of ideas, demonstrating an awareness of context (e.g., purpose, situation, and audience)
S: Complex and some simple sentence structures, containing occasional grammatical errors that don't generally interfere with comprehensibility
W: A variety of vocabulary beyond the stimulus and prompt, generally conveying the intended meaning

3+

Score Point 3
D: Text that shows developing organization including the use of elaboration and detail, though the progression of ideas may not always be clear
S: Simple and some complex sentence structures, whose meaning may be obscured by noticeable grammatical errors
W: Some vocabulary beyond the stimulus and prompt, although usage is noticeably awkward at times

2+

Score Point 2
D: Text that shows emerging organization of ideas but with heavy dependence on the stimulus and prompt and/or resembles a list of simple sentences (which may be linked by simple connectors)
S: Simple sentence structures; meaning is frequently obscured by noticeable grammatical errors when attempting beyond simple sentences
W: Vocabulary primarily drawn from the stimulus and prompt

1+

Score Point 1
D: Minimal text that represents an idea or ideas
S: Primarily words, chunks of language, and short phrases rather than complete sentences
W: Distinguishable English words that are often limited to high frequency words or reformulated

Aniqa Leena
Within the text and across ideas/paragraphs
@mention or reply

Aniqa Leena
Words, sentence structures, and text forms that are selected with clear and controlled purpose
@mention or reply

Aniqa Leena
Where usage is not awkward, but not a large enough variety of vocab to warrant a 4, award 3.5
@mention or reply

Appendix I: WIDA Screener Speaking Scoring Scale (annotations)

The WIDA Screener Speaking Scoring Scale

Score point	Response characteristics
Exemplary use of oral language to provide an elaborated response	Language use comparable to or going beyond the model in sophistication Clear, automatic and fluent delivery Precise and appropriate word choice
Strong use of oral language to provide a detailed response	Language use approaching that of model in sophistication, though not as rich Clear delivery Appropriate word choice
Adequate use of oral language to provide a satisfactory response	Language use not as sophisticated as that of model Generally comprehensible use of oral language Adequate word choice
Attempted use of oral language to provide a response in English	Language use does not support an adequate response Comprehensibility may be compromised Word choice may not be fully adequate
No response (in English)	Does not respond (in English)

Aniqa Leena
Largely accurate use of conjunctions/complex sentences to convey meaning

@mention or reply

Aniqa Leena
Uses key vocabulary related to stimulus accurately

@mention or reply

Aniqa Leena
Meaning may at times, be obscured through incorrect lang use, incomplete sentence structures etc

@mention or reply

Aniqa Leena
May include responses which are: too quiet, unclear, lacks fluency etc.

@mention or reply

Aniqa Leena
Key terms related to stimulus/necessary for response may be missing

@mention or reply

AL: So I want to have a quick chat with you guys about the work that you've been doing in Year Four OK. And I know recently you had a topic on the Titanic, right? Yes, OK, so the first tell me about what you've been doing with that topic.

Ingrid: We were talking about the Titanic, and it hit the iceberg

AL: OK cool.

Kiran: And one half of it got like split, and one half in a way and no one has found it yet, but the other half is still in the sea and they found it.

AL: Fabulous, Kiran, thank you and Ingrid. So what is that you were talking about there?

Ingrid: It set sail from xxxx to New York

AL: Oh, so it set sail from xxxx? Oh, that's quite exciting. Great. Yusra, did you go to like visit anything? Where did you go?

Yusra: xxxx Museum

AL: Cool and what what happened there?

Yusra: We looked at stuff from there and wrote about it back then

AL: Fantastic, Awesome. And Salma, was there anything else that you learned when you were at the museum?

Salma: That that the.......

AL: Don't worry, I can come back. I can come back to you, that's OK. But I think it's really special that you know you live in xxxx and you've got this real piece of history. Everyone knows the Titanic, right? And it

Ingrid: I think I know where the place it began to sail it's near xxxx

AL: Oh, where all the shops are? is that near, Is that xxxx? I don't know I.

Ingrid: It's near.

AL: OK, cool, I think that's really nice that you've got this, you know bit of history so close to you

Kiran: In xxxx Museum, we learned about loads of passengers.

AL: OK, tell me about that. Were there different types of passengers or something?

Kiran: Yeah so there was first class passengers, the second class, and then the third class passengers

AL: OK.

Kiran: So more of the third class passengers passed away, because they were at the bottom and the water started coming from the bottom

AL: I see, oh my God, that's quite sad.

Kiran: 'cause the third class is like the lowest class and in first class is like the better class and the womens went first with the kids.

AL: Yeah, fabulous. Salma, were you going to say something? Or have you forgotten? Something about the different passengers, did you learn about?

Kiran: Yeah they have different jobs like firemans, like cleaners,

AL: Yeah, cool. Ok. Were you going to say something Salma?

Salma: The kids have [indistinct] …. Well, because the women's were taking care of the kids [indistinct] ….and the boats they put the kids on

AL: Yeah, they put the kids and the women onto the boat onto the lifeboats first, is that what you mean?

Salma: Yeah.

AL: Yeah, for safety. OK cool. So, the first question that I have is could you tell me how much you enjoyed these sessions? So, I will start with Yusra first, and we'll work our way around. So think about it... could you tell me how much you enjoyed these sessions, Yusra?

Yusra: I enjoyed them

AL: OK, what in particular did you quite enjoy?

Yusra: Ummmm

AL: Anything like that you found quite interesting? ….Yeah, if not, I can come back to you. OK right? Ingrid could you tell me how much you enjoyed these sessions?

Ingrid: I enjoyed them because we went to xxxx museum tour and we could talk with the people, we could talk with the people who passed away.

AL: You could talk with the people who passed away?

Ingrid: Not really, but yeah

AL: OK, OK.

Ingrid: There's like a phone that you pressed the button, then there's like. Some people from the Titanic that passed away like some years ago, and they recorded themselves on the TV and the TV for them recorded them and put it on the phone.

AL: Oh, so you could like you could hear their voices? So you enjoyed that too?

Ingrid: Yeah. And because I saw a piece of a lifeboat and some objects from the Titanic ship.

AL: Oh I might actually have to visit this museum! I've never been before. Cool. Kiran, can you tell me how much you enjoyed these sessions?

Kiran: I enjoyed them a lot and because I could find out like where they would sleep and you could see like they had like a toilet. Yeah, and they had like bunk beds and I could see like how they would live their lives.

AL: So that's third class, I'm guessing. Definitely not first class. OK, great, so that's really cool. And then lastly, Salma can you tell me How much you enjoyed these sessions?

Salma: Um...I didn't enjoy. I didn't like I was in the middle.....I liked when we went to the city museum because there was a space. Whether those are real, I could like Press that, I think....Where they connect you and would like to drive it and added the screen.

AL: Ah, cool, so it's like a simulator? So you had a wheel and you could pretend that you were the one driving?

Salma: Yeah yeah

AL: That sounds really cool. So when you were doing this work on the Titanic, did you find some sessions difficult or easy? Or somewhere in the middle, what did you find difficult? What did you find easy? So have a think about that..... So what did you find difficult or easy about these sessions? Have a little think. Go for it, Kiran

Kiran: Say I feel like it was a bit difficult where you would like, try to figure out where um like the lands um would be like. The building and how tall it was. So it was kind of a bit hard.

AL: OK, so like the scale of things, that's quite tricky? OK, that's fair enough. And anyone else

find that difficult, or anything different that you want to say?

Kiran: Yeah, a bit hard to like process that there's a fake funnel like there's one of the funnels in the Titanic is fake.

AL: Oh I had no idea

Kiran: Someone survived because they were like cleaning something and they'll clean the funnels and then when the like, during the ship or it's like, there's a ladder and he climbed the ladder and then he went on the lifeboat and he got saved.

AL: Whoa, Oh my goodness, I have no idea. That's so cool so that sounds super interesting, great. Anything else that we found difficult? Or any tasks or anything that you found difficult during your learning??

Yusra: I think everything was easy

AL: Everything was easy? Anything in particular that was super easy? …....No? …...just generally it wasn't difficult. OK, that's good to know. Ingrid, Salma? What you thinking... difficult, easy or somewhere in the middle?

Ingrid: It was it was easy as like when we learned about the Egyptians. It was fun and I liked it was easy.

AL: OK OK cool. And lastly, Salma, anything difficult, anything easy?

Salma: Some was difficult and some was easy

AL: OK, tell me one thing that was difficult or one thing that was easy.

Salma: I forgot

AL: OK, you forgot? Ok so we're somewhere in the middle that's fine, don't worry. So then my next question to you then is thinking about all...'cause it sounds like you learned a lot about the Titanic a lot. You're very, very knowledgeable on it, and I could. I had a look through your books as well, I can see there's lots that you've been doing, but what's something that you personally learned from these sessions?

AL: Ooh, Salma yes go for it

Salma: When we went to xxxx museum. One of the uh, workers, their, her wife.... There was a baby.... On the crib... And he, I think she died. I don't know, but yeah, but that was her wife's sister.

AL: Oh gosh, well, so. You learned about that story of someone on the Titanic? Amazing, great. Anyone else. One thing that you learned during these sessions?

Kiran: I think when we were like, there were like clothes and there was a lady and she'd pick people and you'd act and see how the age was and what job they would do.

AL: Ah, what based on what they were wearing? That's really interesting.

Kiran: Yeah. Like pick the clothes and like the hats and accessories for each person you think it is

AL: And then you could work out kind of who they were? Oh, that's fascinating. Amazing, great. Right, Ingrid? One thing that you learned from this.

Ingrid: Actually, the fact when I was at the museum, I saw a watch that it was found from the Titanic, that is that it freezed 'cause. The water was freezing cold and it was freeze at the time that the Titanic sunk.

AL: Oh wow, Oh my gosh, that's. That's something really memorable, isn't it? That's something you could see yourself. Wow, amazing.

Kiran: Yeah it was cold because there was an extra big iceberg and lots of people that tried to go away and try to swam away, but they couldn't

AL: Gosh, it's really sad, isn't it? Yeah, lastly Yusra, one thing that you've learned from this this topic, about the Titanic? What you thinking? ……..

Maybe I'll come back to you So when you were learning about the Titanic, if you could go back and change something or improve something to help you with your learning, what would that be? Ok think about it... oh, super speedy ok what are you thinking Salma?

Salma: There was like, underneath the boat there was a room....the water gone and there was. A little crack and.....They cracked but they clogged the cracks because [indistinct] so the people there.

AL: I would love to be able to go back to the time of the Titanic and fix that so that you know all those people didn't pass away, but sadly we can't go that far back. We're just talking about maybe when you're in class or when you were at the museum, if you think about all this work that you did on the Titanic. Is there anything that you would like to change to help with your learning?

Kiran: Maybe I should've done like a bit more details of lots of stuff. Like how they do their stuff.

AL: OK.

Kiran: Like if people had the same job, like how they would do their stuff do it differently. Like I could write a bit more

AL: OK, so maybe you want to learn a bit more about the people, maybe their stories or something and that could have helped - discussing those stories might have been able to help you learn a bit more about those people? Yeah, that's fair enough. OK, what about you guys? Anything that you can think of?

Ingrid: I wanna go back in time on the Titanic. There's a lot of people that died, and the third class passengers didn't have a lot of money. So if I was the captain, I would change the price of the tickets.

AL: Did you guys discuss and learn about the different like first class than third class passengers? Did you talk about that in in your classes?

Yusra: We talked about second class is.... second class ticket was 13 pound And third passenger, class ticket was £5

AL: That sounds quite cheap!

Yusra: Yeah, that's why lots of people like was more, like, wanted to book third class because it wasn't that much money

AL: Oh, I see, OK.

Ingrid: I kinda just want it like it to be like 1 pound? 'Cause I feel too bad for them

AL: That's true.

Yusra: I kind of feel, I want them to like have one like first class or like one third class because it's not fair like people in third class like they don't have luxury stuff like first class

AL: Yeah, that's true, that's true. So did you have a chance to talk about that in class? Like how each of the different like, types of passengers and the things that they had available to them, so was that quite interesting talking about in class? Yeah? Did you talk about it in your groups or with your teacher, or?

Yusra: In like, little groups

AL: Ok. Sorry Yusra, was there anything else you wanted to say? ………….

No? Ok that's all right. Fair enough. Sounds like it was a really, really good topic I must admit, and I really want to visit the museum now! So. My last question is. Is there anything? Else that you'd like to tell me about. You know when you're in class when you're you know, talking in your groups or talking with your teacher. Or is there anything else that you want to share with me? Yeah, Ingrid?

Ingrid: I think when we were in little group we talked about the third class passengers that they had a lot of noise in their rooms

AL: OK, alright, so did they have to share with other people? So it was quite noisy?

Ingrid: They had to share bathrooms.

Yusra: Yeah. It didn't flush, it was just there

AL: Ew! How many people had to share like 1? Bathroom do you know?

Yusra: I think it was more than 10.

AL: More than 10 have to share one bathroom? Oh my goodness. Oh, Salma's checking her book. Maybe there's some extra extra notes in there.

Kiran: In like, first class, they had like luxury sort of bars and they would go into at the top the ship and see like lots of stuff.

AL: Right, so they had a far more luxurious experience than in 3rd class?

Kiran: They wouldn't share a bed in first class [indistinct]

AL: Oh wow Kiran that's amazing. Salma, what were you going to say?

Salma: [indistinct]

AL: Oh my gosh, that's so interesting. So Salma was just showing me, so there were lots more third class passengers and they're the ones... most of those passengers were the ones who passed away....Right. Is there anything else that you'd like to share with me about this topic? Or are you happy with that? I've learned lots from you today.

Kiran: They like the first class passengers in their bedrooms. It's really big and they had like chandeliers and they would have like really sturdy beds. But in like third class all they would have is like a small room and just two bunkbeds and that's it AL: How do you know about this? Did

you see pictures or did you see this in the museum?

Yusra: Yeah, there was like even a swimming pool as well

AL: Yeah, Oh my. So you saw pictures of all these different classes?

Yusra: Yeah, and in the city museum we saw the classes

AL: Fabulous OK great so it sounds like you've done lots of work in class and then you've learned even more when you're at the museum

Ingrid: Yeah as we saw like on the floor. There was like a map of xxxx. And some people on the Titanic use to like, live around us like around the screen. I mean, they like basically lived here

AL: That's so amazing. Yeah you guys are part of a you know, a historical area. Being in xxxx that's really cool right? Let's leave it there then

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AL: OK, so now. I know recently you've been doing a lot on reciprocal reading and talking in class, right? So show me your books. What was the last thing that you did about reciprocal reading?

[indistinct] Hansel and Gretel, Egyptians.

AL: Right so What have you been doing with the Egyptians? Start me off. Right what's your name? Sorry I've forgotten already? Maya. Sorry Maya start us off

Maya: We learnt about Egyptians. And we wrote down all of these questions about books.

AL: What kind of, what about the books? Have you read them before or?

Amir: No, we were just like guessing.

AL: Guessing, oh

Amir: We were like making predictions and asking questions

AL: Oh that's all based on the cover? That's fantastic. [Indistinct]. OK, so tell me what's one of the questions that you, that you asked.

Amir: Where are they? How many? How many seasons? Why is there writing on the gravestone?

AL: Fantastic Amir. OK, so these are something, so you guys discussed these first in your group, and then you then you wrote those questions I'm guessing?

Amir: Yeah. We we just. We just like making questions on ourselves.

AL: Oh yourself? OK right got it OK Maya, what did you want to say?

Maya: I done why. Why is the why the man interviewing a dead man?

AL: I mean…It's a valid question, great. OK So what about you guys? So so you guys also did the same thing. OK so.

Michal: But yeah, that's different writing.

AL: Different writing? Or different questions I guess as well?

Michal: Yeah

AL: OK, so now Fahad. Tell me something else that you did during this this topic? or about the Egyptians as well? [pause] Or you know what else did you guys learn about the Egyptians? [pause] Ok go on then Amir

Amir: I know we write summaries.

AL: You wrote some summaries, OK?

Julia: Oh yeah. So on here, we were so basically 'cause there were like 2 writings of adventurer called Emily Sands that was going to Egypt to explore the pyramids uhm, yeah, but she said there's something more that she's like trying to like. All of the treasure in the world, yeah and she was looking for something really special but also on here, but it's just different writing and we were also talking about that,

AL: Fantastic

Julia: And it was also in the same year.

AL: So what were you talking about there? So Amir do you want to carry on?

Amir: So like we did it, there was is this. There's some other parts are the same here so. Is it the same thing? Yeah, but. Yeah, it's the same year.

AL: OK, fantastic

Amir: And she's an Egyptologist 'cause Egyptologists might discover stuff. And Egypt and like their other stuff.

AL: Cool cool fantastic thank you. Maya?

Maya: So before, before the Egyptians we learned about Hansel and Gretel. But before that this one was my favourite. We learned, we learned about rocks and-

Michal: Volcanoes

Maya: Yeah, and volcanoes yeah. And then we made this project on Chromebooks.

Michal: Well I got a new book so I can't show you

AL: That's alright

Fahad: Oh yeah. We did these

Julia: Yeah, and kind of like a presentation.

AL: Oh so you were talking about this?

Amir: Yeah, but like these papers were like bigger, this is Julia's

AL: So huge! OK what you did those as a group or individually?

[indistinct] individually well, yeah.

Michal: We learned about the soldiers as well

Lana: This is Julia's

AL: Ok

Michal: [indistinct] Because I wasn't here.

Julia: Yeah, that was mine.

AL: Wow oh, I see fantastic. So what about you Lana? What did you prefer, the rock stuff or the Egyptian stuff?

Lana: Uh, the Egyptian stuff

AL: And why is that?

Lana: Uhm, just because you get to see, you get to see there's more…. My question was that why is there a timeline and and it kept on going and going and going?

AL: Oh my goodness, so there's an awful lot that happened during that time, that's a good question.

Michal: I have 44 BC what's up?

AL: 44 BC? Oh gosh, that's a long time so that's over. Well over 2000 years ago. But yes, Maya?

Maya: So my favourite one was my favourite one was also well we we were doing 'xxxx at War' 'cause we getted to go under the tables

[indistinct] yeah, yeah

Maya: And we evacuated.

AL: Oh wow

Amir: Miss I also missed that 'cause that Friday I was in London doing my passport.

AL: Ah, never mind. Sounds like good fun though.

Maya: Also the soldier, because we went to classrooms and

Michal: And invaded

Maya: Yeah like 'this classroom is ours!'

AL: Oh, I see.

Maya: That was called the Romans

Julia: Yeah,

AL: What were you going to say?

Julia: It's basically like things that happened in the world like

AL: OK.

Julia: I forgot his name, but he had like a. Lot, lot of like wives?

AL: Henry VIII?

Julia: Yeah, yeah, and he ended up killing two

AL: Yes

Julia: And then one survived 'cause he died

AL: Right. So we're now, so it seems like you guys have done so much this year already, which is great.

Julia: Very fun stuff

AL: I mean, I'm quite jealous actually, it sounds like it's good fun in xxxx.

Julia: I love being in Year 4

AL: So my first question to you all is, could you tell me how much you enjoyed these sessions? Let's start go on then, Michal first.

Michal: Well they're OK yeah, some of them are more fun than others. And some of them aren't great.

AL: Yeah, that's all right OK? That's fair enough. Lana what about you? Can you tell me how much you enjoyed these sessions?

Lana: I enjoyed these sessions just because I liked Hansel and Gretel more. Just because like we get to talk about and this kind of thinking never give up and urm when I read Hansel Gretel, I read it to my sister and she likes it.

AL: Is she younger than you, I'm guessing?

Lana: Yeah she's in Year R

AL: Aw, she's tiny. That's very sweet. Lovely thank you for that. Julia, can you tell me how much you enjoyed these sessions that we've been talking about?

Julia: I really would like to know. I really, really like them, but like Michal said. Some of them aren't really great,

AL: Ok, ok

Julia: But like and I always like when Mr. Heap like ask questions 'cause we kind of go into detail,

like in one book there was like a bunch of stuff from other fairy tales. Yeah, and we just saw and we were like there was like the pumpkin from Cinderella, the shoes… like a bunch of things like that. Yeah, do you not remember that?

AL: Yeah, before it turns. Into the carriage, right?

Michal: Yeah, I've never watched that one

AL: Oh ok fair enough. Amir. Can you tell me how much you enjoyed these sessions?

Amir: Well I liked it 'cause it's interesting and I like interesting stuff, yeah? Some parts were like kind of boring,

AL

Yeah? That's fine, we'll talk about that later. Don't worry, that's fine, but so you're saying it's a mix? Is that what you're saying?

Amir

It was fun 'cause we done Roman stuff, I bought in a spear and it was fun 'cause we did a topic on Iron Giant, oh Iron Man

Michal: Oh yeah, that was fun.

Amir: Yeah oh and war, 'Southampton at War'. I built a Spitfire.

AL: That's really cool. Wait, out of what?

Amir: Paper, but it didn't fly!

AL: Fair enough, that's very cool. Ok. Maya. Can you tell me how much you enjoyed these sessions?

Maya: I enjoyed it very much and I really like when Mr Heap says we're gonna go out.

[indistinct] Yeah, yeah.

Maya: When we doing it like fun activities.

Julia: Yeah I liked that too

Maya: Yeah and I really liked that 'Southampton at War' and the Iron Man. And the Romans, they were really fun.

AL: Great, great and last but not least Fahad. Can you tell how much you enjoyed these sessions?

Fahad: I'm I think I enjoyed every single one. But yeah, I think I agree with Michal. Like some of them like are better than the others 'cause. I don't like writing a lot

Michal: Yeah I agree I don't like writing either

Julia: Yeah me either

AL: It's hard, there's a lot that you have to when you're writing

Fahad: Also, I loved the way we did the questions.

AL: Yeah that seemed really cool

Julia: I also loved the Romans, the volcanoes. And I've forgotten

[indistinct]: The Egyptians,

Amir: Yeah I could have asked my uncle to build me a volcano

AL: That'd be cool.

Amir: Yeah he wouldn't mind

AL: Ok. Next question and we need to wizz through some of these 'cause I realise it's very nearly home time. So right next question I know, did you find these sessions difficult or easy? OK, and depending on what you found, yeah, what did you find difficult or easy? So I'm going to start from this end now 'cause you guys started? Ok I'll start with Maya

Maya: Some are difficult some are easy. Difficulties are when we have to write down things 'cause sometimes I don't know what to write down

AL: Sure

Maya: and something that's easy. It's when we describe things and we do fun activities on on the topic of it.

AL: Fantastic thank you. Amir?

Amir: Uh, I think. Some parts are hard and some parts were easy.

AL: Such as?

Amir: Just like the questioning ones, when yeah, that was pretty hard 'cause I don't. I didn't add that much questions like this

AL: OK. What did you find easy then?

Amir: Uhhh

AL: Or not? Doesn't have to be…I can come back to you. Don't worry, don't worry, right.

Amir: It was world war two

AL: It was a bit easier?

Amir: Yeah, yeah

Maya: He got a new book I think

Amir: Yeah

AL: Cool. OK Julia, what did you find? Did you find these sessions difficult or easy? And what did you find difficult and easy?

Julia: It's somewhat easy, somewhat difficult. Some was like medium, like I could do it but not a lot.

AL: Give me an example of what's something that you found a bit difficult, bit tricky?

Julia: Umm…Iron Man 'cause as as Amir said, I can't really like describe things. When we were describing the Iron Man, yeah.

AL: So you're saying it is it's a bit hard to describe things. So Iron Man was a bit tricky?

Julia: Yeah, and like doing like a lot of writing, like a lot a lot. Yeah, 'cause my hand starts to hurt and then I was like, yeah?

AL: OK, that's cool. That's cool. Lana?

Lana: I think some stuff is easy and difficult because and stuff that were easy like describing stuff and different stuff they were easy and the ones that were difficult like making the sentence like properly like so Mr Heap can see it like properly made good.

AL: OK, yeah

Lana: And, and I like making the questions because you can think about it and you can look at the pictures.

AL: Right OK, interesting. Michal?

Michal: Um most of them are easy, some are medium-ly, like

AL: Yeah, ok give me an example?

Michal: I know it's in here 'cause I just saw it.

AL: Don't worry if you can't find an example, that's fine.

AL: What did you find difficult then?

Michal: Like writing like loads of paragraphs about volcanoes.

AL: Yeah, I can see. You guys worked hard. Yeah, OK, that's fine. And then lastly, hold on, Fahad? Things that you found difficult and easy?

Fahad: I found every session difficult and easy.

Michal: Huh?

AL: OK, tell me. Why is that? What happened there?

Fahad: Well, because in some of the lessons, um, a little bit was hard and little bit was like easy

AL: Ok so what's the easy bit and what's the hard bit?

Fahad: The hard bit was writing 'cause I hate writing

Michal: Same!

AL: OK.

Fahad: And easy bit was just… reading or listening or looking.

Michal: Is it home time now?

AL: Not yet, not yet.

Michal: In about 30 minutes?

AL: Yes. OK, we're gonna move on to the next question, lovely so.

Fahad: I just got one thing

AL: Go on then, very quickly.

Fahad: There's something else hard 'cause a lot of this tinderbox story I wrote two whole pages.

AL: Oh my goodness me that is a lot

Lana: What I think that I find difficult is handwriting because I try to do good handwriting, but sometimes I get stretched.

AL: Yes, I get that. So now tell me, have a think beforehand. What did you learn from these sessions? OK, so have a little think, and then we're going to go to Amir first

Amir: Uh, we learn new stuff 'cause some of this stuff, I don't know. Like other stories, I don't know Hansel and Gretel

AL: Oh, Hansel and Gretel, some of the fairy tales? Ok, cool. Julia? What did you learn?

Julia: I learn like, what was I gonna say? Oh yeah, so. Uhm these sessions. Yeah like they help me learn like things like on how to do like more questions.

Michal: Describing…

Julia: Yeah, describing

AL: Ok. So you're talking about skills? So like describing things, that's a skill as he said. That's what you've been learning?

Julia: Yeah, but like paragraphs,

AL: Yeah, yeah.

Julia: Like they help me like do more

AL: That's fantastic, great. Lana?

Lana: [Indistinct] we were doing Hansel and Gretel yeah. And and we're doing please. And that made me made my sentence go like good at. And it made my handwriting like better and and when we did the other book. And it made my handwriting and my sentences even better.

AL: Great, so what you learned from this was how to construct good sentences. And you were learning like to develop your handwriting as well?

Lana: Yeah,

AL: Great, those two things. Michal. What did you learn from these sessions?

Michal: I could describe better and that's it

AL: OK that's fine, Fahad and Maya?

Maya: I learned about the olden days.

AL: Ok

Maya: And I learned how to do good handwriting, but I still still learning how to do it. And I can ask, I know how to draw.

Michal: Same

Maya: And now I'm a little bit good at drawing.

Julia: I'm very good at drawing

AL: You got plenty of time to develop that so.

Michal: I draw so well as well.

AL: So don't worry, last but not least, Fahad? Things that you learned?

Fahad: You know about Iron Man? I learned about, yeah, the iron man

AL: What about the Iron man though? What did you learn about the iron man?

Fahad: Iron. Giant, and….[pause]

AL: Ok cool, so you learnt about that story?

Fahad: And the Romans, I learnt about the Romans

AL: So you learn basically new knowledge, new topics? Is that what you're trying to say?

Fahad: And then in Egyptians, I learned about the Egyptians.

AL: Fantastic, great. OK so when you guys said sometimes you had, you know sessions that you really, really enjoy, but there's sometimes there were ones that were not great. So think about those ones. Maybe. And is there anything that you would change or improve, to help with your learning in these sessions? So we'll start with Amir.

Amir: Probably….think what I wanna write before, 'cause sometimes I make a lot of crosses. And… practice more. At home. But I don't have any time.

AL: Ok. Fair enough. Julia? So if you were able to, what things would you want changed or improved, to help with learning in your session?

Julia: Like, uh, most like more sessions of things like turned into games. So yeah, you don't have to like write for like half an hour just like random stuff.

Michal: Yeah, yeah. Same thing.

AL: Like what?

Michal: So yeah, like. A book that you know, but you're just summarising it.

AL: Sure, well as in like, talking it, talking about it verbally or writing it?

Julia: No, yeah writing it.

AL: Ok

Julia: Yeah. Stuff like that.

Michal: I don't like writing either

AL: OK great, Lana. What about you? What things would you want changed or improved to help with your learning in these, in your lessons?

Lana: I would practise and. I would try to make it even better.

AL: So I'm saying about in these lessons. If there was any element of these lessons that you would want Mr Heap to change, or you'd want something to change in that classroom, what would you say that's what needs to be improved?

Lana: Like if I wanted to change one of my sentences, I would like try, I would think what I want to do first and then write it down.

AL: OK, great so focusing on what you need to do and knowing that, great. Michal. What things do you think could change or improve to help with your learning in your lessons?

Michal: More playtime.

AL: More play times!

[laughter]

AL: OK, but what could you do in the classroom, 'cause you don't have playtime in the classroom?

Michal: Sometimes you do

AL: Sometimes, only if it's like wet break or something, yeah. But what could change or improve?

Michal: Uh, I don't know

AL: You're not sure. So are you happy with how things are at the moment? Like,

Michal: Kind of

AL: Kind of. That's fine, yeah. Fahad? Oh no, Maya?

Maya: What's the question?

AL: So the question is if you could, what things would you change or improve to help with the learning in your classroom?

Maya: My handwriting and my maths

AL: OK, what about maths? How could maths change or how could it improve to help you?

Maya: Be more easier

AL: How, in what way?

Michal: Like easier questions?

Maya: Yeah, that sounds good.

Amir: More practice

Maya: Yeah, yeah.

Michal: I'm very good at maths.

Maya: And, uh. Well, I kind of like bigger numbers. And um. My handwriting is sometimes too big and sometimes too small. I can't make it medium

AL: That's all right. Don't worry, you've got plenty of time to sort that out. Fahad... So is there anything that you think could be changed or improved to help with learning in your classroom?

Fahad: Am I last one?

AL: You are the last one.

Fahad: Learning.

AL: How? This is good. But how?

Fahad: I don't know

AL: You don't know? Learn through maybe through different things or like?

Michal: Different subjects?

Fahad: Yeah in like English

AL: Ok, last question. Is there anything anyone wants to talk about, or share with me, or anything you want to say about when you're learning in class?

[indistinct] No thank you, no

AL: Ok, we'll leave it there now

AL: OK, right Rabbits. So we've got Jamal, Hafsa, Nina, Hanna and Virat, Right? OK, so. Have a look at these pictures. Jamal can you see from there? OK, right, so the first question I want to ask you when you've got to do a task or an activity... *[AL points to each image in turn]* Do you like doing that job on your own? Do you like doing that with a partner or do you like doing that in a small group? What are you guys thinking...hold on, Jamal, what you thinking?

Jamal: In a group

AL: Why is that?

Jamal: 'cause I I I like when my friends helped me.

AL: Yeah, that's great. Hafsa, what about you? How do you like working when you've got a job to do? What do you prefer?

Hafsa: A partner

AL: OK, why is that? Why do you like working with a partner?

Hafsa: 'Cause when it's loads of people with me. It's hard because then they just carry on and then they just. I don't know what they're doing because they're all doing it in a different way. But if I have, if it's two partners, I can work with one person and it would, I can just listen to that person only.

AL: That's great, that's great. OK Nina, what about you?

Nina: I like by my own. And with a partner and in a small group

AL: Which one do you do you like best, if you had to choose?

Nina: On my own 'cause I know what I'm doing

AL: Ok. That's fair enough. What about you?

Hanna: I like...I like in myself

AL: Why is that, Hanna?

Hanna: Because people are writing on my work.

AL: Oh OK, so you don't like that? That's fair enough. And Virat, lastly?

AL: Lastly, how do you? How do you like working?

Virat: I like working on my own because I find that hardest

AL: Oh ok. So your next question, when you've got your teachers. When you got Mrs [xxxx], or another grown up that you're working with. [*AL points to each image in turn*] Do you like working with your teacher on your own? ... Do you like working with your teacher in a small group? Or do you like it when you are all working together as a class with your teacher? So have a little think and we'll start this way first. Virat, what are you thinking?

Virat: I like it when we learn with our teacher in a whole class

AL: Ok, and why is that?

Virat: Because then we all have nice ideas and the people have my and the people who have nice ideas they can share it to us and give us nice ideas

AL: That's lovely! So when you're all together in a class you can share nice ideas with each other? Great. Ok what about you Hanna?

Hanna: Ah, I like in small group because people can help me with my learning.

AL: Great, fantastic. Nina?

Nina; I like with with my only teacher because ...

AL

...So you like working on your own with your teacher, any reason why?

Nina: I just do

AL: You just do, OK. Hafsa, what about you?

Hafsa: I like doing it with the whole class because when I feel a bit worried I can tell my friend.

AL: Ah, and then maybe your friend can help you?

Hafsa: Yeah, and if they don't know what to do, I can ask my other one, or if none of them knows and its one less and then if that person knows then I'll feel happy again.

AL: Alright, fabulous and Jamal what about you?

Jamal: I like a smaller group with a teacher

AL: Why's that?

Jamal: 'Cause um so we can work together.

AL: Nice fantastic. OK, so I know in topic you did some work with pancakes recently.

Nina: Yeah, we did!

AL: Can you show me? Where you did some work... I think you guys made pancakes or like you designed them,

Jamal: *[points to photo of his pancake]* This one!

AL: My goodness they look so yummy. OK so I know you read a story about a boy called Alfie and then you designed. Some pancakes and then you designed some pancakes, and then you made them right? So what did you like about these lessons?

Hafsa: Well, no, we were doing their toppings. I really want to do more.

Hanna: {*flicks through her book]* Pancakes!

Virat: No, not pancakes doing some cakes or desserts, making desserts.

AL: So you liked making desserts in class, OK fabulous. Hanna. What about you?

Hanna: I like doing my pancake because it was yummy.

AL: So you liked that it was yummy food that you had in the classroom, OK?

Hanna: And it was Alfie. It was healthy also.

AL: Oh, that's nice. Yeah, that's really important, isn't it? Yes, Virat?

Virat: It would be nice if we shared all of our pancakes with Alfie. We could taste them with Alfie.

AL: Oh yes, lovely yeah.

Hanna: *[points to pile of books on the side]* Why is that book's so big?

AL: I don't know they're not mine, so I don't know. Right, so Jamal, what did you like about these lessons?

Jamal: Uhm, I liked making the faces.

AL: Fantastic, yeah so what did you-

Hafsa: I liked about making it and eating it.

AL: Yeah, and Nina what? About you, what did you like about these lessons?

Nina: I liked about it because it's healthy.

AL: Yeah, so so you were learning about Alfie and you were designing them and you were

thinking about healthy choices. What did you learn from this? Hanna?

Hanna: I learned that you have to eat healthy food.

AL: OK, you need to, you learned that you need to eat healthy food. Yes, Nina, what did you learn?

Nina: I learned from...We have to share

AL: We have to share? That's a good thing, isn't it? Anyone else want to say anything? *[pause]*.No? OK, the next question I have for you. Is did you find anything tricky? So when you're in class what do you find tricky?

Hanna: I found tricky doing math because I I whisper to my friend to help me.

AL: I mean, that's good, that you're asking somebody to help you. Definitely. What about you Jamal? What do you find tricky when you're in class?

Jamal: Uhm. Nothing

AL: You find nothing tricky, nothing hard? Okay. What about you Virat?

Virat: I also don't really quite find anything that hard.

AL: OK, maybe your teachers need to find something challenging for you guys to do! What could they give you?

Hanna: I wish I could make something again sweet uh, a lollipop.

AL: Yeah, yeah.

Virat: They can give us numbers writing to 100 in just 30 seconds.

AL: Oh wow, yes, so they could give you some activities to give you a bit of a challenge, OK?

Hanna: Mrs Chapman gives us a number square.

AL: OK fantastic. Hafsa and Nina. What do you find tricky or hard when you're in class?

Hafsa: I found it hard when I'm when it's all muddled up and I don't know which one is where. I should put them in that.

AL: What's muddled up, sorry?

Hafsa: All the numbers are muddled up, that makes it tricky

AL: Ok Nina, what about you, what do you find hard? No? OK, right don't worry. So now the other thing I would ask you. If you could change anything to make things easier for you, what would you change? Yes Nina?

Nina: I would change...uhm I would change the toys

AL: You would change the toys. What kind of toys would you want?

Nina

Uhm, I would want a rainbow.

AL: A rainbow? You mean a toy rainbow? You might have to ask Mrs.[xxxx], I'm not sure!

Nina: Or a pet rainbow!

AL: Oh I'm not sure! Fantastic OK, Virat, what would you change?

Virat: I'll change my old toys for some new school buses.

AL: Oh for? For [school name] you'd like a school bus?

Virat: Yeah! I'm far away from school.

AL: Ah ok ok hold on. Hafsa's got something to say. Yes Hafsa, what would you change?

Hafsa: I would change the books to pop up books.

AL: Oh yeah, pop up books are cool. Yeah, that's. nice.

Hanna: What are pop up books?

AL: Pop up books are like, when you open up a page and something comes out of the page

Hanna: Oh I like that

Virat: If Hanna lives very far from this school, I can ride her in my school bus.

Hanna: Well he lives near the school

AL: Ah, well there you go. Jamal, what about you?

Jamal: I would say I really want to do change so we could not wear school uniforms and go on school buses

AL: School buses so you want to go on some more school trips?

Hafsa: I wanna go on a school when we go with the bus is in the zoo

AL: That's cool, very exciting. Nina, last thing?

Nina: I want a rainbow to be tiny and I will be tiny and I can sleep in bed in the rainbow.

AL: OK! Lots of rainbows!

Hanna: I wish I could be a baby to sleep all night. I don't want to go to school.

Virat: I want, I also want to change my pillow for a nice cosy tiger sleeping bag.

AL: OK, I think we are going a little bit away from what we were talking about, so I just want to say is there anything else that you want to tell me about when you're in the classroom when you're learning?

Nina: In the classroom, I would learn about rainbows.

AL: I bet you would. I mean, you might have to ask Mrs [xxxx]. Maybe she can give you a lesson!

Virat: So Hanna, which dessert do you like?

AL: So you want to learn more about desserts?

Virat: But what dessert do you like?

Hafsa: What dessert?

Jamal: Chocolate!

Hafsa: Like ice cream, biscuits, cupcakes?

Jamal: Snickers?

Hanna: My favourite is ice-cream.

AL: Oh, that's very cool

Hanna: Then I want to make ice-cream for you!

AL: Aw, that's very kind of you. OK so then I think we'll leave it there.

AL: Alright. OK so where you've got an activity to do *[points to each image in turn]* do you like doing it on your own, do you like working with a friend, or do you like working in a group? So have a think first. *[pauses]*. When you're doing something in class which way do you like working? OK, so let's start with Sita first.

Sita: I like to work with the partner because my friend is Phoebe and I work with Phoebe. I sometimes work other children

AL: OK.

Sita: So I sometimes I work like that.

AL: OK, so you like working with your friends?

Sita: Yeah and I I love working with [xxxx] and I sit here and [xxxx] sit here.

AL: OK great. What about you boys? Do you like working on your own with a partner or with a group?

Imran: I think I think I love working with.

Sita: With.......with children

AL: So you like working in a group? With other children? OK Yusuf, what about you?

Yusuf: Me and Filip, I like to be in a.... part with a partner

AL: So you like working together as partners when you're doing an activity? Ok What about you, Natalia, yeah, what do you think? OK.

Natalia: I working on my own because then I persevere more and persevere more and help me with writing

AL: Wow, you persevere, that's such a big word, oh my goodness! Ok so Filip do you like working on your own or with a partner, or in a group?

Filip: A group but when I'm sad, you know and I don't wanna playground I do my work on my own. I want to do.

AL: OK, so you like working on your own sometimes? OK. So now this is the next question. When you when you've got Miss [xxxx] is in the classroom. Do you like working on your own with her? Sita, are you having a look? Do you like working on your own with her?

Filip: No

AL: Have a listen first.[*points to each picture in turn*]. Do you like working on your own with your teacher, or do you like working with your teacher in a small group?

Yusuf: Yes

AL: Or, altogether working as a class? Sita, you tell me first.

Sita: I love it when I worked with her. This meeting with my teacher and I love it because when I'm like I don't know the question, she helped me all the time and she can she gives. Or when I want something.

AL: Ok, great. What about you Imran?

Imran: I like working in a big group because then then we can check which answer right or which answers wrong. But I wish all them answers right and then we can, we can learn all together about science and math.

AL: OK. Nice, that's great. Yusuf, what about you?

Yusuf: I like working in a small group because. Me and Filip when we, when we are in a small group we can, he can. We can talk to each other if we have answers wrong.

AL: Oh, OK, so if you if you sometimes get the answers wrong, you can talk about them. And then make them right?

Yusuf: Yeah

AL: How do you like working with your teacher?

Filip: Sometime I like in a small group, sometime I like in a big group

AL: Why is that?

Filip: Uhhh. Maybe. Maybe like. I know how to do [indistinct]. I don't know but Yusuf help me that much better

AL: That's nice, so Yusuf would help you, and that helps you get better? That's lovely. Natalia, what about you? How do you like working with your teacher?

Natalia: I probably like to work in a whole class or something with the teacher but my favourite one is work with the teacher

AL: On your own?

Natalia: Yes

AL: And why is that?

Natalia: She, because she always helps when I have a problem with writing

AL: Oh, that's lovely. So your teacher can help you. So you like working with her on your own best?

Natalia: Yes

AL: OK, right, so that was really really good, right? So your next question is, I know in topic you've been doing some work with pancakes, haven't you right? Can you show me what did you do with pancakes?

[Indistinct]

AL: Let's see what did you.... Did you make pancakes?

Natalia: Well, I made a pancake pancake.

Yusuf: My ingredients I I had a special recipe, I my special recipe was yoghurt and jam and strawberries, bananas and jam.

AL: That sounds delicious.

Yusuf: And then and then banana!

Filip: Mine was have something special on it. Then we make something from some strawberry, banana.

AL: Hold on, let me listen.

Filip: Strawberry yogurt, many jam and then more banana

AL: Yeah,

Filip: And then something like that. And then we make it delicious!

Yusuf: Oh so I forgot. It's made out of batter

AL: OK. So so Imran, what were you going to say about your pancake? What did you enjoy about doing this?

Imran: I had some blueberry that I hide under the bananas and I have some bananas and some yogurt and I did use some jam.

AL: OK,

[Indistinct chat – children]

AL: So I know you or you read a story about a boy called Alfie didn't you? And what was what was happening there? Did you talk about that?

Yusuf: A healthy pancake for Alfie

Filip: But Alfie didn't eat it us, us eat it

AL: Ah, that's right you all ate it?

Natalia: I didn't remember because it's not in my book

AL: That's alright, so you first *[points to each in turn]* you designed your pancake and then you made it, and then you and then you talked about it, right? So it looks delicious. Then of course you ate it, of course. So, my question to you is when you were doing these topic lessons about the pancakes, what did you enjoy about it?

Sita: My favourite thing was eating and making it and my top was banana, strawberries blueberries and some yoghurt and some jam. And I mixed it all up. And then I ate it. And then Phoebe sitting next to me and we both made the same one and I enjoyed it.

AL: Lovely, so what did you learn from these lessons?

Yusuf: Well, I learned about this is to how to make a pancake. Now I can go home and make a pancake for my mum and my dad and my brother and my sister and everyone in my family and even my grandpa and my grandma, but my grandpa died but I still have my grandma.

AL: Ah that's so sweet, so now you've learned how to make it and you can make it for everybody in your family!

Yusuf: Yeah, but not my grandpa because he died, he's in Jannah.

AL: Oh, I'm sorry to hear that.

Imran: I think you got two

AL: What did you learn?

Imran: I learned that it's pretty hard to make a pancake because my... I don't have a pancake slice... and I don't have a pancake. I pretty loved the yoghurt and bananas. I did like the Blueberries little more because they were kind of tasty.

AL: I understand. So Natalia, what did you learn from these lessons?

Natalia: I learn how to make a pancake and persevere with writing.

AL: Wow, yes I can see you did some writing. It's beautiful.

Natalia: I really persevered but I forgot the finger spaces

AL: Oh, that's all right. That's all right. OK, so uhm, now your next question is when you're in your class and I know you do lots of stuff. Yes?

Imran: I did a lot of writing. I worked for that for 100 days!

Yusuf: No!

AL: Oh ok. So listen, my next question. My next question is when you are in class, what did you find hard?

Sita: I finded it hard to like draw fish and when we were drawing a fish and I looked hard when [Teacher L] said try 2 sentence of fish. Does have legs or does fish have beak? And it looks tricky and it it and it has like question marks and then we need to sort it out. Is there full stop or a question mark?

AL: Ah, so you find the writing quite hard? OK, Yusuf, what about you? What do you find hard when you're in class?

Yusuf: What I find hard is trying to do my capital letters like this [shows book] and because sometimes I do my name wrong because I didn't do a capital letter that makes my name think it's not even name.

AL: Yeah OK. Imran. What about you?

Imran: I found I found the....

AL: What do you find hard?

Imran: 'Zedd' hard because I keep doing it wrong. My my Zedd was too big so it accidentally go to my writing.

AL: OK, and Filip, Natalia. What do you find hard when you're in class?

Natalia: I I found nothing was hard for me!

AL: Nothing was hard? Oh wow.

Natalia: Only the finger spaces were tricky in all of the writing.

AL: Ok Filip, what about you, what do you find hard when you're in class?

Filip: I found hard doing capital and doing finger spaces.

AL: Yeah, they can be tricky.

Filip: I keep forgetting.

AL: What do you mean?

Filip: I keep forgetting to do them.

AL: Oh, you keep forgetting to use them. OK, another question now if there was something that you could change when you're in class, what would you change?

Yusuf: I would change if my pancake was bad and it tasted bad. I would reset it and do it all over again.

AL: Oh OK, what about you guys?

Children: [Indistinct]

AL: Hold on,

Filip: To write ...for me, to write a lego car. [indistinct] I didn't get one and another and another.

Sita: Like my blueberries?

AL: OK. Right. We will leave it there.

Appendix N.i: Codebook – first round of coding

Year 1 interviews	Year 4 interviews
Challenging myself	Building on each other's responses
Clarifying learning	Contextualised learning
Collaborating with others	Developing literacy skills
Confidence to express thoughts	Difficulty with abstract ideas
Difficulty group work	Difficulty with task
Difficulty with task	Engaged learning
Engaged learning	Learning related to pupils' lives
Listening to others	Meaningful reflection beyond self
Making connections with learning	Opportunities to talk
Meaningful reflection beyond self	Possible reluctance to answer
Possible reluctance to answer	Pride in work
Pro-group work	Recalling learning
Pro-partner work	Recognising differences
Pro-solo work	Referring to group work
Self-motivated learning	Referring to peer work
Support from peers	Self-motivation
Support from teacher	Self-reflecting on learning
	Teacher response

Appendix N.ii: Codebook – second round of coding

Name	Description
Challenges with developing literacy	Challenges with aspects of writing/text: composing ideas, transcription, constructing sentences etc.
Collaborative group work	Pupils share their opinion on working in groups, with their friends, teachers etc.
Confident conversations	Children express their thoughts, listen to what peers are saying, and build on each others comments.
Engaged learning	Children share what they enjoyed and were directly involved in their learning experiences.
Learning related to children's lives	Children recognise how aspects of their classroom learning can relate/draw upon their lives
Pair work	Children share thoughts on why they like working with a partner in class
Possible reluctance to answer	Instances of pupils giving no/limited responses
Recalling learning	Children refer to previous learning and share this openly (related to stimulated recall materials)
Reflecting on learning	Children make reference to previous learning and consider/clarify/analyse these experiences
Self-motivated learning	Children express awareness of what they can do to further develop their learning
Teacher support	Children make reference to teacher practice: whole-class teaching, small group work, feedback
Thinking about others	Children demonstrate meaningful consideration of others (beyond themselves) through their classroom learning

Appendix N.iii: Codebook – third round of coding

Name	Description
Engagement	Children share their enjoyment and direct involvement in learning experiences, as well as how learning has sometimes related to their own lives
Engaged learning	Children share what they enjoyed doing in class and how they were directly involved in their learning experiences.
Recalling learning	Children refer to previous learning and share this openly (related to stimulated recall materials)
Relatable learning	Children recognise how aspects of their classroom learning can relate/draw upon their lives
Challenges	Challenges with developing aspects of literacy/writing/text: composing ideas, transcription, constructing sentences etc.
Abstract thinking	Pupils refer to difficulty in thinking/responding to things in lessons which are not concrete/tangible.
Awareness	Pupils recognise they find an aspect of classroom learning difficult
Composition	Refers to generating ideas to help structure speech and/or writing
Transcription	Reference to difficulties with handwriting and/or spelling
Collaboration	Children share thoughts on how they work with others, e.g. pairs, groups, friends, adults etc.
Group work	Pupils share their opinion on working in groups, with their friends, teachers etc.
Pair work	Children share thoughts on why they like working with a partner in class
Teacher support	Children make reference to teacher practice: whole-class teaching, small group work, feedback
Reflection	Children express meaningful awareness of others, improving their learning and analyse/clarify previous learning experiences
Reflecting on learning	Children make reference to previous learning and consider/clarify/analyse these experiences
Self-motivated learning	Children express awareness of what they can do to further develop their learning
Thinking about others	Children demonstrate meaningful consideration of others (beyond themselves) through their classroom learning

Appendix O: Stimulated recall images

When you have an activity to do - do you like….

- Working on your own?
- Working with a partner?
- Working in a group?

When you are in class – do you like….

- Working with just your teacher?
- Working in a small group with your teacher?
- Working as a whole class?

HEADTEACHER INFORMATION SHEET

Research Project:	Talk Rich Teaching
Researcher:	Aniqa Leena (a.t.leena@pgr.reading.ac.uk)
Principal Investigator:	Dr. Naomi Flynn (n.flynn@reading.ac.uk)

Dear headteacher,

I am currently undertaking Doctoral studies in Education at the University of Reading. I am writing to invite your school to take part in a research project about how teachers can support pupils in the classroom, particularly pupils who speak English as an Additional Language (EAL). Your school is being invited to participate because it is due to receive professional development training based upon the 'Enduring Principles of Learning' (EPoL). The current research project complements EPoL by examining the impact this change in pedagogy has on pupils' language and literacy skills.

What does the study involve?

Over the course of the study I would be expecting to do some tasks with pupils, on the premises and during the school day. These include:

- Administering listening, reading, writing and vocabulary tasks with all pupils in each specified class group, taking no longer than 75 minutes for all four tasks to be completed. This would be arranged with teachers to take place at a mutually convenient time and organised to ensure minimal disturbance to learning.

- Conducting a spoken English task with EAL pupils only, with their response audio recorded and later transcribed for analysis. This would require a quiet space outside the classroom to complete, take no longer than fifteen minutes per pupil and be on a 1:1 basis. This again, would be arranged with teachers to ensure minimal disruption.

- Conducting focus group interviews which would aim to elicit their thoughts on the change in pedagogy and reflections on their own English language/literacy development. Each session would take up to thirty minutes, be arranged with teachers beforehand and take place in a quiet space within the school. These interviews would also be audio-recorded and transcribed. Pseudonyms would be applied during transcription to ensure pupils' anonymity.

- Requesting all participating pupils' data held by the school, such as assessment and attainment levels, languages spoken at home by pupils and proportion of pupils with SEND and/or eligible for Pupil Premium. This information would be useful in providing contextual background on participating schools.

Pupils would attempt these language and literacy tasks on two occasions, during the academic year 2021-22. These would take place in the late autumn and summer terms. The tasks have been specially designed to be teacher-friendly and consider the EAL learner. The focus group interviews would require one session with each pupil group and would take place in the summer term.

What will happen if the school takes part?

With your agreement, participation will involve us selecting one class group in **Year 4.** We would send an information letter and leaflet home to ask parents/pupils for their consent to participate in the project. Teachers would also receive an information letter and also be asked for their consent in taking part. Upon receiving consent from all relevant parties, I will begin carrying out the tasks outlined above.

Do the school have to take part?

It is entirely up to you whether you give permission for the school to participate. You may also withdraw your consent to participation at any time during the project, without any repercussions to you or the school, by contacting me using the details above.

What are the risks and benefits of taking part?

To the best of our knowledge, there are no risks associated with taking part in this study. Your pupils' engagement with the tasks will remain confidential and only seen by the research team. Neither you, the pupils, nor the school will be identifiable in any published report resulting from the study. It is hoped the knowledge we gain from this study will help inform our understanding of effective classroom practice, which may help us support other pupils in the future. An electronic summary of this study's findings can be made available to you by contacting me on the details above.

What will happen to the data?

Any data collected will be held in strict confidence and no real names will be used in this study or in any subsequent publications. The records of this study will be kept private. No identifiers linking you, the pupils or the school will be included in any sort of report that might be published. Pupils will be assigned a number and will be referred to by that number in all records. Research records will be stored securely in a locked filing cabinet and on a password-protected computer and only the research team will have access to the records. The data will be destroyed securely once the findings of the study are written up, after five years.

The results of the study may be presented at national and international conferences, and in written reports and articles. Additionally, this project has been reviewed following the procedures of the University Research Ethics Committee and has been given a favourable ethical opinion for conduct. The University also has the appropriate insurances in place. Full details are available on request.

What happens if I change my mind?

You can change your mind at any time without any repercussions. If you change your mind after data collection has ended, we will discard the school's data.

What happens if something goes wrong?

In the unlikely case of concern or complaint, you may contact my supervisor, Dr. Naomi Flynn, by email on n.flynn@reading.ac.uk

What do I do next?

If you are happy for your child to take part in this research project, please complete the consent form and return this to the email address listed at the start of this letter. Thank you for your time.

Yours faithfully,

Aniqa Leena

HEADTEACHER CONSENT FORM

Research Project:	Talk Rich Teaching
Researcher:	Aniqa Leena (a.t.leena@pgr.reading.ac.uk)
Principal Investigator:	Dr. Naomi Flynn (n.flynn@reading.ac.uk)

I have read the information sheet about the above research project and received a copy of it. I understand what the purpose of the project is and what is required of me. All my questions have been answered.

❑ I consent to the involvement of my school in the 'Talk Rich Teaching' project.

Name of headteacher: _____   Signed: _____

Name of school: _____   Date: _____

TEACHER INFORMATION SHEET

Research Project: Talk Rich Teaching

Researcher: Aniqa Leena (a.t.leena@pgr.reading.ac.uk)

Principal Investigator: Dr. Naomi Flynn (n.flynn@reading.ac.uk)

Dear teacher,

I am currently undertaking Doctoral studies in Education at the University of Reading. Your school has very kindly agreed to take part in a research project about how teachers can support pupils in the classroom, particularly pupils who speak English as an Additional Language (EAL). You have been invited to take part because you are due to receive professional development training based upon the 'Enduring Principles of Learning' (EPoL). The current research project complements EPoL by examining the impact this change in pedagogy has on pupils' language and literacy skills.

What does the study involve?

Over the course of the study I would be expecting to do some tasks with pupils, on the premises and during school hours. These include:

- Administering listening, reading, writing and vocabulary tasks with all pupils in each specified class group, taking no longer than 75 minutes for all four tasks to be completed. This would be arranged to take place at a mutually convenient time and organised to ensure minimal disturbance to learning.
- Conducting a spoken English task with EAL pupils only, with their response audio recorded and later transcribed for analysis. This would require a quiet space outside your classroom to complete, take no longer than fifteen minutes per pupil and be on a 1:1 basis. This again, would be arranged to ensure minimal disruption.
- Conducting focus group interviews which would aim to elicit their thoughts on the change in pedagogy and reflections on their own English language/literacy development. Each session would take up to thirty minutes and take place in a quiet space within the school at a mutually convenient time.
- Requesting pupil data held by the school, such as assessment and attainment levels, languages spoken at home by pupils and proportion of pupils with SEND and/or eligible for Pupil Premium. This information would be useful in providing contextual background on participating schools.

Pupils would attempt these language and literacy tasks on two occasions during the academic year 2021-22. These would take place in the late autumn and summer terms. The focus group interviews would require one session with each pupil group and would take place in the summer term.

What will happen if I take part?

With your agreement, we would ask you to send information letters to the parents/guardians of all pupils in your class, for their consent to participate in the project. Once consent is received, I would appreciate your assistance in a) identifying the EAL learners you work with and b) finding mutually convenient times to begin carrying out the tasks outlined above.

What will happen if I take part?

With your agreement, participation will involve us first sending an information letter and leaflet home to give parents/pupils an opportunity to opt-in to the research project. Upon receiving consent, I will begin carrying out the tasks outlined above. As such I would require the pupils for the times listed above and would appreciate your assistance in identifying the EAL pupils in your class.

Do I have to take part?

It is entirely up to you whether you participate. You may also withdraw your consent to participation at any time during the project, without any repercussions to you or the school, by contacting me using the details above.

What are the risks and benefits of taking part?

To the best of our knowledge, there are no risks associated with taking part in this study. Your pupils' engagement with the tasks will remain confidential and only seen by the research team. Neither you, the pupils, nor the school will be identifiable in any published report resulting from the study. It is hoped the knowledge we gain from this study will help

inform our understanding of effective classroom practice, which may help us support other pupils in the future. An electronic summary of this study's findings can be made available to you by contacting me on the details above.

What will happen to the data?

Any data collected will be held in strict confidence and no real names will be used in this study or in any subsequent publications. The records of this study will be kept private. No identifiers linking you, the pupils or the school will be included in any sort of report that might be published. Pupils will be assigned a number and will be referred to by that number in all records. Research records will be stored securely in a locked filing cabinet and on a password-protected computer and only the research team will have access to the records. The data will be destroyed securely once the findings of the study are written up, after five years.

The results of the study may be presented at national and international conferences, and in written reports and articles. Additionally, this project has been reviewed following the procedures of the University Research Ethics Committee and has been given a favourable ethical opinion for conduct. The University also has the appropriate insurances in place. Full details are available on request.

What happens if I change my mind?

You can change your mind at any time without any repercussions. If you change your mind after data collection has ended, we will discard the school's data.

What happens if something goes wrong?

In the unlikely case of concern or complaint, you may contact my supervisor, Dr. Naomi Flynn, by email on n.flynn@reading.ac.uk

What do I do next?

We do hope you will agree to participating in this study. If you are happy to take part, please complete the consent form and return this to a.t.leena@pgr.reading.ac.uk or, return the consent form to the school office/reception at your earliest convenience.

Aniqa Leena

TEACHER CONSENT FORM

Research Project: Talk Rich Teaching

Researcher: Aniqa Leena (a.t.leena@pgr.reading.ac.uk)

Principal Investigator: Dr. Naomi Flynn (n.flynn@reading.ac.uk)

I have read the information sheet about the above research project and received a copy of it. I understand what the purpose of the project is and what is required of me. All my questions have been answered.

❑ I consent to participating in the 'Talk Rich Teaching' project.

Name of teacher: _____   Signed: _____

Name of school: _____   Date: _____

PARENT/GUARDIAN INFORMATION SHEET (TESTS)

Research Project: The Talk Rich Teaching Project

Researcher: Aniqa Leena (a.t.leena@pgr.reading.ac.uk)

Principal Investigator: Dr. Naomi Flynn (n.flynn@reading.ac.uk)

Dear parent or guardian,

I am currently undertaking doctoral studies in Education at the University of Reading. I would like to invite your child to participate in a research project your school has kindly agreed to take part in. The project is about how teachers can support pupils in the classroom, particularly pupils who speak English as an Additional Language (EAL). *Please read this letter carefully and complete the consent form if you are happy for your child to participate.*

What does the study involve?

I will ask pupils to complete some language and literacy tasks during the school day. These tasks should take no longer than 75 minutes and are designed to be similar to what children encounter in their usual English classes. If your child speaks more than one language, they will also complete a spoken English language task, which will take place in a quiet area outside the classroom, on a 1:1 basis. This speaking task should take no longer than 15 minutes.

Do I have to let my child take part?

Your child has been invited to take part because they are in a year group we are interested in researching. However, taking part in this project is entirely voluntary. You may withdraw consent to participation at any time during the project, without any repercussions to you or your child, by contacting me on the details above.

What are the risks and benefits of taking part?

To the best of our knowledge, there are no risks to taking part in this study. Your child's engagement with any of the tasks will in no way influence their assessment levels issued by their school. It is hoped the knowledge we gain from this study will help inform our understanding of effective classroom practice, which may help us support other pupils in the future. An electronic summary of this study's findings can be made available to you by contacting me on the details above.

What will happen to the data?

Any data collected will be held in strict confidence and no real names will be used in this study or in any subsequent publications. The records of this study will be kept private. No identifiers linking you, your child or the school will be included in any sort of report that might be published. Children will be assigned a number and will be referred to by that number in all records. Research records will be stored securely in a locked filing cabinet and on a password-protected computer and only the research team will have access to the records. The data will be destroyed securely once the findings of the study are written up, after five years.

The results of the study may be presented at national and international conferences, and in written reports and articles. Additionally, this project has been reviewed following the procedures of the University Research Ethics Committee and has been given a favourable ethical opinion for conduct. The University also has the appropriate insurances in place. Full details are available on request.

What happens if something goes wrong?

In the unlikely case of concern or complaint, you may contact my supervisor, Dr. Naomi Flynn, by email on n.flynn@reading.ac.uk

What do I do next?

If you are happy for your child to take part in this research project, please complete the consent form and <mark>return it to the school office by</mark> **[date].** Thank you for your time.

Yours faithfully,

Aniqa Leena

PARENT/GUARDIAN CONSENT FORM

Research Project: The Talk Rich Teaching Project

Researcher: Aniqa Leena (a.t.leena@pgr.reading.ac.uk)

Principal Investigator: Dr. Naomi Flynn (n.flynn@reading.ac.uk)

Please complete and return this slip to the <mark>school office by [date].</mark>

❑ I have read the Information Sheet about the project and received a copy of it.

❑ I consent to my child taking part in this research project.

Name of parent/guardian: _____   Signed: _____

Name of child: _____   Date: _____

Name of school: _____

PARENT/GUARDIAN INFORMATION SHEET (INTERVIEWS)

Research Project:	The Talk Rich Teaching Project
Researcher:	Aniqa Leena (a.t.leena@pgr.reading.ac.uk)
Principal Investigator:	Dr. Naomi Flynn (n.flynn@reading.ac.uk)

Dear parent/guardian,

I am currently undertaking doctoral studies in Education at the University of Reading. I would like to invite your child to participate in an additional part of a research project your school is currently involved in. The project is about how teachers can support pupils in the classroom, particularly pupils who speak English as an Additional Language (EAL). *Please read this letter carefully and complete the consent form if you are happy for your child to participate.*

What does the study involve?
Children will be asked to take part in a small group interview, where they can discuss classroom experiences and progress about their English language and literacy skills, if they wish to. This would take place outside the classroom, but in a quiet area within the school, taking no longer than 30 minutes to complete. Their responses would be audio recorded, transcribed, and anonymised before data are analysed.

Do I have to let my child take part?
Your child has been invited to take part because they can speak more than one language, and they are in a year group we are interested in researching. However, taking part in this project is entirely voluntary. You may withdraw consent to participation at any time during the project, without any repercussions to you or your child, by contacting me on the details above.

What are the risks and benefits of taking part?
To the best of our knowledge, there are no risks to taking part in this study. Your child's engagement with any of the tasks or interview, will in no way influence their assessment levels/grades issued by the school. It is hoped the knowledge we gain from this study will help inform our understanding of effective classroom practice, which may help us support other children (particularly EAL learners) in the future. An electronic summary of this study's findings can be made available to you by contacting me on the details above.

What will happen to the data?
Any data collected will be held in strict confidence and no real names will be used in this study or in any subsequent publications. The records of this study will be kept private. No identifiers linking you, your child or the school will be included in any sort of report that might be published. Children will be assigned a number and will be referred to by that number in all records. Research records will be stored securely in a locked filing cabinet and on a password-protected computer and only the research team will have access to the records. The data will be destroyed securely once the findings of the study are written up, after five years.

The results of the study may be presented at national and international conferences, and in written reports and articles. Additionally, this project has been reviewed following the procedures of the University Research Ethics Committee and has been given a favourable ethical opinion for conduct. The University also has the appropriate insurances in place. Full details are available on request.

What happens if something goes wrong?
In the unlikely case of concern or complaint, you may contact my supervisor, Dr. Naomi Flynn, by email on n.flynn@reading.ac.uk

What do I do next?

If you are happy for your child to take part in this research project, please complete the consent form and return it to school office/reception at your earliest convenience. Thank you for your time.

Yours faithfully,

Aniqa Leena

PARENT/GUARDIAN CONSENT FORM

Research Project: The Talk Rich Teaching Project

Researcher: Aniqa Leena (a.t.leena@pgr.reading.ac.uk)

Principal Investigator: Dr. Naomi Flynn (n.flynn@reading.ac.uk)

Please complete and return this slip to school by [date]

❑ I have read the Information Sheet about the project and received a copy of it.

❑ I consent to my child taking part in the group interview.

Name of parent/guardian: _____Signed: _____

Name of child: _____Date: _____

Name of school: _____

University of Reading

KS1/KS2 Assent Form

	Yes	**No**
Miss Leena has told me about her project and answered the questions I have had about the project.	🙂	🙁
I know that I will be completing some tasks for Miss Leena.	🙂	🙁
Where it's needed, I am happy for Miss Leena to audio record what I say and use this for her project.	🙂	🙁

My Name: …………………………………………………………..

My School: ………………………………………………………….

Date: …………………………………..