



The Acquisition of the English Plural Morpheme by Young EFL Learners in China

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At the beginning of this journey, I felt an overwhelming sense of anxiety. Perhaps it was due to the prestigious name of Oxford—it carries a weight that can be daunting. When I received my offer from this university, I did not feel the satisfaction one might expect. Instead, I felt a greater burden on my shoulders. These mixed emotions have accompanied me throughout my time with ALSLA. Even now, after submitting my dissertation, I do not feel the relief I anticipated. Instead, I am left with a sense of perplexity. I hope that sharing these feelings does not add stress to you, the reader, but this is my honest reflection at this moment.

Expressing my emotions has never been easy for me, but I want to take this opportunity to convey my gratitude to the people who have supported me during this journey.

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ABSTRACT

A growing body of literature about acquiring inflectional morphemes, such as past tense, by second language learners has been conducted (Jia, 2003; Ionin & Wexler, 2002). Many studies have focused on second language learners from the naturalistic setting. However, research investigating the acquisition of English plural morphemes by young English as a Foreign Language (EFL) learners is under researched. As a group with a large population worldwide, EFL learners received limited exposure compared to the learners from an immersive environment. Thus, attempting to understand EFL learners' grammatical acquisition process better, this study aims to explore the plural morpheme acquisition process by young EFL learners in China. The study involved 60 child participants, categorised into two groups (N = 30 per group): Grade 4 and 6 in a primary school in China. One oral picture description task and one written gap-filling task were conducted with the children to assess their use of English plural morphemes. A language background questionnaire was spread to the parents of each child to examine the potential predictors impacting the grammar acquisition process. Findings demonstrated that after years of English instruction, Grade 4 and 6 children still struggle to produce accurate English plural morphemes in productive tasks. The results carry implications for English language teaching in China and call for more studies on the EFL community.

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1 INTRODUCTION

Second language acquisition (SLA) research has developed rapidly within applied linguistics in the 1970s. It aims to investigate how individuals acquire, process, and use additional languages in various settings, such as naturalistic and instructional environments (Nunan & Carter, 2001; Rothman & Slabakova, 2018). To provide a comprehensive picture of SLA, research has targeted a variety of participants, including those from different age groups (children or adults), group sizes (individual or group), and learning contexts (instructed or naturalistic) (Doughty & Long, 2003). Most SLA research is cross-sectional, focusing on identifying the nature of the L2 acquisition process, as well as the developmental stages of L2 learners, which will be the focus of this dissertation. Understanding how learners develop grammatical systems in SLA is essential for promoting effective language teaching and learning. As a complex process, grammatical acquisition is influenced by various factors, presenting significant challenges to L2 learners (Jia & Aaronson, 2003; Jia & Fuse, 2007; Jiang et al., 2011). Over the past few decades, more research studies have focused on the developmental orders of inflectional morphemes (Luk & Shirai, 2009; Muñoz, 2010; Murakami & Alexopoulou, 2016). Also, many studies explored the acquisition of distinct inflectional morphemes, such as finiteness, tense-aspect system, and plural morphemes in English (DeKeyser, 2005; Jia, 2003; Tang, 2020; Yang & Huang, 2004).

Among those inflectional morphemes, plural morphemes are one of the earliest acquired inflectional morphemes for English-speaking children, both for first-language (L1) and second-language (L2) learners (Brown, 2013; Cazden, 1968; Dulay & Burt, 1974; Jia, 2003). Some studies intended to investigate the developmental trajectories of L2 children's English plural morpheme acquisition in naturalistic settings (i.e. ESL settings) (Adejare, 2019; Jia, 2003; Yamaguchi & Kawaguchi, 2014). The criterion to measure the acquisition level is set. Lahey et al. (1992) set a criterion that children are considered to master the grammatical morphemes when they can correctly use the morphemes in obligatory context over 80% of the time. As the result, native English-speaking children typically master plural morphemes by the age of three (Brown, 2013; Dulay & Burt, 1974). It takes many years of immersive exposure for ESL learners to acquire the plural morphemes. Previous research findings are controversial: some researchers found that L2 children cannot master plural marking even after years of exposure (Jia, 2003; Yamaguchi & Kawaguchi, 2014), whereas others found high accuracy in

using plural morphemes (Adejare, 2019). In particular, for English as a Foreign Language (EFL) learners, the process can be significantly more complex due to various linguistic and environmental factors, especially for those speakers' L1 having no inflectional morphemes, compared with the English as Second Language (ESL) learners (Ionin & Wexler, 2002; Park & Lee, 2017).

The importance of this study lies in its focus on a population that has been relatively underexplored in the existing literature – young EFL learners in China. A substantial body of research has investigated the acquisition of grammatical morphemes, particularly plural morphemes, in English as a Second Language (ESL) contexts (Jia, 2003; Jia & Fuse, 2007; Paradis, 2011). However, the difference in exposure quantity and quality between ESL and EFL contexts might lead to different learning outcomes and developmental trajectories in terms of L2 grammatical acquisition. This topic is essential to gain a more comprehensive picture of the EFL learners worldwide, as the population of EFL learners is gradually increasing. China, in particular, has the largest population of young EFL learners (MOE, 2001). Hence, the objective of this study is to contribute to the existing body of knowledge on the acquisition of plural morphemes in English by exploring Chinese primary school children in an English as a Foreign Language (EFL) context. As one of the earliest acquired inflectional morpheme in English (Jia, 2003), the plural morpheme acquisition process by L2 learners, particularly under instructional setting, is under researched, so this study will fill the gap by providing detailed insights into the plural morpheme acquisition process.

Specifically, this dissertation has three aims. First, it will assess the accuracy of using plural morphemes in production tasks (i.e. oral and written tasks) to investigate the English plural morpheme acquisition process by young EFL learners in China. Second, it will examine the factors influencing the acquisition process; and third, it will examine performance differences due to task effects (oral vs written), which can be further revealing of children's learning at school. The task performance may also reflect the teaching method as in Chinese schools mostly a 'focus on form' approach is followed through the emphasis on written tasks over oral tasks (Ellis, 2008; VanPatten, 2013).

The dissertation will start with a review of the relevant literature, along with the research aims and questions. Subsequently, this paper will present a detailed account of a quantitative method study to assess the English plural morpheme use by Grades 4 and 6 children in a

primary school in China with further interpretation and comparison between the findings and relevant studies. This dissertation will conclude with the limitations of the current study and the implications for future research topics.

2 LITERATURE REVIEW

This chapter will introduce the main theories and previous studies on L2 grammar acquisition. Section 2.1 will unpack the relevant theories of L2 grammar acquisition, transitioning to sections 2.2 and 2.3 for a review of previous studies on L2 grammar acquisition. Next, section 2.4 will discuss studies on factors that affect acquisition, and section 2.5 will examine task effects on grammar acquisition between oral and written tasks. Finally, the research gaps will be assessed, leading to the ‘Current Study’ chapter, which outlines the research goals and research questions of this dissertation.

2.1 Main Theories of L2 Grammar Acquisition

Theories have been proposed to explain second language (L2) grammar acquisition, including the Usage-Based Approaches and the Generative Approaches. This section will present and explain the main tenets of each approach that is relevant to this dissertation.

2.1.1 Usage-Based Approaches

The usage-based approaches to second language acquisition (SLA) emphasise learning through language use and experience (Ellis, 2008; Ellis & Wulff, 2014; VanPatten, 2013). They highlight the importance of input, frequency, and generalisation mechanisms in language learning (Ellis & Wulff, 2014; Javadi & Kazemirad, 2020). These approaches also underscore the importance of focusing on oral and written production (VanPatten, 2013). VanPatten (2013) suggests that grammatical forms will be acquired if sufficient input is provided, leading to a richer grammatical system for L2 learners. Similar findings are supported by other researchers. For example, Ellis (1999) found that enriched input helps learners pay more attention to form, thereby improving the accuracy and comprehension of grammatical morphemes. Usage-based theories have been applied to various aspects of SLA research, including instructed acquisition and language teaching (Ellis & Wulff, 2014). They provide a unified framework for understanding language acquisition in various settings.

2.1.2 Generative Approaches

Generative Approaches in L2 grammar acquisition focus on describing and explaining the representation of implicit L2 knowledge within the brains of L2 learners (Rothman &

Slabakova, 2018). Universal Grammar (UG) posits that there is a set of innate universal grammatical principles and parameters that differ across languages (Chomsky, 2014). This framework viewed L2 acquisition as the (re)setting of parameters, with researchers disagreeing as to whether parameter resetting is possible during the post-critical period or not (Lenneberg, 1967). Recent developments in Generative Approaches include Chomsky's Minimalist Program (2014). The Minimalist Program aims to explain language using the simplest and most economical principles, focusing on how L1 learners can effectively acquire these minimal sets of grammatical knowledge (Chomsky, 2014). Later, one of the most influential hypotheses within this framework is the Interpretability Hypothesis (IH) (Tsimplici & Dimitrakopoulou, 2007). The IH posits that only meaningful, interpretable grammatical features can be acquired by L2 learners (Rothman & Slabakova, 2018), while syntactic features that are void of meaning will be difficult to acquire post-critical period if they are not present in a learner's L1. For instance, Lardiere (2017) found that Chinese Mandarin native speakers learning English as an additional language often omitted the third-person singular form in English. In conclusion, Generative Approaches are vital for SLA research as they provide valuable insights into the cognitive representation underlying the SLA process (Rothman & Slabakova, 2018).

2.1.3 Contrasting the Two Approaches

While the Usage-Based Approaches focus on the role of input and forms, the Generative Approaches focus on the internal cognitive representation and universal principles underlying the grammatical acquisition. These approaches both provide valuable insights in understanding the mechanisms of L2 grammar acquisition, aiming to create a more comprehensive and effective language learning experience for L2 learners. Particularly, the frameworks indicated the crucial role of input during the acquisition process, which also provided a significant theoretical underpinning for this study in terms of L2 grammar acquisition. Next section will present and discuss studies about L2 grammar acquisition to provide an empirical perspective on the previous research that has been conducted.

2.2 Plural Morphemes Acquisition

2.2.1 Overview

Plural morphemes are among the earliest grammatical morphemes acquired by native English speakers and second-language learners of English (Brown, 2013; Dulay & Burt, 1974). English plural markers include two main types: regular and irregular plural markers. Regular plural markers require adding suffixes, such as -s or -es, after the nouns, whereas the irregular plural nouns include several types of changes, such as vowel-change plurals (e.g. teeth), -en plurals (e.g. children), no-change plurals (e.g. sheep), and suppletives (e.g. people) (Cazden, 1968; Jia, 2003). On the other hand, Chinese does not have plural morphemes. Instead, numerals and quantifiers are added in front of the noun to demonstrate plurality (e.g. ‘Three cats’ in Chinese will be said and written as ‘三只猫’, which the direct translation is ‘Three-Quantifier Cat’). Based on previous studies, native English-speaking children master the plural morphemes at the age of 3 (Brown, 2013). Before they fully acquire plural marking, children go through multiple developmental stages, such as preplural, transitional, and plural-mastery states (Brown, 2013; Cazden, 1968; Mervis & Johnson, 1991). Errors are presented during these stages, with the most common omission, which refers to not adding any markers after regular plural nouns, and overregularization (OG) errors (Cazden, 1968).

Compared with English L1 speakers, studies on the acquisition of plural morphemes by L2 learners are fewer but proliferating. An increasing number of studies have been conducted regarding L2 plural morpheme acquisition in the past few decades. Research methods have evolved from morpheme order studies (Freeman, 1975) to more process-oriented approaches, exploring the developmental stages of L2 learners’ acquisition process (Adejare, 2019; Jia, 2003; Jia & Fuse, 2007). Varied results have been found; therefore, the next section will present empirical studies on L2 plural morpheme acquisition in ESL and EFL settings.

2.2.2 Empirical Studies on L2 Plural Morpheme Acquisition

Many previous studies have focused on the acquisition of grammatical morphemes by L2 learners since the 1970s (Abbasi et al., 2023; Hopp, 2013; Ionin & Wexler, 2002; Jiang et al., 2011). As a complex process influenced by various factors, there is an ongoing debate about whether grammatical morphemes can be fully acquired by L2 learners. Some researchers believe that morphemes cannot be fully acquired because many factors could have an impact

on the acquisition process, such as L1 transfer and language environments (Jia, 2003; Jia & Aaronson, 2003; Jia & Fuse, 2007). For instance, some longitudinal studies have found that even after many years of continuous exposure, L2 learners with advanced proficiency could not master grammatical morphemes in spontaneous L2 production (Jia, 2003; Jia & Aaronson, 2003; Jia & Fuse, 2007). Others believe that grammatical morphemes can be acquired by L2 learners and that native-like accuracy in morphological production can be achieved (Adejare, 2019).

Several reasons are presented to explain the mixed results of previous studies. The L2 proficiency levels in the different studies varied, including beginner, intermediate, and advanced learners with different exposure times (Altarawneh & Hajjo, 2018; Jiang et al., 2011; Lardiere, 2017). The definition of each proficiency level also varied which could be another reason for the differing findings. On the other hand, learning environment also drives to different results of L2 grammar acquisition, such as second language (SL) and foreign language (FL) environments (Jia, 2003; Jia & Fuse, 2007; Altarawneh & Hajjo, 2018; Qureshi, 2016). To clarify, SL refers to an immersive language environment, whereas in FL environments, the amount of exposure is greatly limited, causing FL learners to pay more attention to forms in the instructional settings (Qureshi, 2016). Moreover, the research methods used to assess grammatical acquisition also varied from study to study (Jiang et al., 2011). In terms of data collection, some studies conducted single testing sessions (Altarawneh & Hajjo, 2018), while others designed longitudinal methods to test for long-term effects (Jia, 2003). The specific tasks used in these studies also varied, including grammaticality judgment tests, sentence completion, story retelling, and more. Most importantly, different grammatical morphemes were assessed, including plural markers (Jia & Fuse, 2007), tense markers (Ionin & Wexler, 2002), and gender markers (Hopp, 2013). All of these variations in task design also led to a variety of research findings in terms of L2 grammar acquisition.

Particularly, research on L2 acquisition of English plural morphemes has demonstrated mixed results across different learner groups, such as English as a Second Language (ESL) and English as a Foreign Language (EFL) learners, and different age groups (children vs. adults). Two categories of findings are presented in the previous studies. Some studies found that L2 learners can achieve native-like proficiency of using English plural morphemes (e.g. Adejare, 2019), whereas others found that persistent difficulties and challenges exist for L2

learners' English plural morpheme acquisition processes, leading to a partial mastery of the plural morpheme acquisition (Jia, 2003; Jia & Fuse, 2007; Yamaguchi & Kawaguchi, 2014).

A substantial body of research has investigated the acquisition of English plural morphemes by adult learners (predominantly college students) in both ESL and EFL settings across diverse L1 backgrounds, including Russian, Korean, Chinese, and Iraqi speakers (Adejare, 2019; Altarawneh & Hajjo, 2018; Al-Jarf, 2022; Cheng & Lee, 2020; Hu, 2011; Khalaf, 2018; Tretiakova, 2020). Key findings are presented. Collectively, these studies identified significant acquisitional challenges, particularly by EFL learners, due to L1 interference and low proficiency levels. These studies also found a developmental stage by the L2 learners that shifted from initial omissions to the gradual acquisition of both regular and irregular forms. During the developmental stages, omission and overregularisation (OG) errors would improve with the increasing exposure for L2 adults' acquisition of English plural morphemes. In addition to the investigation of the plural morpheme acquisition process among adult L2 English learners, some studies have also examined the same phenomenon among L2 children who are learning English as the second language (Blom, Paradis, & Duncan, 2012; Jia, 2003; Park & Lee, 2017; Yamaguchi & Kawaguchi, 2014). Various findings are presented from children with different L1 backgrounds and within different learning contexts.

Yamaguchi and Kawaguchi (2014) conducted a longitudinal case study in ESL setting to investigate the developmental pattern of English plural morphemes from a school-aged Japanese child. Consistent tasks, such as memory tasks and picture description tasks, were implemented to assess the child's plural acquisition accuracy. This child demonstrated a significant progress of using plural morphemes over the 2-year period of this study, but only partial mastery of English plural acquisition was achieved because persistent errors, such as omission, were made during the tasks, even until the end of this two-year period. Yamaguchi and Kawaguchi's study (2014) indicated that even though the accuracy still cannot reach the full acquisition, it still improved over time. The longitudinal design of this study is beneficial for understanding children's developmental trajectory when acquiring the English plural morphemes. However, only one participant was included in this case study, which makes the study demonstrate less generalisability. More participants are needed for understanding the bigger picture of L2 children's acquisition of English plural morphemes.

Jia (2003) conducted a longitudinal study to investigate the acquisition of English plural morphemes by L1 Chinese Mandarin children who are immigrants to the United States between age of 5 and 16. The study followed 10 children for over five years with persistent assessments of their proficiency level in terms of English plural morphemes through oral picture description task and spontaneous speech. The results revealed that only 7 out of 10 children mastered the use of plural morpheme with considerable individual differences influenced by age of onset and language environment. Earlier age of onset showed greater proficiency and more consistent use of plural morphemes, compared with those children who started learning English at a later age. Jia (2003) highlighted the importance of early and immersive exposure to English in achieving better outcomes in plural morpheme acquisition and suggested that individual difference of each learner and environmental factors significantly impact the acquisition process. The longitudinal design and mixed methods to measure the plural morpheme proficiency are beneficial for the study, which provides a comprehensive understanding to ESL children's acquisition process and ensures a more thorough assessment of their proficiency levels. However, the study focused on children's performance regarding plural morpheme use in ESL context. A more comprehensive picture could be demonstrated if it includes detailed information about the role of family and school in children's exposure and instruction, and from a diverse learning context (e.g. EFL context). In addition, the frequency of testing sessions decreased over time, which may have affected the continuity and reliability of the data. Future research could benefit from incorporating a variety of tasks, such as writing exercises, to provide a more comprehensive understanding of how children acquire English plural morphemes.

Regarding EFL settings, it is notable that fewer studies have been conducted, as most studies focused on native English speakers and ESL children. However, it is important to address these settings as a discrete category, given that learners in such contexts do not have the same level of immersive exposure as in natural settings (Kamalizad & Samuel, 2016; Muñoz, 2010). Park and Lee (2017) have examined the acquisition of six English inflectional morphemes by 39 Korean EFL children in primary school from the fourth and sixth grades. They aimed to investigate the developmental orders of the six inflectional morphemes, which included the plural morpheme -s, and the types of inflectional morphemes that Korean EFL children can use with higher accuracy. A gap-filling task was conducted for the participants to

fill in the correct form according to the base form provided in the parentheses (e.g. “There are many ____ in the park (bird)” (Park & Lee, 2017, p. 261).). A pseudoword version of the gap-filling task was also conducted to decrease the impact of using the known vocabulary knowledge by the participants. In terms of plural morpheme accuracy, there was a significant increase in the mean accuracy from fourth-grade to sixth-grade performance. However, this study only used the gap-filling tasks to test the inflectional morpheme accuracy. It is important to include more various types of tasks (e.g. speaking tasks) to gain a more comprehensive understanding of EFL children’s inflectional morpheme acquisition process. This study also did not evaluate if children can acquire the English plural morphemes after years of exposure.

Overall, even though there were a limited number of studies investigating the acquisition of English plural morphemes by L2 children, similar findings were presented. Collectively, these studies indicated there were ongoing challenges for L2 children to acquire the English plural morphemes. With most studies found that children can only partially master the use of the plural marker after years of immersive exposure (e.g. Jia, 2003). However, most studies investigated the developmental trajectory of acquiring the plural morpheme by L2 children, indicating that the children’s accuracy in using plural markers increased with the consistent exposure. In particular, the influence of L1 presented significant obstacle for the L2 acquisition process, especially for children whose L1 does not have plural markers (e.g. Chinese mandarin from Jia (2003) and Japanese from Yamaguchi and Kawaguchi (2014)). Another part of the findings from these studies was about the errors made by the L2 learners. The common errors were found during children’s production, such as omission and overregularisation in both ESL and EFL settings (Jia, 2003; Yamaguchi & Kawaguchi, 2014). Overall, previous studies’ findings on both ESL and EFL settings revealed that the acquisition process is highly complex and influenced by various factors. For example, even after up to five years of consistent exposure, some children were still found not to reach the criterion of mastering the plural morphemes use (e.g. Jia (2003)).

2.3 The Factors Affecting L2 Acquisition

Research on L2 acquisition has extensively examined the diverse factors contributing to individual differences in mastering grammatical morphemes, focusing on both internal and external aspects (Paradis, 2011; Sun et al., 2016; Unsworth, Hulk & Marinis, 2011). The

findings indicate a complex interplay of internal and external variables. Internal factors, such as age, cognitive abilities, and language aptitude, along with external factors, including the quantity and quality of input, language environment, and parental involvement, have been identified as significantly impacting L2 learning (Jia, 2003; Jia & Fuse, 2007; Paradis, 2011; Sun et al., 2016). These factors play critical roles in explaining the existence of individual differences and why some L2 learners acquire the grammatical morphemes more rapid than others. This section will review the significant findings from the previous studies about each factor.

To begin with, age of onset refers to the time which the learner receives significant amount of exposure of the target language (Jia, 2003; Jia & Fuse, 2007; Qureshi, 2016). Some studies have demonstrated that younger ESL children tend to acquire L2 more effectively as they are more likely to be benefit from a longer period of immersive exposure and are more likely to achieve native-like proficiency compared to learners who start learning the target language in an older age (Jia, 2003; Lichtman, 2016). On the other hand, other studies found that the effect of age of onset is less clear, meaning that no significant impact was detected (Unsworth, Hulk & Marinis, 2011). In terms of exposure, ESL children are exposed to immersive environments (Jia, 2003; Sun et al., 2016), whereas EFL students have limited exposure, including restricted instructional time (Muñoz, 2008). Consequently, the acquisition process of EFL learners is contingent upon the teacher's proficiency in the target language and the extent of its utilisation within the classroom setting. Furthermore, EFL students have minimal exposure to English outside of the educational setting, with the quality and quantity of such exposure varying considerably between individuals. Other factors were examined in the previous studies, such as motivation and parental support (Sun et al., 2016). As one of the most critical factors in EFL setting, motivation toward L2 play roles in sustaining interests and making efforts to acquire the target language (Sun et al., 2016). Similarly, due to the limited exposure in EFL settings, support from parents and the community can enhance learning.

In a study conducted by Paradis (2011), the individual differences in the vocabulary acquisition and verb morphology learning of 169 children from newcomer families to Canada, aged between 4 and 7 years old, were examined. The influence of internal factors, including age, phonological memory, and non-verbal IQ, and external factors, such as exposure length and the richness of the English environment, was investigated. The findings indicated that both

internal and external factors were significant, with the internal factors exerting a more substantial influence on the acquisition process (Paradis, 2011). Nevertheless, the generalisability of the study is open to question, given that it focused exclusively on very young learners in Canadian ESL contexts. Considering the findings of Paradis (2011), Sun et al. (2016) conducted a study to investigate the internal and external factors influencing English proficiency in 71 very young Chinese EFL learners aged between 2 and 5 years old. Further factors were investigated, including the age of onset, maternal proficiency in English, and the home media environment. The study by Sun et al. (2016) revealed that external factors were significant predictors of receptive and productive vocabulary, as well as receptive grammar. Nevertheless, internal factors also had an impact, but to a lesser extent.

The two studies effectively demonstrate the importance of considering individual differences in L2 acquisition in ESL and EFL contexts. In contrast with the findings of studies conducted in the context of ESL (Paradis, 2011), the findings of studies conducted in the context of EFL emphasise the significance of external factors. Nevertheless, few studies have focused on young L2 learners, as evidenced by the findings of Paradis (2011) and Sun et al. (2016). In light of the prior study findings, the present study aims to examine the factors influencing young EFL learners' plural morpheme acquisition process in China.

2.4 Task Effects on L2 Grammar Acquisition

Research on task types and the task effects in SLA has shown varied results. First, the nature of the task can affect learners' attention to grammatical forms and their accuracy of performance (Storch, 2001). Different task types, such as grammaticality judgement task, effectively focus learners' attention on grammatical forms; while factors such as planning conditions, task complexity, and communication modes significantly impact fluency, complexity, and accuracy in language production (Storch, 2001; Foster & Skehan, 1996; Kuiken & Vedder, 2007; Kim, 2017). Studies suggest that cognitively demanding tasks enhance acquisition despite lower intake, and assessment techniques like cued production and elicited imitation are recommended for evaluating L2 development (Reinders, 2005; Abrams & Rott, 2017; Eisenstein et al., 1982).

Speaking and writing skills are distinct from each other as they have different characteristics when L2 learners use them (Son, 2024). Speaking tasks require more

spontaneous production because it is usually conducted through conversational settings. On the other hand, writing tasks allow the L2 learners to produce in their own pace, which most of the time is not interactive (Gilabert et al., 2016 cited from Son, 2024). Moreover, the accuracy of written tasks is usually more consistent, meaning they have less variations, comparing with the oral production because it allows for revision and more controls on the written production (Granfeldt, 2018 cited from Son, 2024). These differences between these two modalities usually result in different performance in L2 grammar acquisition.

In terms of accuracy of L2 grammar acquisition, mixed results are presented in the previous studies. Compared with oral production, some studies showed that the performance of written tasks obtained higher accuracy due to the non-spontaneous characteristic of the written task (Hu, 2011; Zalbidea, 2017; Son, 2024). Other studies found reverse results (Vasylets et al., 2017). For example, Hu (2011) conducted two studies to examine the variation of plural marking in Chinese EFL students' acquisition of plural morphemes through writing and speaking in university. Both studies emphasized the complexity of acquiring plural morphemes in an EFL setting. The comparison between the written and oral data revealed the differences in affecting the plural marking in speech and written productions. In terms of task effect results, the oral study by Hu (2011) explicitly noted that different task types led to variation in plural marking accuracy. This highlights the importance of considering the nature of tasks when assessing L2 acquisition. In Chinese EFL settings, written production is more commonly practiced than the oral forms (Hu, 2011). Therefore, the current study would also expect to see L2 children perform better in the written production than the oral task.

In sum, all these findings highlight the different performance between oral and written production in SLA due to the distinct characteristics between these two modalities. The next section will summarize the key findings from the above previous studies and identify the research gaps.

2.5 English Language Education in China: A Brief Overview

China's educational landscape encompasses a diverse range of institutions, including public schools, private schools, international schools or departments, and after-school programs. These institutions serve unique purposes, such as facilitating students' entrance into prestigious secondary institutions or universities and preparing them for applications to foreign

educational institutions. Starting from January 2001, the Ministry of Education in China shifted the English language subject to a compulsory course in third-grade primary schools, which was a required course in secondary schools, due to the trend of globalization, joining the World Trade Organization, and the bid on 2008 Beijing Olympic Games (Hu, 2005; Lin & Harumi, 2011; Qi, 2016). Within this educational framework, the teaching and assessment of the English language play a crucial role, with standardized tests being a common method used to evaluate students' proficiency for secondary school and university entrance. With only one test, students' futures can be decided. Therefore, "schools, parents, and students pay most of their attention to being successful in examinations" (Lin & Harumi, 2011, p.294). Even though the Basic Requirement for Primary School English in China issued by the Ministry of Education (MOE) in China promoted a joyful and playful teaching environment in primary school English classes, lots of students in primary school experienced a sense of stress due to high demand and expectations from parents and the test-oriented education (MOE, 2001; Qi, 2016; Qiang, 2002). Higher test scores increase the likelihood of admission to more esteemed institutions. Consequently, teachers often prioritize teaching test-taking techniques (i.e. written skills) alongside fundamental grammatical features of the English language, sometimes without the need for an extensive vocabulary. As Dang (2021) noted, students may only need to grasp syntactical and affix rules without a deep understanding of word meanings to excel in these tests. Moreover, with the limited exposure time, teachers tend to prioritize their teaching and EFL learners' learning process in a more cost-effective approach (Dang, 2021; Muñoz, 2008; Sun et al., 2016).

In recent years, there has been a notable increase in the number of foreign language programmes being offered in East Asia (Butler, 2014; Sun et al., 2016). In China, which has the largest population of children learning English (Ministry of Education of the People's Republic of China, 2001), the age at which English courses are introduced in the national curriculum has been reduced from secondary school to the third grade of primary school, approximately at age nine. Some schools modify this starting age in accordance with the availability of teaching resources.

2.6 Research Gaps in the Literature

Combining the insights from all the previous studies in the field of L2 grammar acquisition, particularly plural morpheme acquisition, it becomes clear that the acquisition process is multifaceted, influenced by both internal and external factors and the broader linguistic contexts (Jia, 2003; Jia & Fuse, 2007; Paradis, 2011; Park & Lee, 2017; Sun et al., 2016). The findings in task effect suggest that both written and oral assessments are crucial for a comprehensive understanding of language acquisition processes (Hu, 2011; Hu, 2011; Son, 2024).

Despite the extensive research on L2 grammar acquisition, significant gaps remain, particularly in the context of EFL learners and their plural morpheme acquisition processes. Previous studies have predominantly focused on adult learners in university and in ESL settings, revealing a multifaceted L2 acquisition process. However, the field of English as a Foreign Language (EFL) is relatively understudied, particularly for Chinese EFL children. This gap is critical as young learners represent a unique population which contrary to adults in SLA research. Moreover, EFL setting are known for its limited exposure amount comparing with the naturalistic ESL setting (Kamalizad & Samuel, 2016; Muñoz, 2010). Different results could yield due to the different learning environments. Therefore, the current study aims to address the gap by investigating the acquisition of plural morphemes among young EFL learners in China. The next section will present the research aims and research questions.

3 CURRENT STUDY

3.1 Research Goals and Research Questions

According to the literature review, the acquisition of plural morphemes by young EFL learners is under-researched, therefore, this paper will focus on the acquisition of plural morphemes by L2 EFL learners, especially in China. The current study has three primary objectives. The first objective is to assess the level of English plural marking acquisition after 4 and 6 years of instruction to better understand the language development in an EFL setting. The second objective is to identify and evaluate the factors influencing the acquisition of plural marking, including proficiency level, age, gender, age of onset, exposure time, parental education, and motivation. Finally, the third objective is to examine differences in children's performance across oral and written tasks. The following three research questions have been formulated accordingly regarding the acquisition of English plural markers by Chinese EFL children in primary school, in line with the stated objectives:

1. Have Chinese primary-school-aged children acquired the English plural markers after 4 and 6 years of English exposure at school?
2. Which factors explain children's acquisition of plural marking in L2 English?
3. Does children's performance differ across the oral and written tasks?

3.2 Hypotheses

According to the findings in previous studies, most L2 English children could only partially acquire the English plural morphemes even after several years of exposure (e.g. ESL settings in Jia (2003) and Yamaguchi & Kawaguchi (2014), EFL settings in Park and Lee (2017)). Therefore, for Research Question 1, it is hypothesized that 6th-grade participants will outperform 4th-grade participants in the productive tasks, and children from both grade levels will not fully acquire the use of English plural morphemes.

For Research Question 2, it is anticipated that most factors investigated in this study (age, proficiency, age of onset, exposure time, parental education, and children's motivation) will be significant predictors of children's performance in using English plural markers in productive tasks, based on the findings of Paradis (2011) and Sun et al. (2015). One key characteristic of EFL setting is the limited exposure compared to ESL setting. For instance, in

China, the quantity (and quality) of exposure may be limited, as English is not a dominant language in the community. Therefore, it is expected that exposure amount might play a bigger role in terms of L2 grammar acquisition.

Regarding Research Question 3, it is expected that task performance scores will differ significantly between oral and written tasks. Specifically, written task scores are anticipated to be higher than oral task scores because the writing production allows more time for the learners to think and revise on their production, whereas the oral production asks for more spontaneous response because there is no time for deeper thinking during the oral task. Furthermore, given that the Chinese educational system places significant emphasis on the written form of English, as evidenced by the prevalence of written examinations in the English national curriculum, it is reasonable to hypothesise that written tasks may be perceived as more challenging than their oral counterparts. Next section will introduce the methodology of this dissertation.

4 METHODOLOGY

4.1 Participants

This study involved 60 participants from the fourth and sixth grades of an elementary school in China. The participants were randomly selected from two intact classes, with 30 participants from each grade. The fourth graders' age ranged from 9 to 10 years old ($M = 9.73$, $SD = 0.45$), and the sixth graders' age ranged from 11 to 13 years old ($M = 11.93$, $SD = 0.37$). The sample included both male and female students. Specifically, the fourth-grade participants consisted of 17 male and 13 female students, and the sixth-grade participants included 14 male and 16 female students.

All participants had been engaged in the mandatory national English language curriculum since the first year of their elementary education, which is generally between the ages of 5 and 7. Grade 1 and 2 children will have two 45-minute English classes; Grade 3 and 4 children have three 45-minute sessions; and Grade 5 and 6 children have four 45-minute sessions each week. The instructors are all non-native English teachers in China. Children started learning plurality along with learning vocabulary from Grades 1 to 4. Starting from Grade 5, children will be introduced to the grammatical rules of the English language, including plural morphemes.

Based on the results from the Parental Questionnaires, the range of the age of onset (AoO) for English language learning is between 3 and 7 years old. If the age of onset was earlier than 5 or 6 years old, then the children should have started learning English outside primary school. The parents of all participants held college degrees and had educational backgrounds, including bachelor's degrees, master's degrees, and doctoral degrees. Recruitment of the participants was conducted through an email circulation reached out to the elementary school headteacher.

4.2 Materials

The materials employed in the present study are one Vocabulary Task, two tasks assessing the plural marking production, and one Language Background Questionnaire. I introduce each in turn.

4.2.1 Word Finding Vocabulary Test

The Word Finding Vocabulary Test (Renfrew, 1995) assesses children's expressive vocabulary in English. The vocabulary task was used as a proxy for children's proficiency. There were 50 items in this task, which were presented to children one at a time. Children were asked to name the pictures in English. Contrary to the original test instructions, children were asked to name the pictures as quickly as possible. Figure 1 presented two examples of the pictures and the target answers expected from children.

The figure originally presented here cannot be made freely available via ORA because of copyright. The figure was sourced at Renfrew, C. (1995). Word Finding Vocabulary Test. 4th edition. Bicester: Winslow Press

Figure 1. Two examples of the Word Finding Vocabulary Scale and expected answers.

4.2.2 Oral Picture Description Task

The Oral Picture Description Task was adapted from Jia (2003), who conducted a study investigating the acquisition of the English plural morpheme by 10 native Mandarin-speaking children and adolescents living in the United States. This task aimed to capture the oral production of the plural morpheme '-s' and '-es', or the correct production of the irregular plural form (e.g. 'child' for 'children', 'foot' for 'feet', and 'fish' for 'fish').

The task consisted of 18 items: 11 eliciting plural marking items and 7 fillers (see Appendix E for the prompts). The main items asked the children to name some objects and their respective quantities presented in pictures. The fillers required children to describe actions done by the characters shown in the pictures. Figure 2 demonstrated the images with the example questions and expected answers shown to the participants during the task. All images used in the task were available online and open access.

According to the Permitted Uses of All Content on Canva from Canva's Content License Agreement, the Free Content from Canva was permitted for school or university projects. (<https://www.canva.com/policies/content-license-agreement/>).

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Figure 2. Examples in the Oral Picture Description Task

4.2.3 Gap-filling Task

The Gap-filling task was a written task created by the author of this thesis to examine Chinese EFL learners' written production of plural marking. Specifically, children were presented with a short paragraph on the theme of a “Family Trip to a Zoo” containing blanks. The word to be used in each gap was provided within brackets, and children were asked to fill in those blanks with the correct form in 10 minutes.

The Gap-filling Task contained 19 items: 14 items requiring plural marking and 5 fillers examining other inflectional morphemes, such as using the correct form to mark tense (See Appendix F). Figure 3 showed two sentences of the gap-filling task presented to the participants.

The garden grew many _____ (carrot) and _____ (potato). I love _____ (eat) carrots.

Figure 3. Example of the Written Gap-filling Task

4.2.4 Task Design Details

Both tasks aimed to assess the acquisition of plural number by primary school students; hence, the children's age was considered in the task design and language used. The same child-friendly theme was maintained in both production tasks – “Family and Zoo”. The vocabulary in the production tasks was chosen based on the word list in the Primary School English Curriculum Instruction Programme by the Chinese Ministry of Education (MOE, 2001) to ensure that children have learned those in classroom settings before conducting this study. Fillers were included in each task to prevent the participants from guessing the purpose of these assessments.

4.2.5 Language Background Questionnaire

An online language background questionnaire was designed to collect information on the potential factors predicting children's accuracy in plural marking in primary school. The parents of the child participants needed to fill out the questionnaire. Questions concerned the children's English learning background and basic family demographic information. Specifically, the questions were aimed at obtaining information on the child's name, age, gender, age of onset, English exposure outside of class, multimedia involvement through English language learning, and parental educational levels. For the Language Background Questionnaire, see Appendix C.

4.3 Procedures

4.3.1 Ethical Approval

The Departmental Research Ethics Committee (DREC) granted ethical approval for this study concerning research involving human participants (see Appendix D for the Ethical Approval Document).

4.3.2 Piloting

The Renfrew Word Finding Vocabulary Test and the Oral Picture Description Task were pilot-tested with 5 students who were not included in the main study. Feedback was used to refine the task design. For instance, the primary target group was 3rd and 6th grade primary school students in China. The 3rd grade children were too young to independently complete the tasks; therefore, the lower age group were raised to 4th graders (about 9 to 10 years old).

4.3.3 Obtaining Consents

Prior to the start of the study, informed consent was obtained from the school headteacher through a School Information Sheet and Consent Form (see Appendix B). Subsequently, parental consent was obtained by providing parents with a Parent Information Sheet and a Parent Consent Form (see Appendix A). Additionally, prior to the start of testing, each individual was asked to provide oral assent regarding their willingness to engage in the tasks with the researcher. A few minutes of brief talking were involved before each testing session with each individual participant to present the study to each child.

4.3.4 Data Collection

The data collection consisted of oral and written tasks conducted sequentially with the fourth graders, followed by the sixth graders. Oral tasks were administered in a quiet classroom within the elementary school. One-on-one testing sessions between participants and the researcher were recorded using an audio recording device. The oral assessment comprised the Renfrew Word Finding Vocabulary Test (Renfrew, 1995) and an oral picture-description task. During the testing session, prior to the start of the tasks, the researcher asked the participants a question to measure their motivation for learning English as a foreign language: *How do you feel about your current English learning at school on a scale of 1 to 5?* Five emojis were presented to the participants depicting different emotions they could choose from (see Figure 4). Subsequently, the researcher provided task instructions in English, supplemented by one or two practice items as examples. If the participants expressed difficulty comprehending the English instructions, the researcher reiterated the instructions in Chinese. It was observed that most sixth graders required no translation, whereas almost all fourth graders needed further clarification in Chinese.

The figure originally presented here cannot be made freely available via ORA because of copyright.

Figure 4. Motivation Question Scale

Following the completion of the individual oral assessments, a written task was administered to the entire group within a 15-minute time frame. Each participant was provided with a piece of task paper. Prior to the start of the task, the researcher explained the instructions in English and allowed time for questions. However, no questions were raised by participants.

4.3.5 Language Background Questionnaire

Upon obtaining parental consent, the researcher requested each class's teacher to release the link to the language background questionnaire via a parent group chat. The questionnaire was created and administered via Qualtrics, an online survey tool to build and distribute surveys and collect responses. To maintain the confidentiality of the participants' personal information, their names were replaced with unique participant IDs. The original names were

permanently deleted after this conversion. Following the collection of all online questionnaires, the data was exported to Excel files for subsequent analysis.

4.4 Transcription and Coding

The data was transcribed into Excel files. The researcher listened to the audio recordings and transcribed each child's response verbatim for the oral tasks. For the written task, each participant's responses to each question were individually recorded in an Excel file. There were instances where the child replied 'Don't know' or gave no answer. Two distinct codes were used to categorise these responses: DKN ('Don't Know') and NR ('No Response'). DKN was used when the participants explicitly stated that they did not know the answer to certain questions, whereas NR was used when participants either shook their heads or provided no response at all either in oral or written tasks.

4.5 Scoring

This section presents the scoring schemes for the Renfrew Word Finding Vocabulary Test, the Oral Picture Description Task, and the Gap-filling Task that the participants completed in this project.

4.5.1 Scoring Criteria for the Renfrew Word Finding Vocabulary Test

Following the scoring guide provided by Renfrew (1995), the scoring criteria employed in this study adhered to these established guidelines. If the participant described the picture using the vocabulary specified in the answer sheet (see Table 1 below), their response was marked as correct, earning 1 point for the corresponding prompt. Responses coded as DKN ('Don't Know'), NR ('No Response'), or any answer that did not match the specified vocabulary on the answer sheet were marked as incorrect and received 0 points. Unfortunately, due to an administration error, 7 items were removed from the final scoring. Therefore, only 43 items were included in the data analysis. Scores will be presented both as raw numbers and as percentages as a proxy for proficiency.

Table 1. Target words in the Renfrew Word Finding Vocabulary Test

1	Cup	12	Dice	23	Map	34	Screw
2	Key	13	Snail	24	Drill	35	Microphone
3	Window	14	Scarecrow	25	Binoculars	36	Horse

4	Finger	15	Hanger	26	Pineapple	37	Spanner
5	Snake	16	Owl	27	Lighthouse	38	Aerial
6	Kite	17	Arrow	28	Vegetables	39	Tennis
7	Duck	18	Guitar	29	Parachute	40	Hurt
8	Clown	19	Camel	30	Magnet	41	Compass
9	Crocodile/ Alligator	20	Watering Can	31	Anchor	42	Thermometer
10	Helicopter	21	Mermaid	32	Beehive	43	Spire
11	Kangaroo	22	Caterpillar	33	Igloo		

4.5.2 Scoring Criteria for the Oral Picture Description Task and the Gap-filling Task

The Oral Picture Description and Gap-filling tasks aimed to assess participants' production of plural markers in oral and written modes. Consequently, the scoring criteria for both tasks focused on the use of the English plural markers in obligatory contexts. The scoring scheme of correct and incorrect plural marking in obligatory contexts were based on the systems developed by Cazden (1968) and employed by Jia (2003), which consisted of the correct and incorrect use of regular and irregular plural markers and overregularisation.

For nouns requiring the regular plural endings, such as '-s' and '-es', if the participant correctly used the regular plural endings, their response was counted as correct, earning 1 point. If the participant omitted the regular plural endings when required, the answer was counted as incorrect and earned 0 points (e.g. 'apple' instead of 'apples'). Under certain circumstances during the written task, participants added incorrect regular plural endings to a noun, such as 'tomatos' instead of 'tomatoes'. However, as the child attempted to use a plural form for nouns requiring regular plural endings, but made spelling errors, these errors were disregarded. This approach acknowledges the child's understanding of plural markers despite the spelling mistake. Therefore, the answer was counted as correct if the participant attempted to use the regular plural marker but ended up with a spelling error.

In this study, the irregular plural markers were further categorised into four types: vowel-change plurals (e.g. men, women, feet, and teeth), no-change plurals (e.g. fish and sheep), -en plurals (e.g. children), and suppletive (e.g. people and mice), according to Jia's (2003) categorisation of irregular plural markers of nouns. If the participant correctly used the irregular plural forms of the corresponding nouns, they earned 1 point. Conversely, if the participant used the singular form instead of the irregular plural form, the response was marked as incorrect, earning 0 points (such as 'child' for 'children' in Jia 2003).

Furthermore, instances of overregularization in responses requiring obligatory plural markers were counted as incorrect, earning 0 points. However, overregularization might show that the plural marking can be used but the child does not know the correct form yet. Given this special scenario, the number of instances of overregularization was counted and will be discussed in the following Results and Discussion sections. Specifically, there were two contexts for overregularisation. First, if the participant added a regular plural ending to nouns requiring irregular plural forms or no-change plurals, the answer was marked as incorrect (e.g. ‘foots’ for ‘feet’, and ‘fishes’ for ‘fish’ according to Jia (2003)). Second, if the participant marked the irregular plural forms twice by adding a regular plural ending after already marking the noun with its irregular plural forms. In that case, the answer was incorrect (e.g. ‘feets’ for ‘feet’ in Jia (2003)).

In addition to the obligatory rules for English plural marking, if the participant explicitly indicated that they did not know the answer to a specific question, the response was coded as DKN, and the corresponding question scored 0 points.

Under certain circumstances, the participants demonstrated self-correction in their responses. If self-correction occurred, the corrected answer was considered in the final scoring, following Jia and Fuse (2007). In their longitudinal study on various aspects of L2 morphological acquisition, which measured the morphological proficiency through spontaneous speech samples and elicitation tasks, “Utterances followed by spontaneous self-corrections were not coded, but the corrected forms were coded and counted” (Jia & Fuse, 2007, p. 1286). This approach is in line with practices in speech error research. Levelt (1983) emphasized that repairs in speech typically follow detection of a problem and are aimed at achieving the correct intended message, which is meant to capture the speaker’s accurate, intended linguistic output rather than the errors that are immediately corrected by the speaker.

4.6 Data Analysis

The data was analysed using both descriptive and inferential statistical methods. Descriptive statistics summarise the demographic characteristics and overall task performance, presenting the mean, standard deviation, and range for the continuous variables and proportions and percentages for the categorical variables.

Specifically, to address research question 1, I first present descriptive statistics regarding accuracy in plural marking for both groups to assess whether participants have acquired the plural marking after 4 and 6 years of instruction or are still developing their knowledge. I subsequently ran independent samples t-tests to compare the performance difference between 4th and 6th grade participants in their oral and written tasks. To address research question 2, I ran multiple linear regression to investigate factors that can explain children's English plural marking acquisition. To address research question 3, I ran paired samples t-tests to compare the differences in performance across the oral and written tasks performed by the children. The Results section will further unpack the results after running these data analyses.

5 RESULTS

The results of this study are presented in detail below, focusing on the acquisition of English plural morphemes by 4th and 6th-grade EFL students in China. This section aims to present findings from statistical analyses for each research question.

5.1 Research Question 1: Have Chinese Primary School Children Acquired the English Plural markers after 4 and 6 years of English Exposure at School?

5.1.1 Descriptive Statistics

5.1.1.1 Overall Task Performances

This section addresses the research question of whether Chinese EFL children attending a primary school have acquired the English plural marking. Table 2 presents descriptive statistics, including means and standard deviations (SD), of participants' performance in using English plural markers in both oral and written productions.

The overall means were calculated based on the number of correct uses of English plural markers out of the total number of prompts, which were 11 for the oral task and 14 for the written task (see Table 2). The mean accuracy for Grade 4 children in oral production was 4.80 out of 11 prompts, indicating that children correctly marked plurals in 40% of their answers in the oral production task. In the same task, Grade 6 children had a mean accuracy of 58%, indicating an increase in accuracy compared to younger ones. As for the written task, the mean accuracy for Grade 4 children was 7.28 out of 14 prompts, indicating that children correctly marked plurals in 52% of their answers. In the same task, Grade 6 children have a mean accuracy of 71%, indicating an increase in accuracy compared to the younger ones.

Table 2. Overall score (in percentage) of the productive tasks.

	Grade Level	N	Mean	SD
Overall score for oral task	4th grade	30	40% (4.80/11)	.12
	6th grade	30	58% (6.96/11)	.17
Overall score for written task	4th grade	30	52% (7.28/14)	.16
	6th grade	30	71% (9.94/14)	.17

I now turn to consider regular and irregular nouns separately which can provide insights into what children have learned.

5.1.1.2 Plural Marking of Regular Nouns

The means for using regular plural markers were calculated by dividing the total number of correct uses of either regular or irregular plural markers by the total number of uses of each type of plural marker. As each participant demonstrated a different number of regular and irregular plural marker uses, only the percentages are presented in Tables 3 and 4. The mean accuracy for Grade 4 children in oral production of regular plural markers is 44%, indicating that less than half of the regular plural markers were used correctly in oral tasks. Grade 6 children showed a significant improvement with a mean accuracy of 76%. In terms of the written tasks, Grade 4 students had a higher mean accuracy of 80% compared to the oral performance, showing that they perform better in written tasks regarding the use of regular plural markers. Grade 6 children further improved, achieving a mean accuracy of 85% in written tasks, which demonstrates a high level of proficiency.

Table 3. Accuracy (in percentage) of using regular plural markers in productive tasks.

	Grade Level	N	Mean	SD
Oral Regular Score	4th grade	30	44%	.30
	6th grade	30	76%	.28
Written Regular Score	4th grade	30	80%	.22
	6th grade	30	85%	.16

5.1.1.3 Plural Marking of Irregular Nouns

The mean accuracy for Grade 4 children in oral production of irregular plural markers is 45%, indicating that less than half of the irregular plural markers were used correctly in oral tasks. Grade 6 children showed a modest improvement, with a mean accuracy of 54%, suggesting a slight increase in correct usage but still reflecting challenges in mastering irregular plural forms. In terms of written production, Grade 4 children had a low mean accuracy of 24% showing significant difficulty in using irregular plural markers correctly in written tasks, whereas the Grade 6 children performed better, achieving a mean accuracy of 57%.

Table 4. Accuracy (in percentage) of using irregular plural markers in productive tasks.

	Grade Level	N	Mean	SD
Oral Irregular Score	4th grade	30	45%	.17
	6th grade	30	54%	.25
Written Irregular Score	4th grade	30	24%	.22
	6th grade	30	57%	.26

5.1.1.4 Types of Errors

Participants made two major types of errors. One was omission error which the singular plural form was used when either the plural markers -s or -es is required as the regular nouns or the plural markers required for irregular plural markers formation. The other was overregularization (OG) errors. Many participants made overregularization (OG) errors in the production tasks. There were two types of OG errors, similar to the types documented in prior literature (Jia, 2003): (a) adding a regular plural ending to nouns required irregular plural forms or no-change plurals (e.g. ‘foots’ for ‘foot’, and ‘fishes’ for ‘fish’); and (b) double-marking the irregular plural forms, such as ‘childrens’ for ‘children.’ Table 5 summarises the descriptive statistics of ratio of OG errors by the participants in the different grade levels. The ratio was calculated by dividing the number of OG or omission errors by total number of errors made by children. The results are in Tables 5 and 6.

In terms of oral tasks, Grade 4 children had a mean ratio of 82%, indicating a high tendency to omit plural markers in oral tasks. The mean ratio of Grade 6 children is slightly lower at 75%. The total mean ratio is 78%, indicating that omission errors were common in oral tasks for both grade levels. For Grade 4 OG errors, the mean ratio was 17%, indicating a lower frequency of OG errors in oral tasks. Grade 6 children’s OG error ratio raised to 20%, showing a slight increase in OG errors. The total mean ratio is 19%, suggesting that OG errors are relatively less common.

For the written tasks, Grade 4 children had a mean ratio of 25%, indicating fewer omission errors in written task compared to oral tasks. Grade 6 children’s mean ratio of omission errors drops to 35%. The total mean ratio for omission is 30%, reflecting that the omission errors are less frequent in written tasks compared to oral tasks. For OG errors, Grade 4 had a mean ratio of 75%, indicating a high frequency of OG errors in written tasks, whereas Grade 6 children’s

mean ratio was 62%, suggesting fewer OG errors compared to 4th graders. Overall, the total mean ratio is 68%, indicating that OG errors are prevalent in written tasks.

In sum, the results showed that both omission and OG errors are prevalent among children, with omission errors more common in oral tasks, while OG errors more frequent in written tasks. Both types of errors decrease as children progress from 4th to 6th grade, indicating improvements.

Table 5. Types of Errors Descriptive Statistics (Ratio)

	Grade Level	N	Mean	SD
Ratio of Omission in Oral Task	Grade 4	30	82%	0.22
	Grade 6	30	75%	0.28
	Total	60	78%	0.25
Ratio of Omission in Written Task	Grade 4	30	25%	0.24
	Grade 6	30	35%	0.35
	Total	60	30%	0.30
Ratio of OG in Oral Task	Grade 4	30	17%	0.23
	Grade 6	30	20%	0.24
	Total	60	19%	0.23
Ratio of OG in Written Task	Grade 4	30	75%	0.24
	Grade 6	30	62%	0.36
	Total	60	68%	0.31

Table 6. Types of Errors Descriptive Statistics (Number)

	Grade Level	N	Mean	SD
Number of Omission in Oral Task	Grade 4	30	5.02	2.09
	Grade 6	30	2.93	1.89
	Total	60	3.98	2.24
Number of Omission in Written Task	Grade 4	30	1.60	1.67
	Grade 6	30	1.03	1.10

	Total	60	1.32	1.43
Number of OG in Oral Task	Grade 4	30	0.83	1.12
	Grade 6	30	0.93	1.29
	Total	60	0.88	1.20
Number of OG in Written Task	Grade 4	30	4.63	1.75
	Grade 6	30	2.00	1.44
	Total	60	3.32	2.07

5.1.2 Statistical Analyses

To run statistical analyses to test whether the differences in performance between the groups were significant, I ran independent samples t-tests. I first checked the assumption of normal distribution for these data as well as the presence of outliers. Data were normally distributed, and no extreme outliers were identified.

The independent samples t-test presented in table 7 reveals significant differences in the overall performance of Grade 4 and 6 children in both oral and written tasks. For the oral tasks, the Levene's test indicated equal variances ($p = 0.203$), and the t-test showed a significant difference in performance, with 6th graders outperforming 4th graders ($t(58) = -4.82, p < 0.001$). The mean difference of -0.19 suggests that 4th graders had lower scores. Similarly, for the written tasks, the Levene's test confirmed equal variances ($p = 0.540$), and the t-test again indicated a significant difference, with 6th graders performing better than 4th graders ($t(58) = -4.61, p < 0.001$). The mean difference of -0.19 underscores the lower performance of Grade 4 children in written tasks. These results highlight the notable improvement in performance from Grade 4 to Grade 6 in both oral and written productive tasks.

Table 7. Independent Samples T-Tests for Overall Task Performance between 4th and 6th Grade

		Levene's Test		t-test for Equality of Means							
		F	Sig.	t	df	Significance 1- Sided p	2- Sided p	Mean Diff	SE Diff	95% CI L	U
Overall score for oral task	Equal variances assumed	1.66	.203	-4.82	58	<.001	<.001	-.19	.04	-.28	-.11
Overall score for written task	Equal variances assumed	.38	.540	-4.51	58	<.001	<.001	-.19	.04	-.28	-.11

SE = Standard Error; CI = Confidence Interval, L = Lower, U = Upper.

5.2 Research Question 2: Which Factors Explain Children's English Plural Morpheme Acquisition?

To address the second research question regarding the factors that explain accuracy in English plural marking in an EFL setting, nine independent variables were considered based on past literature. These variables include number of hours spent on homework weekly (weekly homework hours), age of onset of English learning, total weekly exposure time outside of school (in hours), gender, mother's education, father's education, motivation, and proficiency. Since age, gender, parental education, and motivation are categorical variables, they were dummy-coded accordingly (see Tables 9 and 12). Age is considered as a categorical variable in this study because there were two age groups in general.

The categorical variables are dummy-coded with specific reference levels to facilitate comparisons. For the age group, the reference level is Grade 6 children, against which the performance of Grade 4 children is compared. Regarding gender, the reference level is male, compared with the performance of female participants. In terms of the mother's and father's educational levels, the reference levels are parents earning a bachelor's degree, and comparisons are made against those earning a master's degree and a doctoral degree. For the motivation variable, the reference level is children who believed learning English is "really good." Comparisons are made against children with motivations described as "awful," "not very good," "okay," and "fantastic."

A normality test was conducted, and it was found that the total exposure time outside of school was not normally distributed. Therefore, the original data were log-transformed to achieve normal distribution. All assumptions for the multiple regression analysis were met, including achieving normal distributions of the continuous variables and ensuring there were no extreme outliers. Collinearity diagnostics indicated no issues with multicollinearity (all VIF values were below 2.84).

The descriptive statistics for the independent predictors are presented in Table 8. For continuous variables, the mean proficiency percentage was 24.20% (SD = 0.11). Weekly hours spent on homework (HW Hours) averaged 1.67 hours (SD = 0.96). The age of onset for learning English was on average 5.18 years old (SD = 1.17), with a range from 3 to 7 years. Exposure to English outside of school averaged 0.55 hours per week (SD = 0.26). For categorical variables, gender was coded as 1 for males and 2 for females, with a mean of 1.48 (SD = 0.50). Motivation to learn English had a mean of 3.58 (SD = 0.99), indicating that on average the children from both grade levels considered English language course at school between “okay” and “really good.” Parental education levels, coded as 1 for bachelor’s degree, 2 for master’s degree, and 3 for doctoral degree, had mean values of 1.35 (SD = 0.66) for mothers and 1.38 (SD = 0.59) for fathers, indicating most parents are earning a bachelor’s degree.

Table 8. Descriptive Statistics for Independent Variables

Variable Names	Mean	SD	Range	Min.	Max.
<i>Continuous Variables</i>					
Proficiency	24.20%	0.11	0.46	7%	53%
HW Hours (Weekly)	1.67	0.96	4.30	0.20	4.50
Age of Onset	5.18	1.17	4	3	7
Exposure (Hours/week)	0.55	0.26	1.15	0	1.15
<i>Categorical Variables</i>					
Gender	1.48	0.50	1	1	2
Motivation	3.58	0.99	4	1	5
Mother’s Education	1.35	0.66	2	1	3
Father’s Education	1.38	0.59	2	1	3

For Gender, 1 = male, and 2 = female.

For Parental Education Backgrounds, 1 = bachelor's degree, 2 = master's degree, and 3 = doctoral degree.

Subsequently, multiple regression analyses were conducted for both oral and written tasks to investigate the factors influencing children's acquisition of English plural morphemes. The results are presented in Tables 9 to 14, and this section will present these findings.

5.2.1 Multiple Regression Analysis for the Oral Task

For the oral task performance, a multiple regression analysis was conducted to investigate whether the acquisition of English plural markers in terms of oral production was predicted by the nine independent variables. Tables 9 to 11 present the results of the multiple regression analysis of the oral tasks. The analysis revealed a strong overall correlation between the predictors and the dependent variable ($R = 0.73$). The model accounted for approximately 54% of the variance in the oral task scores ($R^2 = 0.54$), as indicated by the ANOVA results ($F(14, 33) = 2.73, p = 0.009$), demonstrating that the independent variables collectively and significantly explain the variance in the oral task performance in English plural markers.

Among the predictors, English proficiency was the most significant ($B = 0.895, p = 0.005$), indicating that higher proficiency is associated with higher performance on the oral task in the acquisition of English plural markers. English proficiency was based on the results of the vocabulary task in this study, the proficiency score is the percentage of accuracy that children did in the vocabulary task. Furthermore, age of onset was marginally significant ($B = -0.043, p = 0.054$), suggesting that an earlier age of onset is associated with higher oral task performance in the acquisition of English plural markers. For children whose father with a doctoral degree, there's a marginally significant negative effect on the oral task performance ($B = -0.203, p = 0.068$), indicating that these children scoring 0.203 lower compared to children whose fathers having a bachelor's degree or a master's degree.

Non-significant predictors had p-values significantly greater than 0.05, indicating that these independent variables do not significantly predict the acquisition of English plural markers in terms of oral production (see Table 9).

In conclusion, the model significantly explained 54% of the variance in participants' oral task performance. The multiple regression analysis identified the English proficiency as a significant predictor of the overall oral performance in the acquisition of English plural markers. Age of onset and children who has a father with a doctoral degree were marginally significant.

Table 9. Multiple Regression Analysis for Oral Production

Predictors	B	Beta	t	Sig.	VIF
(Constant)	0.575		3.415	0.002	
Proficiency	0.895	0.606	3.034	0.005	2.839
HW Hours	0.005	0.030	0.190	0.851	1.795
Age of onset	-0.043	-0.298	-1.997	0.054	1.580
Exposure	-0.121	-0.177	-1.194	0.241	1.555
Motivation (Awful)	-0.080	-0.093	-0.684	0.499	1.318
Motivation (Not very good)	0.013	0.015	0.117	0.908	1.228
Motivation (Okay)	-0.084	-0.215	-1.428	0.163	1.617
Motivation (Fantastic)	-0.028	-0.064	-0.442	0.661	1.474
Female	0.035	0.100	0.671	0.507	1.578
Mother Master	0.055	0.118	0.706	0.485	1.984
Mother PhD	0.084	0.149	0.973	0.338	1.678
Father Master	0.048	0.132	0.850	0.401	1.723
Father PhD	-0.203	-0.285	-1.885	0.068	1.630
Age (Grade 4, Younger)	-0.043	-0.122	-0.655	0.517	2.462

Dependent Variable: Overall performance for oral task

Table 10. Model Summary of Multiple Regression for Oral Production

Model	R	Adjusted R Square	SE Estimate	R Square Change	F Change	Change Statistics Df1	Change Statistics Df2	Sig.	
1	0.73	0.54	0.34	0.14	0.53	2.73	14	33	0.009

Table 11. ANOVA of Multiple Regression for Oral Production

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0.77	14	0.055	2.73	0.009
	Residual	0.66	33	0.020		
	Total	1.43	47			

5.2.2 Multiple Regression Analysis for the Written Task

The multiple regression analysis for written task performance demonstrated a strong overall correlation between the predictors and the dependent variable ($R = 0.81$). Table 13 presents the results. The model explained approximately 52% of the variance in written task performance ($R^2 = 0.65$), indicating that a significant portion of the variance was accounted for by the predictors. The ANOVA table ($F(14, 33) = 4.36, p < 0.001$) suggested that the model was statistically significant, meaning that the predictors collectively explained a substantial portion of the variance in written task performance.

Among the independent variables, English proficiency was statistically significant ($B = 0.84, p = 0.03$). This result indicates that each unit increase in proficiency level led to an approximate increase of 0.84 units in the overall written task score by the participants (see Table 12). Moreover, the younger age group, which is also Grade 4 children, was also a significant predictor, indicating that being in the 9- to 10-year-old age group is associated with a decrease of 0.24 units in the written task performance in terms of English plural morpheme acquisition ($B = -0.24, p = 0.005$). Other predictors did not significantly predict the overall performance for the written task, as they all had p -values greater than 0.05, indicating that these independent variables do not significantly impact the written production accuracy of using English plural markers (see Table 12).

Table 12. Multiple Regression Analysis for Written Production

Predictors	B	Beta	t	Sig.	VIF
(Constant)	0.740		3.630	<0.001	
Proficiency	0.837	0.407	2.344	0.025	2.839
HW Hours	0.019	0.076	0.548	0.587	1.795
Age of onset	-0.029	-0.141	-1.091	0.283	1.580
Exposure	-0.163	-0.171	-1.331	0.192	1.555
Motivation (Awful)	-0.046	-0.038	-0.324	0.748	1.318
Motivation (Not very good)	0.097	0.081	0.705	0.485	1.228
Motivation (Okay)	-0.090	-0.167	-1.270	0.213	1.617
Motivation (Fantastic)	-0.049	-0.079	-0.632	0.532	1.474
Female	-0.037	-0.077	-0.597	0.555	1.578
Mother Master	-0.099	-0.154	-1.062	0.296	1.984
Mother PhD	-0.108	-0.138	-1.031	0.310	1.678
Father Master	0.048	0.094	0.692	0.493	1.723
Father PhD	-0.136	-0.137	-1.041	0.305	1.630
Age (Grade 4, Younger)	-0.237	-0.486	-3.002	0.005	2.462

Table 13. Model Summary of Multiple Regression for Written Production

Model R	R	Adjusted R Square	SE Estimate	R Square Change	F Change	Change Statistics		Sig.
	Square	R Square		Change	Change	Df1	Df2	
1	0.81	0.65	0.17	0.65	4.36	14	33	<0.001

Table 14. ANOVA of Multiple Regression for Written Production

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.80	14	0.13	4.37	<0.001
	Residual	0.97	33	0.03		
	Total	2.77	47			

5.3 Research Question 3: Does Children’s Performance Differ Across the Oral and Written tasks?

In order to address the third research question in relation to examining the differences in children’s performance across the oral and written production tasks, I ran two paired samples t-tests for each grade level. All the assumptions were checked, including obtaining the normally distributed data without extreme outliers being detected. Results are presented for each grade.

5.3.1 Grade 4 Task Differences

Tables 15 and 16 reveal significant differences in oral and written accuracy of Grade 4 children. Descriptive statistics showed that children achieved a higher mean accuracy in written task (51.87%) compared to oral tasks (39.73%), with slightly more variability in written task performance. Inferential statistics, based on the paired-samples t-test in Table 16, indicates a significant mean accuracy difference of -12.13%, with written task accuracy being notably higher. The 95% confidence interval for the difference (-19.41% to -4.86%) and $t(29) = -3.41$, $p = 0.002$ confirm that this difference is statistically significant.

Table 15. Paired Samples T-Tests Descriptive Statistics for 4th Grade

	Mean%	N	SD
Overall score for oral task	39.73%	30	0.13
Overall score for written task	51.87%	30	0.16

Table 16. Paired Samples Tests for 4th Grade

	Mean%	SD	95% CIs		t	df	two-sided p
			Lower	Upper			
Overall score for oral task - Overall score for written task	-12.13%	0.19	-19.41%	-4.86%	-3.41	29	0.002

5.3.2 Grade 6 Task Differences

In terms of Grade 6 children's task performance differences, Tables 17 and 18 demonstrate the results. Descriptive statistics showed that children achieved a higher mean accuracy in written task (71.00%) compared to the oral tasks (58.37%), with similar variability in accuracy for both tasks (SD = 0.17). Inferential statistics, based on the paired samples t-test, indicated a significant mean difference of -12.63%, with written task accuracy being notably higher. The 95% confidence interval for the difference (-18.77% to -6.49%) and t-score ($t(29) = -4.21$, $p = 0.0002$) confirm that the difference is statistically significant.

Table 17. Paired Samples Descriptive Statistics for 6th Grade

	Mean%	N	SD
Overall score for oral task	58.37%	30	0.17
Overall score for written task	71.00%	30	0.17

Table 18. Paired Samples Tests for 6th Grade

	Mean	SD	95% CIs		t	df	two-sided p
			Lower	Upper			
Overall score for oral task - Overall score for written task	-12.63%	0.16	-18.77%	-6.49%	-4.21	29	0.0002

6 DISCUSSION

6.1 Overview

The primary aim of this study was to assess the acquisition of English plural markers among Chinese primary school children after four and six years of English instruction. The current dissertation also aimed to identify the factors influencing the plural morpheme acquisition and to examine differences in performance across oral and written tasks. The results provide valuable insights into the grammatical morphemes development processes of young EFL learners in China and make contribution to the broader field of SLA. This section will discuss the results in detail by comparing the findings with previous studies.

6.2 Plural Morpheme Acquisition

The first question raised in this study was whether Chinese children have acquired the English plural markers after 4 and 6 years of English exposure in primary school. According to the results found in this dissertation, the mean accuracy for Grade 4 children was 40% (SD = 0.12) in oral tasks and 52% (SD = 0.16) in written tasks. Among all Grade 4 participants, none of them achieved the 80% threshold, indicating that none of them achieved the mastery level of using English plural morphemes. For Grade 6 children, the mean accuracy was 58% (SD = 0.17) in oral tasks and 71% (SD = 0.17) in written tasks. On average, Grade 6 students did not fully acquire English plural morphemes after about 6 years of English language instruction at school.

Two types of errors are observed in the oral and written production of the EFL children in this study: omission and overregularisation (OG). Omission refers to “missing the plural inflections in the obligatory contexts” (Jia, 2003, p. 1308), which is the most common error made by the child participants in the current study. During the task sessions, many children did not consistently mark the plural forms. Some nouns were marked with correct plural markers whereas others were not. This finding is consistent with Jia’s (2003) study of L2 learners’ inconsistency in marking plurality. Under the context of children in this study, all the participants were L1 Chinese speakers. The reason that omission is the most common error could be explained by L1 transfer, as Chinese does not have plural morphemes. Instead of adding the suffixes at the end of the noun to demonstrate plurality, Chinese speakers only need to add the number before the nouns. This is completely different from English. Another type

of error made by children was overregularisation (OG) errors. Two types of OG errors were observed through their responses: (a) adding a regular plural marker to the nouns required for irregular plural form (e.g. “fishes”), and (b) double-marking the irregular plural nouns with a regular plural ending (e.g. “childrens”). This observation is consistent with Jia’s (2003) finding that L2 learners who did not reach the mastery level of using plural markers could overuse (e.g. OG errors) or inconsistently use the plural markers (e.g. omission errors) in their language production. This may be a developmental error while learners are still developing their knowledge.

The answer to the first research question is obtained based on Lahey et al.’s (1992) criterion about assessing the mastery of grammatical morphemes by the learners. The criterion indicated that children are considered to master the grammatical morphemes when they can correctly use them in obligatory contexts with 80% accuracy. In the current dissertation, among the 30 Grade 6 children, 4 of them reached the 80% threshold in the oral task, and 8 of them reached the 80% threshold in the written task. 2 of the 30 Grade 6 children reached the 80% threshold in both oral and written tasks. Hence, these findings suggest that even after 4 and 6 years of classroom instruction, children still cannot master the English plural morphemes. Difficulties were still present while producing the English plural markers. Jia (2003) concluded that similar findings were present. They adopted the same criterion in their longitudinal study investigating the acquisition of plural morphemes by 10 Chinese ESL children who are immigrants to the United States. According to Jia’s (2003) study, only 7 out of 10 children mastered the English plural morphemes after five years of immersive exposure, which indicates the difficulties that second language learners face in acquiring the morphemes. The difficulty of mastering the use of English plural morphemes by both ESL and EFL children could be due to the variability in plural marking. English pluralisation rules are not uniformly straightforward, which includes variation for regular and irregular change. Particularly, irregular plural marking can confuse L2 learners whose L1 has more consistent pluralisation rules or without plural morphemes (e.g. Chinese Mandarin in Jia (2003) and Korean in Park & Lee (2017)).

To further analyse the findings about the development trajectories of the children, EFL children in Grades 4 and 6 have made significant progress in acquiring English plural markers, though the extent of acquisition varies between the two groups while no group can be said to

have mastered plural marking. The Grade 6 children demonstrated a higher accuracy in both the oral and written tasks compared to the Grade 4 children. These findings suggest a developmental trajectory where older children with more years of exposure to English instruction exhibit greater accuracy in plural marking. These findings align with previous studies on L2 acquisition, which have shown that increased exposure and instruction time positively correlate with higher accuracy in grammatical morpheme usage (Jia, 2003; Jia & Fuse, 2007). In ESL contexts, plural markings have also been found to be challenging and even after 5 years of immersive exposure, Chinese ESL learners have not acquired it (Jia, 2003). Children from different L1 backgrounds are found to partially acquire the English plural morphemes after 2 years of exposure (e.g. the L1 Japanese ESL learner from Yamaguchi and Kawaguchi (2014)). Overall, despite four and six years of instruction, these children have not mastered the plural morpheme use which is also attested in ESL contexts (Jia, 2003; Jia & Fuse, 2007; Yamaguchi & Kawaguchi, 2014). This may show the effect of age in interaction with the L1.

The developmental differences observed between the 4th and 6th graders in this study can be further analysed through the lens of relevant SLA theories. The higher accuracy among 6th graders suggest that these children have had more opportunities to engage with English input that is slightly above their current proficiency level, thereby facilitating the acquisition of plural markers. According to Muñoz's (2010) study, with the limited exposure received in instructional settings compared with immersive language learners, explicit instruction in the classroom is the key for foreign language learners. Among these classroom instructions, older learners usually perform better as they are more cognitively mature and obtain more practice compared with younger learners in an EFL setting (Muñoz, 2010).

Overall, the findings of this study contribute to the understanding of L2 English plural acquisition by EFL children in a Chinese primary school. The finding suggests that even after 4 years and 6 years of instruction, none of the EFL children could fully acquire the English plural morphemes. Errors, such as omission and overregularization, are always presented in written and oral production. However, gradual progression was observed. Grade 6 children outperformed Grade 4 children in both oral and written production, indicating that greater accuracy and fewer errors were made during the production and demonstrating a better

awareness of using English plural morphemes. The observed developmental differences reinforce the significance of extended and quality exposure to English.

6.3 Factors Influencing L2 Plural Marking Acquisition

The second question was about identifying the factors that predict the acquisition of English plural marking by children, including proficiency level, age, age of onset, exposure time outside of school, parental education levels and motivation. Multiple linear regression analysis revealed that vocabulary size, used as a proxy for proficiency, was a significant predictor of plural marking accuracy. A higher proficiency level correlates with better performance in both oral and written tasks. Moreover, the age of onset was marginally significant for the oral task, suggesting that an earlier start in learning English is associated with higher accuracy in oral plural marker use. This aligns with previous research indicating that earlier age of onset can facilitate better L2 grammatical acquisition due to prolonged exposure and more opportunities for interaction (Jia & Fuse, 2007). This finding can also explain the generative hypotheses with the assumption of the critical period for the acquisition of certain features of grammar (Lenneberg, 1967). However, this finding is not consistent with the findings of Sun et al. (2016), who found that older age of onset could predict better learning outcomes since children will be more cognitively mature. The difference might be due to the different age groups between the current study, which focused on young EFL learners between the ages of 9 and 12, and Sun et al. (2016), which focused on very young EFL learners aged between 3 and 7 years old. Additionally, age group (4th vs. 6th grade) was significant for written task performance, indicating that older children performed better than younger children. As children advance to higher grade levels, the increasing instructional time and opportunities to practice English grammatical rules could contribute to better performance. This aligns with the expected developmental trajectory that as age and years of exposure increase, learners will demonstrate better grammatical performance (Jia & Fuse, 2007; Sun et al., 2016).

Interestingly, the multiple regression analysis revealed that having a father with a doctoral degree was marginally significant ($p = 0.068$) and negatively predicted the plural morpheme use in oral tasks when compared with the reference category of fathers with a bachelor's degree and master's degree. This finding may suggest a complex interaction where higher parental education could correlate with different parental expectations or pressures that might not

always translate into better language performance. However, neither mother's nor father's education significantly predicted the written task performance, suggesting that the impact of parental education may vary depending on the task types.

Surprisingly, motivation did not emerge as a significant predictor in this study for either oral or written tasks. Each child demonstrated a variety of motivation levels, including all five levels: "awful," "not very good," "okay," "really good," and "fantastic." The mean motivation level was found to fall between the categories of "okay" and "really good" when the children were asked to evaluate their perception of English language learning. The variable showed no substantial impact on plural marking accuracy across different motivational levels. The lack of significant impact of motivation could be due to the complexity of motivational influences, which may be mediated by other factors such as classroom environment, teaching quality, or personal interests which were not directly measured in the current study. This finding contrasts with previous SLA literature, which often highlights motivation as a key driver of language acquisition (Dörnyei, 2005). This discrepancy may be attributed to the particular context of Chinese EFL learners and the measurement approach employed in this study. The use of a self-reported Likert scale may result in an overestimation or underestimation of children's perceptions regarding their English language learning process. Regarding other non-significant predictors, gender was not significant to explain the plural morpheme acquisition, suggesting that both male and female children performed similarly in their use of plural markers.

Overall, the multiple regression analyses for both oral and written tasks highlight vocabulary size which was used as a proxy for proficiency as the most consistent and significant predictor of plural marking accuracy by young EFL children. Age of onset and age also play important roles, though their impact varies between oral and written tasks. These findings emphasize the multifaceted nature of grammatical acquisition, where proficiency and early start in language learning are crucial, while the significant factors suggested in the previous studies (Paradis, 2011; Sun et al., 2016), such as motivation and exposure time, require further nuanced investigation. The current study contributes to understanding the dynamics of plural marker acquisition among young EFL learners providing valuable insights.

6.4 Task Effect of L2 Plural Morpheme Acquisition

The last question raised in the current study was whether children's performance differs across the oral and written tasks. The findings suggest significant differences in oral and written task performance, with children generally performing better in written tasks. The mean accuracy was higher for the written task compared to the oral task, supporting the findings from previous literature (Hu, 2011; Zalbidea, 2017; Son, 2024). This suggests that despite the timed nature of the written task in this study, children were able to plan, check, and edit grammatical errors within the limited timeframe, similar to the investigation from Son (2024).

The better performance in written tasks may be partly attributed to the use of explicit learning strategies, where learners apply metalinguistic knowledge to consciously monitor the correct use of plural morphemes (Son, 2024; Polio, 2012). This contrasts with the oral tasks that depend on implicit learning, where knowledge is acquired subconsciously and required for spontaneous response (Williams, 2012; Son, 2024; Polio, 2012). On the other hand, the task differences can also be attributed to the emphasis on written forms in the Chinese educational system, where written English is prioritized over oral proficiency (Butler, 2014). Consequently, children paid more attention to the accuracy of the written forms and were more aware of the errors made. These findings align with research showing task modality effects on L2 performance, where learners often demonstrate high accuracy in written tasks compared to oral tasks, particularly in earlier stages of language development (Kim, 2017; Son, 2024; Vasylets et al., 2017). The emphasis on written English in the school's curriculum likely provides students with more practice and familiarity with the written forms, leading to better performance in the written tasks. This is particularly relevant in EFL contexts, where the opportunities for spoken English practice may be limited compared to written practices (Muñoz, 2010). Nevertheless, to ensure balanced language skill development, incorporating more oral practice that encourages implicit learning could foster better automaticity in language use, thereby enhancing oral proficiency alongside written skills.

6.5 Implications for Research and Practices

By addressing the gaps in the literature regarding young EFL learners in China, the current study provides insights into the unique challenges and developmental trajectories of this learner group as well as the factors that affect their grammar acquisition. The observed

differences in performance between oral and written tasks highlight the impact of task modality on language use. This finding supports the idea that different modalities can influence the accuracy of grammatical morpheme usage by L2 learners (Skehan, 1998). The higher accuracy in written tasks suggests that learners may benefit from more structured and explicit language use.

The findings highlight the benefits of early exposure to English in terms of English plural acquisition. Policymakers and educators should advocate for early language learning programs. For example, implementing age-appropriate and engaging language activities in preschool or kindergarten might be beneficial in offering a solid foundation for later English language development and grammatical proficiency enhancement. Moreover, curriculum designers should also recognise the importance of motivation in language learning and create engaging and relevant materials that foster positive attitudes towards English learning, even though no significant effect of motivation on L2 plural acquisition in this study. This could be due to the self-report bias which the children could over- or under-estimate their true motivation levels. Providing diverse and meaningful exposure to English, both inside and outside the classroom, can enhance overall language proficiency. Continuous professional development is also crucial for teachers to equip them with effective strategies for teaching grammar in EFL contexts, especially when most of the teachers are also EFL learners.

On the other hand, even though only slight negative effect was found in terms of father's educational background, this results also revealed the importance of appropriate parental involvement in children's language learning process, as it may increase their exposure outside of classroom and enhance children's motivation to acquire the language. More research studies about parental involvement and attitudes toward EFL learners' language acquisition process are needed to gain a closer understanding to the relationship between parental involvement and learners' acquisition process.

Overall, the study's findings have important implications for EFL instruction in China. The emphasis on written forms in the curriculum appears effective in developing written accuracy; however, there is a need for more balanced instruction that includes ample opportunities for oral practice. Teachers should consider incorporating more interactive and communicative activities to enhance oral proficiency alongside written skills to ensure a more comprehensive acquisition of English plural morpheme use. For example, task-based learning

that integrates both modalities can provide comprehensive language practices, supporting the development of grammatical accuracy in diverse contexts. Additionally, implementing educational technology tools, such as games and language learning apps, can provide more practice for the EFL children as these tools are more flexible to use. Language policy reforms could be also useful in advocating for the balanced development of oral and written skills by EFL children for more comprehensive language development. Curriculum contents might need to be adjusted to ensure that both aspects are equally prioritised.

6.6 Limitations of the Study

While the findings of the current study provide insights into the acquisition of English plural markers by Chinese EFL children in primary school, some limitations need to be acknowledged. The study involved a relatively small sample size of 60 participants, drawn from two intact classes in a single primary school. Although the sample provided a good representation of the target population within this school, the findings may not be generalizable to all Chinese EFL children. Variations in instructional quality, school resources, and regional educational policies could influence the results. Future studies with larger, more diverse samples across multiple schools and regions would enhance the generalizability of the findings.

The cross-sectional design of the study captures a snapshot of plural marking acquisition at specific time points for Grade 4 and Grade 6 children. While this design allows for comparisons between different age groups, it does not account for individual developmental trajectories over time. A longitudinal approach, tracking the same students over several years, would provide more comprehensive insights into the progression of plural marking acquisition and the long-term effects of various influencing factors. The study relied on self-reported measures for variables such as motivation and exposure time, which can introduce biases. Overestimation or underestimation may occur.

The cultural context of China, with its unique educational practices and societal attitudes towards English language learning, may limit the applicability of the findings to other EFL contexts. The major emphasis on written English in Chinese schools and the societal attitudes on English language acquisition could differ in other countries. Therefore, comparative studies involving EFL learners from different cultural and educational backgrounds would help generate a more comprehensive picture of grammar acquisition in different social contexts.

The current study utilized specific tasks to assess plural marker acquisition by EFL children in China. While these tasks were designed to be age-appropriate and aligned with the instruction in school, they might not fully capture the complexity of language use in real-life contexts. Future studies could employ a broader range of assessment methods, such as spontaneous speech samples, interactive communication tasks, and comprehension tests, to gain a more comprehensive view to understand the grammatical acquisition processes.

7 CONCLUSION

Overall, this study provides a comprehensive assessment of the acquisition of English plural morphemes by young EFL learners in China. The research highlights several critical findings regarding learners' developmental trajectory, the factors influencing the acquisition processes, and the differences in task performance.

First, the current study confirms that the acquisition of English plural markers among Chinese primary school students improves with consistent exposure and instruction. Grade 6 children demonstrated significantly higher accuracy in both oral and written tasks compared to the Grade 4 children. However, after years of consistent exposure and instruction, EFL children still did not reach the criterion of successfully mastering the English plural morpheme knowledge. I argued that this could be due to the impact of L1 while acquiring the English plural morphemes since Chinese does not have the inflectional morphemes indicating plurality, which children could demonstrate errors in terms of using the way that Chinese presents plurality while producing English plural forms.

Second, the multiple regression analyses identified several key factors influencing the acquisition of plural morphemes. Among these, age of onset, vocabulary size as a proxy for proficiency, and parental education level emerged as significant predictors of performance. These findings align with prior studies, emphasizing the importance of both internal and external factors in L2 grammar acquisition. The limited exposure in EFL settings, compared to the immersive ESL environments, presents unique challenges for the learners, as highlighted by the varying acquisition levels among the children participated in this study.

Third, this study revealed significant differences in performance across oral and written tasks. Consistent with the hypothesis, students performed better in written tasks than in oral tasks, reflecting the Chinese educational system's emphasis on written English, regarding English language curriculum. It might be due to the different characteristics that each modality has. Writing production involves more explicit knowledge where children could have opportunities to think and revise on their production, whereas speaking production requires for more immediate response leading to no extra preparation time for revision. The task performance difference between the two modalities might also be due to the Chinese standardized test system, where students need to get higher scores in the written tests so that they will have more chances to get into a better secondary school and then college. This finding

underscores the need for balanced instruction that equally prioritizes oral proficiency to ensure comprehensive language development.

The implication of this study is multifaceted. For educators and policymakers, the findings suggest the necessity of enhancing the quality and quantity of English exposure in EFL settings, possibly through increased instructional time and the integration of more immersive language experiences. Despite the fact that motivation was not found as a significant predictor of accuracy in plural marking in this study, it is still a robust finding in literature that students need to be motivated to learn their second language besides the incentive of getting higher standardization test scores.

In conclusion, while the current study provides insights into the acquisition of English plural morphemes in an EFL context, it also identifies areas for future research. Specifically, further investigation into the acquisition trajectories of other grammatical morphemes and the long-term effects of varied instructional approaches could yield a more nuanced understanding of L2 development in young EFL learners. Moreover, expanding the sample size and including diverse educational contexts would enhance the generalizability of the findings. By addressing these gaps, future research can build on the foundations laid by the current study, ultimately informing more effective language teaching practices and policies, and leading to more effective L2 learning in EFL contexts.

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Appendix A
Parental Information Sheets and Consent Forms (English and Chinese Versions)

English Language Learning by Chinese Primary School Children

Ethic Approval Number: EDUC_C1A_24_057

Dear Parent,

I am writing this letter to inform you about my research project and invite your children to take part in it. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take the time to read the following information before you sign the consent form.

Where will this study take place?

This study will take place in [school name].

Who can participate?

Students in Grade 4 (age of 9-10) and Grade 6 (age of 11-12) who have Chinese as their first language can participate. One whole class will be randomly chosen from each grade level to participate in this research.

What will the children be asked to do?

There will be two sessions, an oral and a written one.

During the first session I will meet you child individually in a school room and I will ask the child to do some English activities and games. All the activities are designed to be child-friendly and I believe children will enjoy them. I will ask them to name some pictures. We will also play a game where they will need to describe actions or items in the pictures. The oral part will last for about 10-15 minutes. This part will be audio recorded for further transcription and analyses.

For the written part, they will be asked to fill out one text based on a given theme. And this part will last for about 15 minutes and will take place in the class for all children at the same time as a group.

What parents are asked to do?

As parents, you will need to help us by filling out an online Language Background Questionnaire indicating your child's demographic and language background, including prior English education experiences, which is short and should not take more than 10 minutes.

How will the collected data be stored and accessed?

All the data will be safely stored on the University of Oxford Nexus365 OneDrive for Business file storage service, which is approved by the university for all research data storage. Audio recordings will be permanently deleted after transcription. Data will be pseudonymized by replacing personal identifiers with IDs, and the data containing any personal identifiers, and any linkage to that, will be stored separately and deleted at the end of the project. All physical data that cannot be digitized will be kept in a secure storage facility such as a locked storage cabinet with access to it monitored and limited to the people that require access to the data. Other research data will be stored for 3 years after the final submissions of the thesis. Me and my postgraduate program supervisor only will have access to the research data.

We will only examine data at the group level and will not discuss individual children's performance or share their individual results with anyone. Only the aggregated results for the group will be analyzed and reported only in the M.Sc. thesis.

What if I want to withdraw my child's participation after the data collection?

Any time during the data collection process and afterwards, up to the point when the data has been anonymized, individuals may withdraw from the study any personal information they have provided by sending an email stating their request. After 14 days from the data collection end date, it will not be possible to withdraw your data anymore.

Thank you so much for reading through this! Your contribution to this study is invaluable because it will help us better understand how Chinese students in primary school learn English which may have implications for English language teaching and pedagogy.

If you have any question or if there is anything that is unclear and you would like more information, please feel free to contact me.

“关于中国小学生英语学习过程研究”的致家长一封信

牛津大学伦理审查通过编号: EDUC_C1A_24_057

尊敬的家长:

您好!

此信函旨在介绍我们正在进行的研究项目,以及邀请您的孩子参与其中。我们希望征得您的同意,因此,请您仔细阅读以下内容。如果您同意您的孩子参与到本次项目中,请您签署后面的“家长同意书”并让孩子第二天将签好字的同意书交回给班主任老师;如果您不同意孩子参与该项目,您无需签署“家长同意书”。

谁可以参加本次项目?

以中文为母语的四年级(9-10岁)和六年级(11-12岁)学生均可参加。

参与这项研究,孩子们需要做些什么?

本次研究由两个环节组成:口语和写作。

(1) 口语部分:我会与您的孩子单独进行约10分钟的英语交流。内容将围绕英语活动和游戏展开。所有的活动都是对儿童友好的、适合该年龄段的内容。在该部分,我会让他们说出一些图片的名称。其次,我们还会玩一个描述图片中的动作或物品的英语游戏。口语部分将进行录音,以便进一步转录和分析。

(2) 写作部分:我们将要求学生根据给定的主题用英语的正确形式进行填空,约5分钟。

在此期间,家长需要做什么?

作为家长,您需要帮助我们在线填写一份语言背景问卷。该问卷旨在了解学生的语言背景以及过往英语学习经历。

数据的存储和访问是怎样的?

所有数据都将安全地存储在牛津大学 Nexus365 OneDrive for Business 文件存储服务中,该服务经牛津大学批准用于所有研究数据的存储。口语部分的录音将在转录后永久删除。最终数据将通过数字代替学生姓名进行化名处理,包含任何个人标识符的数据以及与之相关的任何链接都将单独存储,并在项目结束时删除。所有无法数字化的纸质数据都将保存在安全的存储设施中,例如上锁的存储柜。所有研究数据将在论文最终提交后保存3年。只有我与我的硕士研究生导师拥有这些数据的存取权限。

此外，我们将只研究整体的数据，不会讨论单个孩子的表现，也不会向任何人分享参与者在本次研究中的成绩。最终的研究结果只会以整体的形式在硕士论文中进行分析 and 报告。

如果我想在数据收集后撤回我孩子的数据，我该怎么办？

在数据收集过程中的任何时间，直到自数据收集结束之日起的第 14 天，您都可以通过联系我撤回孩子参与的数据。但自数据收集结束之日起的第 14 天后，您将无法撤回已经提交的数据。

非常感谢您百忙之中阅读此信函！您和孩子对本研究的贡献十分宝贵，因为它将帮助我们更好地了解中国小学生是如何学习英语的，这可能会对未来英语教学和教学法产生影响。如您同意孩子参与此次数据收集，请填写并签署下面的“家长同意书”。如果您有任何疑问，或希望了解此研究的更多信息，请随时与我联系。

PARENT/GUARDIAN CONSENT FORM

[English Language Learning by Chinese Primary School Children]

- Your child's school has agreed to take part in a study run by the University of Oxford looking at how children acquire the English language at the school context.
- If your child takes part, a researcher will come and visit them at school, conduct an oral and a written task with them.
- To find out more about the study and before you sign this form, please first read the attached information sheet. You can e-mail us if you have any questions.
- **If you are happy for your child to take part, please fill in the form below and return it to your child's class teacher as soon as possible.**

Full Name of child: _____

Please tick the box if you agree with the statement(s):

I have read and understood the details of the above study, and have had the opportunity to ask questions and discuss the study with others, and received satisfactory answers to my questions.

I understand that the project has received ethics clearance through the University of Oxford's ethical approval process for research involving human participants, and I understand who will have access to the data, how it will be stored and what will

I agree for my child to be audio recorded.

I understand how audio recordings will be used in the research outputs.

I understand that participation is voluntary and that my child and I are free to withdraw at any time after 14 days of the data collection end date, without giving any reason and without my child being affected in any way.

I understand how to raise a concern or make a complaint.

I give permission for my child to take part in the above study.

Name of parent/guardian: _____

Signature: _____ Date: dd / mm / yyyy

Name of researcher: _____

Signature: _____ Date: dd / mm / yyyy

“关于中国小学学生英语学习过程研究”的家长同意书

牛津大学伦理审查通过编号: EDUC_C1A_24_057

1. 您已同意参与牛津大学开展的此项旨在探讨儿童如何在学校环境中学习英语的研究。
2. 如果您的孩子参加了这项研究，研究人员将到访，与学生一起完成口语和写作活动。
3. 在您签署本表之前，请先阅读所附的“致家长一封信”，以了解该研究的详细信息。如您有任何疑问，请发送电子邮件。
4. 如果您同意您的孩子参加这项研究，请填写下表。

孩子的姓名: _____

如果您同意以下声明，请在对应的方框内打勾：

我已阅读并理解上述研究的详细内容，并有机会提出问题，且我的问题已得到满意的答复。	
我了解该项目已通过牛津大学的伦理审批程序，并了解谁将有权访问数据、数据将如何存储以及研究结束后数据将如何处理。	
我同意此项目在数据收集时，对我的孩子进行录音。	
我了解并知晓研究者将如何在数据分析时使用录音。	
我了解参与该活动是自愿的，且我和我的孩子可以在数据收集结束日期起到结束后的第 14 天前随时退出，无需说明任何理由，我的孩子也不会因此受到任何影响。	

我知道如何提出问题或投诉。	
---------------	--

我同意我的孩子参加“关于中国小学生英语学习过程研究”的致家长一封信中描述的研究。

家长签名：_____

日期：_____（年/月/日）

Appendix B
School Headteacher Consent Form and Information Sheet (English and Chinese Versions)

English Language Learning by Chinese Primary School Children

Ethical Approval Number: EDUC_C1A_24_057

Who can participate?

Students in Grade 4 (age of 9-10) and Grade 6 (age of 11-12) who have Chinese as their first language can participate. It would be convenient if one intact class from each grade participated in this research.

How will the participants be recruited?

There will be paper copies of a Parent Information Sheet, and a Parent Consent Form sent to each parent in order to gain their consent concerning their child's participation in this study. They need to sign the consent form if they agree their child to participate in this study and hand them back to me as a record. No child can/will be tested without the signed consent form having been received.

After gaining the consents, what will the children be asked to do?

There will be two sessions, an oral and a written one.

During the first session, I will meet each child individually in a school room and I will ask the child to do some English activities and games. All the activities are designed to be child friendly, and I believe children will enjoy them. I will ask them to name some pictures showing objects. We will also play a game where they will need to describe actions or items in the pictures. The oral part will last for about 10-15 minutes. This part will be audio recorded for further transcription and analyses.

For the written part, children will be asked to fill out one text based on a given theme which will be familiar to them. And this part will last for about 15 minutes and will take place in the class for all children at the same time as a group. A teacher in each grade's class will need to give me 20 minutes of their lesson for completing this writing session.

I assure you that every effort will be made to ensure that the data collection process seamlessly integrates into the school's daily routine and does not disrupt normal teaching activities.

What parents are asked to do?

Parents will need to help us by filling out an online Language Background Questionnaire indicating children's demographic and language background, including prior English education experiences, which is short and should not take more than 10 minutes. The Language Background Questionnaire will be online and may need to be spread through the parents' group chat.

How will the collected data be stored and accessed?

All the data will be safely stored on the University of Oxford Nexus365 OneDrive for Business file storage service, which is approved by the university for all research data storage. Audio recordings will be permanently deleted after transcription. Data will be pseudonymized by replacing personal identifiers with IDs, and the data containing any personal identifiers, and any linkage to that, will be stored separately and deleted at the end of the project. All physical data that cannot be digitized will be kept in a secure storage facility such as a locked storage cabinet with access to it monitored and limited to the people that require access to the data. Other research data will be stored for 3 years after the final submissions of the thesis. Me and my postgraduate supervisor only will have access to the research data.

We will only examine data at the group level and will not discuss individual children's performance or share their individual results with anyone. Only the aggregated results for the group will be analysed and reported only in the M.Sc. Thesis.

What if parents' want to withdraw child's participation after the data collection?

Any time during the data collection process and afterwards, up to the point when the data has been anonymized, individuals may withdraw from the study any personal information they have provided by sending an email stating their request. After 14 days of the data collection end date, it will not be possible to withdraw their data anymore.

Thank you so much for reading through this! Your contribution to this study is invaluable because it will help us better understand how Chinese students in primary school learn English which may have implications for English language teaching and pedagogy.

If you have any question or if there is anything that is unclear and you would like more information, please feel free to contact me.

I look forward to meeting you in person and discuss any related aspect further with you.

关于“中国小学生英语学习”研究项目的信息函

牛津大学伦理审查通过编号: EDUC_C1A_24_057

谁可以参与这项项目?

以中文为母语的四年级 (9-10 岁) 和六年级 (11-12 岁) 学生均可参加。如果每个年级段都有一个完整的班级能够参与本研究的话, 项目的实施会更加方便。

如何招募参与者?

我们将需要通过学校向每位家长发送纸质版《家长信息表》和《家长同意书》, 以征得他们对子女参与本研究的同意。如果家长同意其子女参加本研究, 则需要在《家长同意书》上签字, 并交还给我作为记录。在未收到签字同意书的情况下, 任何孩子都不能且不会接受测试。

征得家长和学生的同意后, 孩子们需要做什么?

本项目将会有两个环节: 口语和写作。

首先进行的是口语环节。我会在学校教室（或任何学校方便的空间）里与每个孩子单独见面，并需要孩子们配合我做一些英语活动和游戏。所有活动都是为孩子们设计的，适合小学生进行的英语小游戏。口语部分又细分成两小部分：词语和句子。我会让他们说出一些显示物体的图片的名称。我们还会玩一个游戏，让他们描述图片中的动作或物品。口语部分大约持续 15 分钟。这部分将进行录音，以便进一步转录和数据分析。

当全部学生完成口语阶段后，孩子们需要给所提供的短文填空。写作环节的时间约为 10 分钟，将以班级形式以纸质小测试的方式进行。每个年级的老师需要给我约 15 分钟的课堂时间来完成整个写作环节。

在此我向您保证，将尽一切努力确保数据收集过程不会干扰正常的教学活动。

与此同时，家长需要做什么？

同意参与此项目的家长需要帮助我们在线填写一份语言背景问卷。其目的旨在说明孩子的语言背景，包括过往英语教育经历。此问卷的填写时间不会超过 10 分钟。语言背景问卷将在线填写，可能需要通过家长微信群进行传播。

完成数据收集后，所有的数据如何存取？

所有数据都将安全地存储在牛津大学 Nexus365 OneDrive for Business 文件存储服务中，该服务器经牛津大学批准用于所有研究数据的存储。录音文件将在转录后永久删除。数据将通过用 ID 号码代替具有个人标识的符号的方式进行化名处理，包含任何具有个人标识的符号的数据以及与之相关的任何链接都将单独存储，并在项目结束时删除。所有无法数字化的物理数据都将保存在安全的存储设施中，例如上锁的存

储柜，并对其访问进行监控，仅限需要访问数据的人员访问。其他研究数据将在论文最终提交后保存 3 年。只有我和我的研究生导师可以访问研究数据。我们只会研究小组层面的数据，不会与任何人讨论单个孩子的表现或分享他们的个人成绩。只有小组的综合结果会在硕士论文中进行分析 and 报告。

如果家长在数据收集后想要撤回孩子的参与内容，他们应该怎么做？

在数据收集过程中和之后的任何时间，直到数据被匿名化之前，参与者都可以随时通过发送电子邮件方式说明自己的诉求 — 从研究中撤回他们提供的任何个人信息。但，数据收集结束的第 14 天后，任何人将无法再撤回其数据。

非常感谢您阅读此文！您对这项研究的贡献非常宝贵，因为它将帮助我们更好地了解中国的小学生是如何学习英语的，这可能会对未来英语教学和教学法产生影响。如果您有任何问题、疑虑、或希望了解更多信息，请随时与我联系。我期待着与您取得联系，并与进一步讨论任何相关问题。

SCHOOL HEAD TEACHER CONSENT FORM

[English Language Learning by Chinese Primary School Children]

- Your school has agreed to take part in a study run by the University of Oxford looking at how children acquire the English language at the school context.
- If [school name] takes part, a researcher will come and visit them at school, conduct an oral and a written task with them.
- To find out more about the study and before you sign this form, please first read the attached information sheet. You can e-mail us if you have any questions.
- **If you are happy for [school name] to take part, please fill in the form below and return it to the researcher as soon as possible.**

Name of school: _____

Please tick if you agree with the statement(s):

I have read and understood the details of the above study, and have had the opportunity to ask questions and discuss the study with others, and received satisfactory answers to my questions.

I understand that the project has received ethics clearance through the University of Oxford's ethical approval process for research involving human participants, and I agree for [*school name*] to take part in the above study.

I agree for the researcher to audio record the tasks.

I understand how audio recordings will be used in the research outputs.

I understand that participation is voluntary and that the children are free to withdraw at any time after 14 days of the data collection end date, without giving any reason and without my

I understand how to raise a concern or make a complaint.

I give permission for [school name] to take part in the above study.

Name of head teacher: _____

Signature: _____ **Date:** dd / mm / yyyy

Name of researcher: _____

Signature: _____ Date: dd / mm / yyyy

关于“中国小学生英语学习”研究项目的同意书

牛津大学伦理审查通过编号: EDUC_C1A_24_057

- 贵校已通过“研究项目数据收集的信息函”了解此项目的相关内容，该研究旨在探讨儿童如何在学校环境中学习英语。
- 如果[学校名称]参加了这项研究，研究人员将到校访问，与学生一起完成口头和书面任务。
- 在您签署本表之前，请先阅读所附的信息函，以了解有关该研究的更多信息。如有任何疑问，请发送电子邮件。
- 如果您同意让[学校名称]参与研究，请填写下表并尽快将其发送至邮箱。

如果您同意以下声明，请在对应的空白处打“√”：

我已阅读并理解上述研究的详细内容，并有机会提出问题与与他人讨论，且我的问题已得到满意的答复。	
我了解该项目已通过牛津大学涉及人类参与者研究的伦理审批程序，并了解谁将有权访问数据、数据将如何存储以及研究结束后数据将如何处理。	
我同意研究人员对数据收集过程进行录音。	
我了解此项研究将如何使用和处置录音文件。	
我了解参与此项目是自愿的行为，在数据收集结束日期的第 14 天前，学生及家长可以随时退出此项目，无需说明任何理由。数据收集结束的第 14 天后，被收集的数据将无法被撤回。	
我了解如何针对此项目提出问题或投诉。	
我同意并允许[学校名称]参加上述研究。	

学校名称: _____

校长姓名：_____ 签名：_____ 日期：_____

研究者姓名：_____ 签名：_____ 日期：_____

Appendix C
Language Background Questionnaire

1. What is the full name of your child? _____
2. What is the date of birth (year and month) of your child? _____
3. What is the child's gender?
 - a) Female
 - b) Male
4. What is the mother's highest educational level?
 - a) No schooling completed.
 - b) Nursery school to 9th grade
 - c) High school graduate, diploma, or the equivalent
 - d) Some college credits, no degree
 - e) Bachelor's degree
 - f) Master's degree
 - g) Doctoral degree
5. What is the father's highest educational level?
 - a) No schooling completed.
 - b) Nursery school to 9th grade
 - c) High school graduate, diploma, or the equivalent
 - d) Some college credits, no degree
 - e) Bachelor's degree
 - f) Master's degree
 - g) Doctoral degree
6. To your best estimate, how many hours does your child dedicate on doing homework for the English language course per week?
 - a) 1 hour or less
 - b) 2 hours
 - c) 3 hours
 - d) More than 3 hours

7. When did your child start systematically learning English? (i.e. When did your child start learning English in classroom or institutional settings?)
- Start from Kindergarten (i.e. 3 years old)
 - Start from Grade 1 of primary school
 - Other (please specify): _____
8. If your child started learning English systematically before primary school, please estimate how many hours per week they spent learning English.
- Less than 1 hour
 - 1-3 hours
 - 3-6 hours
 - Other (please specify number of hours): _____
9. Which of the below activities does your child do in English? Fill in the following chart to indicate the estimate frequency of these activities per week (in hours).

Activity	Frequency (hour/week)
Book-reading	
TV Show watching	
Playing computer/tablet games in English	
Extracurricular activities	
Other: _____	

Appendix D

CUREC Approval Letter

**SOCIAL SCIENCES & HUMANITIES
INTERDIVISIONAL RESEARCH ETHICS COMMITTEE
DEPARTMENTAL RESEARCH ETHICS COMMITTEE**

Department of Education
15 Norham Gardens, Oxford OX2 6PY
student.curec@education.ox.ac.uk; staff.curec@education.ox.ac.uk



Xinyue Cui
Department of Education, Social Sciences Division
University of Oxford

17 March 2024

Dear Xinyue,

Research ethics approval

Research title: The Acquisition of the English Plural Morpheme by Young EFL Learners in China

Research ethics reference: EDUC_C1A_24_057

The above application has been considered on behalf of the Education Departmental Research Ethics Committee (DREC) in accordance with the University's procedures for ethical approval of all research involving human participants.

I am pleased to confirm that, on the basis of the information provided to the DREC, ethics approval has now been granted for this study.

Please note the following:

Personal data: It is the responsibility of the PI to ensure that all personal data collected during the project is managed in accordance with the University's [guidance and legal requirements](#).

In-person activities: Any data collection involving in-person interactions with participants must have an up-to-date fieldwork risk assessment in place; further guidance is available from the Safety Office's [website](#).

Amendments: Please notify the committee if you intend to make any amendments to the information in your ethics application as submitted at date of this approval, as all changes must receive ethical approval prior to implementation. The amendment form is available on the [SSH IDREC webpage](#).

We welcome feedback on your experience of the ethical review process and suggestions for improvement. Please email any comments to staff.curec@education.ox.ac.uk / student.curec@education.ox.ac.uk or ethics@socsci.ox.ac.uk.

Yours sincerely

Lulu Shi

A handwritten signature in black ink, appearing to read 'Lulu Shi'.

DREC member

cc: Dr. Athina Ntalli athina.ntalli@education.ox.ac.uk; student.curec@education.ox.ac.uk

Appendix E

Oral Picture Description Task

Instruction by the Researcher:

Amy went to a zoo last week with her family. There was also a vegetable garden in the zoo. I will show you some pictures one by one and you need to describe what Amy saw in the zoo. In some other cases, you just need to describe what someone is doing. Are you ready?

Prompts:

1. What does Amy see?	7. What does Amy see?	13. What are they doing? (Filler)
<p>The figure originally presented here cannot be made freely available via ORA because of copyright. The figure was sourced at https://www.canva.com/policies/content-license-agreement/</p>		
2. What is she doing? (Filler)	8. What are they doing?	14. What does Amy see?
<p>The figure originally presented here cannot be made freely available via ORA because of copyright. The figure was sourced at https://www.canva.com/policies/content-license-agreement/</p>		
3. What is she doing? (Filler)	9. What does Amy see?	15. What does Amy see?
<p>The figure originally presented here cannot be made freely available via ORA because of copyright. The figure was sourced at https://www.canva.com/policies/content-license-agreement/</p>		
4. What does Amy see?	10. What is he doing? (Filler)	16. What does Amy see?
<p>The figure originally presented here cannot be made freely available via ORA because of copyright. The figure was sourced at https://www.canva.com/policies/content-license-agreement/</p>		

5. What does Amy see?	11. What does Amy see?	17. What does Amy see?
<p>The figure originally presented here cannot be made freely available via ORA because of copyright. The figure was sourced at https://www.canva.com/policies/content-license-agreement/</p>		
6. What is she doing? (Filler)	12. What does Amy see?	18. What does Amy see?
<p>The figure originally presented here cannot be made freely available via ORA because of copyright. The figure was sourced at https://www.canva.com/policies/content-license-agreement/</p>		

Appendix F

Written Gap-filling Task Prompts

Instruction by the Researcher:

Amy went to a zoo last week with her family. There was also a vegetable garden in the zoo. She had a good time with her family. Can you fill in the blanks using the correct word form? You have 10 minutes to complete this task. Are you ready?

Prompts:

My name is Amy. I have a big family. There are six _____ (person) in my family. My dad and my mom _____ (be) 37 years old. They are _____ (teacher). My grandpa is a doctor. My grandma is a farmer. My brother is 16 years old. He is a student. Me and my brother like ____ (play) football.

Today, we ____ (go) to a zoo. The weather ____ (be) sunny but cold. There is a vegetable garden in the zoo. It is very big. There are many _____ (child) playing with each other. The garden grows many _____ (carrot), _____ (tomato), and _____ (potato). I love _____ (eat) carrots. There are many animals in the zoo, too. I see two _____ (chicken) and three _____ (duck). Some _____ (goose) were swimming next to them. Look! Are those goats? No, those are _____ (sheep). There are also two _____ (elephant). They have two big _____ (tooth) and four _____ (foot). I know they are afraid of _____ (mouse).

Appendix G

Correlation Tables for the Multiple Regression Analysis

Table 19. Correlation for Multiple Regression Analysis – Oral Task

	Overall score for oral task	Score for Vocab Task	Number of hours that is used to finish English homework at school	Age of onset	log_sum_exposure	awful	notverygood	okay	fantastic	female	mother master	mother phd	father master	father phd	age 9 to 10
Pearson Correlation	1.000	.591	.219	-.055	.241	-.172	-.021	-.016	.007	-.067	.091	.199	.359	-.151	-.453
	.591	1.000	.130	.136	.472	-.234	-.118	-.011	.045	-.329	-.129	.171	.227	-.017	-.599
	.219	.130	1.000	-.046	.252	.106	.214	.080	-.073	-.106	.198	.367	.131	-.158	-.247
	-.055	.136	-.046	1.000	-.119	.053	-.123	-.300	.325	.178	.020	.001	-.006	-.297	.001
	.241	.472	.252	-.119	1.000	-.008	.083	-.071	-.041	-.122	-.100	.136	.046	-.041	-.444
	-.172	-.234	.106	.053	-.008	1.000	-.043	-.127	-.100	.200	-.093	.270	-.147	-.054	.035
	-.021	-.118	.214	-.123	.083	-.043	1.000	-.127	-.100	-.009	-.093	-.071	-.147	-.054	.035
	-.016	-.011	.080	-.300	-.071	-.127	-.127	1.000	-.293	-.072	.231	-.054	.265	-.157	.151
	.007	.045	-.073	.325	-.041	-.100	-.100	-.293	1.000	.033	.215	.011	.113	-.124	.135
	-.067	-.329	-.106	.178	-.122	.200	-.009	-.072	.033	1.000	.205	.054	.059	-.097	-.035
	.091	-.129	.198	.020	-.100	-.093	-.093	.231	.215	.205	1.000	.100	.152	.514	-.076
	.199	.171	.367	.001	.136	.270	-.071	-.054	.011	.054	-.152	1.000	.048	.194	-.288
	.359	.227	.131	-.006	.046	-.147	-.147	.265	.113	.059	.514	.048	1.000	-.183	-.149
	-.151	-.017	-.158	-.297	-.041	-.054	-.054	-.157	-.124	-.097	-.115	.194	-.183	1.000	-.218
	-.453	-.599	-.247	.001	-.444	.035	.035	.151	.135	-.035	.076	-.288	-.149	-.218	1.000
Sig. (1-tailed)	.	<.001	.067	.356	.050	.121	.443	.458	.481	.325	.270	.088	.006	.153	<.001
	.000	.	.189	.178	.000	.055	.212	.472	.380	.011	.191	.122	.060	.453	.000
	.067	.189	.	.377	.042	.237	.072	.295	.311	.237	.088	.005	.188	.142	.045
	.356	.178	.377	.	.210	.360	.203	.019	.012	.113	.447	.498	.483	.020	.496
	.050	.000	.042	.210	.	.478	.286	.316	.390	.203	.249	.178	.378	.391	.001
	.121	.055	.237	.360	.478	.	.385	.195	.249	.086	.264	.032	.159	.358	.406
	.443	.212	.072	.203	.286	.385	.	.195	.249	.477	.264	.316	.159	.358	.406
	.458	.472	.295	.019	.316	.195	.195	.	.022	.313	.057	.357	.034	.143	.154
	.481	.380	.311	.012	.390	.249	.249	.022	.	.411	.071	.471	.222	.200	.180
	.325	.011	.237	.113	.203	.086	.477	.313	.411	.	.081	.358	.345	.256	.406
	.270	.191	.088	.447	.249	.264	.264	.057	.071	.081	.	.150	.000	.217	.305
	.088	.122	.005	.498	.178	.032	.316	.357	.471	.358	.150	.	.372	.094	.023
	.006	.060	.188	.483	.378	.159	.159	.034	.222	.345	.000	.372	.	.107	.155
	.153	.453	.142	.020	.391	.358	.358	.143	.200	.256	.217	.094	.107	.	.068
	.001	.000	.045	.496	.001	.406	.406	.154	.180	.406	.305	.023	.155	.068	.

Table 20. Correlation for Multiple Regression Analysis – Written Task

	Overall score for written task	Score for Vocab Task	Number of hours that is used to finish English homework at school	Age of onset	log_sum_exposure	awful	notverygood	okay	fantastic	female	mother master	mother phd	father master	father phd	age 9 to 10
Pearson Correlation	1.000	.651	.179	-.034	.311	-.168	.084	-.142	-.136	-.226	-.204	.066	.137	.014	-.660
	.651	1.000	.130	.136	.472	-.234	-.118	-.011	.045	-.329	-.129	.171	.227	-.017	-.599
	.179	.130	1.000	-.046	.252	.106	.214	.080	-.073	-.106	.198	.367	.131	-.158	-.247
	-.034	.136	-.046	1.000	-.119	.053	-.123	-.300	.325	.178	.020	.001	-.006	-.297	.001
	.311	.472	.252	-.119	1.000	-.008	.083	-.071	-.041	-.122	-.100	.136	.046	-.041	-.444
	-.168	-.234	.106	.053	-.008	1.000	-.043	-.127	-.100	.200	-.093	.270	-.147	-.054	.035
	.084	-.118	.214	-.123	.083	-.043	1.000	-.127	-.100	-.009	-.093	-.071	-.147	-.054	.035
	-.142	-.011	.080	-.300	-.071	-.127	-.127	1.000	-.293	-.072	.231	-.054	.265	-.157	.151
	-.136	.045	-.073	.325	-.041	-.100	-.100	-.293	1.000	.033	.215	.011	.113	-.124	.135
	-.226	-.329	-.106	.178	-.122	.200	-.009	-.072	.033	1.000	.205	.054	.059	-.097	-.035
	-.204	-.129	.198	.020	-.100	-.093	-.093	.231	.215	.205	1.000	-.152	.514	-.115	.076
	.066	.171	.367	.001	.136	.270	-.071	-.054	.011	.054	-.152	1.000	.048	.194	-.288
	.137	.227	.131	-.006	.046	-.147	-.147	.265	.113	.059	.514	.048	1.000	-.183	-.149
	.014	-.017	-.158	-.297	-.041	-.054	-.054	-.157	-.124	-.097	-.115	.194	-.183	1.000	-.218
	-.660	-.599	-.247	.001	-.444	.035	.035	.151	.135	-.035	.076	-.288	-.149	-.218	1.000
Sig. (1-tailed)	.	<.001	.112	.408	.016	.127	.286	.168	.178	.062	.082	.328	.177	.462	<.001
	.000	.	.189	.178	.000	.055	.212	.472	.380	.011	.191	.122	.060	.453	.000
	.112	.189	.	.377	.042	.237	.072	.295	.311	.237	.088	.005	.188	.142	.045
	.408	.178	.377	.	.210	.360	.203	.019	.012	.113	.447	.498	.483	.020	.496
	.016	.000	.042	.210	.	.478	.286	.316	.390	.203	.249	.178	.378	.391	.001
	.127	.055	.237	.360	.478	.	.385	.195	.249	.086	.264	.032	.159	.358	.406
	.286	.212	.072	.203	.286	.385	.	.195	.249	.477	.264	.316	.159	.358	.406
	.168	.472	.295	.019	.316	.195	.195	.	.022	.313	.057	.357	.034	.143	.154
	.178	.380	.311	.012	.390	.249	.249	.022	.	.411	.071	.471	.222	.200	.180
	.062	.011	.237	.113	.203	.086	.477	.313	.411	.	.081	.358	.345	.256	.406
	.082	.191	.088	.447	.249	.264	.264	.057	.071	.081	.	.150	.000	.217	.305
	.328	.122	.005	.498	.178	.032	.316	.357	.471	.358	.150	.	.372	.094	.023
	.177	.060	.188	.483	.378	.159	.159	.034	.222	.345	.000	.372	.	.107	.155
	.462	.453	.142	.020	.391	.358	.358	.143	.200	.256	.217	.094	.107	.	.068
	.000	.000	.045	.496	.001	.406	.406	.154	.180	.406	.305	.023	.155	.068	.