THE HONG KONG
POLYTECHNIC UNIVERSITY
香港理工大學
Pao Yue-kong Library
包玉剛圖書館

Copyright Undertaking

Pao Yue-kong Library, The Hong Kong Polytechnic University, Hung Hom, Kowloon, Hong Kong

http://www.lib.polyu.edu.hk

THE IMPACT OF FILIPINA DOMESTIC WORKERS
ON THE LANGUAGE ACQUISITION OF
BILINGUAL HONG KONG PRIMARY SCHOOL CHILDREN

FRANCOIS WOLFAARDT

PhD

The Hong Kong Polytechnic University

2021

The Hong Kong Polytechnic University

Department of Chinese and Bilingual Studies

The Impact of Filipina Domestic Workers
on the Language Acquisition of
Bilingual Hong Kong Primary School Children

Francois Wolfaardt

A Thesis Submitted in Partial Fulfilment of the Requirements for
the Degree of Doctor of Philosophy in Linguistics

September 2020

CERTIFICATE OF ORIGINALITY

I hereby declare that this thesis is my own work and that, to the best of my knowledge and belief, it reproduces no material previously published or written, nor material that has been accepted for the award of any other degree or diploma, except where due acknowledgement has been made in the text.

Francois Wolfaardt

Abstract

This thesis investigates the impact of Filipina domestic workers (FilDWs), a marginalised group in Hong Kong, on bilingual Hong Kong children's language development. More specifically, it focuses on FilDWs' influence on the L2 English and L1 Cantonese abilities of bilingual Hong Kong primary school children attending an English Medium of Instruction (EMI) school. The specific elements investigated are the following: L2 English receptive vocabulary, listening comprehension, reading accuracy and fluency, writing accuracy and complexity, spoken complexity, accuracy and fluency (CAF), and L1 Cantonese receptive vocabulary and word reading. A total of 85 children aged eight to nine participated in the group test, and 64 of them also took individual tests. Two groups of participants were recruited: thirty-four participants (17 boys and 17 girls, mean age 8;11) from homes with FilDWs and 30 (15 boys and 15 girls, mean age 8;11) from homes with no FilDW. All participating children took receptive vocabulary tests in Cantonese and English, a listening comprehension, reading, writing, and speaking test in English, a Cantonese word reading test, and an aptitude test in the form of an English working memory capacity (WMC) test. With the exception of English writing complexity and length, where no significant differences emerged between the groups, participants from households with FilDWs scored significantly higher on all the English measures, while no significant differences between the two groups were found on either of the Cantonese tests or the WMC test. The results suggest that FilDWs exert a positive impact on the L2 English proficiency, without a trade-off effect on the measured aspects of L1 Cantonese proficiency, of bilingual Hong Kong primary school children from EMI schools.

Unlike previous research examining the impact of FilDWs on Hong Kong children's language proficiency, this thesis makes the critical distinction between types of schools in Hong Kong and drew the entire sample from an EMI population in order to eliminate confounding effects from the differences between types of schools. A further unique contribution of this thesis is that it is the first investigation looking into the impact of FilDWs on Hong Kong children's language proficiency to employ multiple measures in assessing both L1- and L2 proficiency, as well as a WMC test. Prior to this thesis, CAF, an established and widely accepted triad as a measure of oral proficiency, has not been employed in a study examining the role of FilDWs on Hong Kong children's language acquisition. This thesis makes a practical contribution to the local community by informing Hong Kong parents of bilingual children attending EMI schools that they can expect their children's English proficiency to benefit via the employment of a FilDW, without being concerned that the children's L1 Cantonese would suffer as a result of less home interaction in Cantonese. Finally, the findings put FilDWs in a different position assigned to them by society. Instead of being low level migrant workers, they appear to be key role players in advancing the L2 English proficiency of Hong Kong children.

Keywords: L2 English acquisition, L1 Cantonese proficiency, language acquisition, language proficiency, comprehensible input, CAF, receptive vocabulary, Filipina domestic workers, home language environment, working memory capacity

Finally, I would like to thank the EMI school that provided me with research participants, the premises on which to do all the tests for the main study, as well as the teachers over there who provided me with invaluable assistance. I also want to thank every child who was a research participant in this study. Without their participation and cooperation, this research would not have been possible.

List of Abbreviations

AE	American English
BE	British English
BOGOF	Buy-one-get-one-free
CAF	Complexity, Accuracy, and Fluency
CMI	Chinese Medium of Instruction
CVI	Content Validity Index
DFM	Dysfluency marker
EMI	English Medium of Instruction
FDW	Foreign Domestic Worker
FiLDW	Filipina Domestic Worker
+FiLDW	With Filipina Domestic Worker
-FiLDW	Without Filipina Domestic Worker
FL	Foreign Language
GE	Grammatical Error
H	Hypothesis
HKE	Hong Kong English
HK$	Hong Kong dollar
I-CVI	Item Content Validity Index
ILO	International Labour Organisation
LTM	Long Term Memory
L1	First Language
L2	Second Language
L2WTC	Second Language Willingness to Communicate
MAW	Minimum Allowable Wage
PE	Philippine English

PPVT	Peabody Picture Vocabulary Test
RQ	Research Question
RST	Reading Span Test
S	Sentence
S-CVI	Scale Content Validity Index
SD	Standard Deviation
SES	Socio-economic Status
STM	Short Term Memory
VNA	Verbs, Nouns, and Adjectives
VNAA	Verbs, Nouns, Adjectives, and Adverbs

Table of Contents

<center>**Chapter 1**</center>

<center>**Introduction**</center>

1.1   Migrant Workers in Hong Kong

According to the UN, there are an estimated 272 million migrant workers around the world, of which 48% are women.[1] Many of these women are employed as domestic workers, and they go by many names, such as maids, helpers and housekeepers. They are commonly called foreign domestic workers (FDWs[2]) in Hong Kong, where the research participants in this thesis are from.

Hong Kong families have been employing FDWs since the 1970s, as there is a lack of local domestic workers in the region (Tang & Yung, 2012). Due to this dearth, the number of FDWs in Hong Kong are ever increasing, rising from approximately 350,000 in September 2017 (Cheung, 2017) to nearly 400,000 in April 2020 (Ng, 2020). The vast majority of FDWs in Hong Kong originate from the Philippines and Indonesia, with Filipinas accounting for more than half of the total FDW population in Hong Kong (Cheung et al., 2019).

As may be derived from the term FDWs, these women are officially employed to do domestic duties. However, apart from the usual domestic duties, like cooking, cleaning and doing laundry, many FDWs' employers typically expect them to also take care of children and/or the elderly. Thanks to the services of FDWs in Hong Kong, parents in many households are freed from their household duties, enabling

---

[1] https://www.un.org/sites/un2.un.org/files/wmr_2020.pdf
[2] FDWs will be used throughout this thesis to refer to overseas domestic workers.

<center>1</center>

both mother and father to take up full time employment, which leads to higher living standards that the double family income makes possible. FDWs are therefore contributing to the quality of Hong Kong families' lives, something which FDWs rarely get credit for. In fact, they are a marginalised group in Hong Kong society.

As has been documented by numerous authors (e.g. Asato, 2004; Chan, 2014; Constable, 1996, 1997, 2007; Ladegaard, 2012, 2013, 2015, 2016, 2017; 2020; Lai & Fong, 2020; Leung, 2017) FDWs in Hong Kong have been subjected to numerous forms of mistreatment, including verbal, physical and sexual abuse. Such mistreatment may spring from prejudiced views that FDWs are uneducated and unintelligent (Hsia & Smales, 2011). According to Allport, prejudice is based on illogical and/or unjustifiable views (O'Connor, 2017). Evidence that those labelling Filipina FDWs (henceforth referred to as FilDWs) in Hong Kong as uneducated are misrepresenting them is found in the fact that FilDWs, on average, have 15.1 years of schooling, with many holding college degrees (Tang & Yung, 2012; Tang, 2015). Furthermore, apart from being well educated, FilDWs are at least bilingual (in Tagalog and English), with some being trilingual or multilingual. As an integral part of many Hong Kong children's home language environment, FilDWs may therefore play a significant role in the English language acquisition of such children.

1.2 Cross-Cultural Communication in a Lingua Franca

Some research suggests that misunderstandings are more likely to occur when communicating across cultures in a lingua franca (Cookson, 2009; Valle, 2011). Such evidence may legitimise assumptions that Hong Kong children's second language

(L2) English performance may be hampered if they are from homes employing FilDWs, where English would be used as a cross-cultural lingua franca every day. However, most communication in English around the world take place between non-native speakers (O'Neal, 2016). Furthermore, research investigating naturalistic cross-cultural communication in Malaysia, with English (a second or third language for all research participants) as a lingua franca, found no evidence that misunderstandings abound during such interaction (Kaur, 2011). An important factor to consider when analysing cross-cultural conversations is familiarity with one's interlocutor, which would greatly reduce misunderstandings (Deterding, 2013). High familiarity is likely to develop through daily interaction over several years between FilDWs and Hong Kong children. In light of the above, it may be a better argument that early exposure to regular communication in a lingua franca prepares one for authentic scenarios.

Considering the increasingly frequent contact between people from diverse language backgrounds, reasons for learning more languages go beyond the traditional incentives of language contact, colonisation, trade, education and intermarriage (Genesee, 2004). As Krashen (2003a) noted, English is dominating the internet, it is the language of science, the default language in ground to air communication of The International Civil Aviation authority, and the world's number one lingua franca. The education system in the Philippines places great emphasis on English. It is one of the country's official languages and a major language of instruction from primary school to university[3].

---

[3] Filipino Language in the Curriculum (http://ncca.gov.ph/subcommissions/subcommission-on-cultural-disseminationscd/language-and-translation/filipino-language-in-the-curriculum/)

Although a mother tongue-based education policy is currently in place in certain parts of the Philippines (Tupas & Martin, 2017), this does not affect FilDWs of this study, as they received their education between the mid-1980s and 2010. Furthermore, at least 70% of Philippine nationals speak English as an L2 (Gonzales, 2008). This is in stark contrast to the language environment of Hong Kong.

1.3 Hong Kong's Language Environment

Cantonese is the most widely spoken language in Hong Kong, with the overwhelming majority of the population using it as an L1 (Wang & Kirkpatrick, 2018). The other two major languages in the region are Mandarin and English, with 42% and 40% of the population respectively being able to speak each of these (Poon, 2010). Despite Hong Kong no longer being a British colony after 1997 and less than 5% of the population above the age of five using English as their usual spoken language[4], English continues to enjoy a very high level of prestige in post-colonial Hong Kong and it remains one of the major languages of instruction (Li, 1999b). The effect of English in the multicultural, multilingual society of Hong Kong is in fact so strong that it permeated the region's dominant language, leaving visible traces in the variety of Cantonese spoken Hong Kong (Li, 1999a). As far as primary and secondary education is concerned, Hong Kong schools mainly[5] divide into Chinese Medium of Instruction (CMI) and English Medium of Instruction (EMI). There are also international schools, but they are only attended by 6% of students in Hong Kong. CMI schools conduct all classes (with the exception of English language classes which are often taught by native English speakers) in Cantonese or Mandarin.

---

[4] https://www.gov.hk/en/about/abouthk/facts.htm
[5] https://www.legco.gov.hk/research-publications/english/1718issh30-international-schools-in-hong-kong-20180619-e.pdf

EMI schools divide into early EMI (all grades) and late EMI (grade seven and upwards). According to a study observing 34 full science lessons conducted at different times of the day and different days of the week at various EMI schools in Hong Kong, teachers in early EMI schools only use students' L1 1.5% of the time, on average, whereas in late EMI ones, the L1 is used 26% of the time, on average (Pun and Macaro, 2019).

Notwithstanding the predominant use of English in EMI schools, research suggests that the standard of English in Hong Kong declined drastically after the turn of the century, which lead to the introduction of the "Fine-tuning Medium of Instruction Policy" by the Hong Kong government in 2010 (Poon, 2016). Not only does the local government want to see high standards of English in the region, but the majority of Hong Kong parents desire for their children to be proficient in English, partly because all universities in Hong Kong almost exclusively use English as the medium of instruction (Wang & Kirkpatrick, 2018). However, perhaps mainly due to the lack of an English learning environment outside of the classroom, English in Hong Kong can be better described as a foreign language (FL), rather than an L2 (Li, 2009). This is further evident in overseas Hong Kongers experiencing learning and social difficulties in an environment where English is used as the first language (Berry & Williams, 2004). Local Hong Kongers being trained as English teachers also reported that they face numerous challenges when it comes to effective communication in English, with one of the main reasons cited being lack of opportunity to converse in English outside of the classroom (Gan, 2012).

The above evidence suggests that, despite the prestige that the English language enjoys in Hong Kong, there is a general lack of proficiency and performance of

English among Hong Kong locals. The picture may not be the same for all Hong Kongers, though. The presence of a FilDW in many households means that English will be used at home on a regular basis, which could possibly make English for children growing up in such homes an L2, rather than an FL. If the root of the problem lies in lack of opportunities to communicate in English outside the school environment, children from homes with FilDWs are less likely to experience difficulties in using English, as they are used to communicate in English at home with their helpers. These children will not only be exposed to Hong Kong English at school and other varieties of English through the media, but their first exposure to English may be the variety used by their helpers, namely Philippine English (PE). In fact, if we consider that often both parents of children from homes with FilDWs hold full time jobs, PE may be the main variety of English many Hong Kong children are exposed prior to entering school. But what is PE?

1.4 PE and FilDWs as English Teachers

Following the American occupation in the late 19th century, English started to hold a dominant presence in the Philippines (Gonzales, 2017). Since then the influence of English in the Philippines kept growing and today PE is one of several recognised world Englishes.

According to Tayao (2008), PE subdivides into three main sociolects, namely an acrolect (considered most prestigious), a basilect (considered least prestigious) and a mesolect (somewhere between the acrolect and basilect). Tayao (2008) classifies those using the acrolect of PE as native English speaking Philippine nationals, often working as broadcasters, while the mesolect is used by educated, non-native English speakers, with a good command of English, and the basilect is utilised by those who

are weak in English and mostly use it to speak to their superiors. Furthermore, PE is based on American English (AE), with the acrolect most closely resembling AE, the mesolect characterised by phonological deviations from AE, and the basilect, heavily influenced by the speakers' native language, having the least resemblance to AE (Tayao, 2008). As this thesis is not investigating PE per se, it would be beyond its scope to go into details of what precisely distinguishes PE from other English varieties. Suffice to say here that PE has numerous distinct phonological features (Tayao, 2004, 2008), lexical items (Bolton & Butler, 2008; Dimaculangan & Gustilo, 2017) and grammatical features (Bautista, 2008). Perhaps most relevant to this thesis is that educated Philippine nationals, in order to avoid sounding artificial, choose to speak the Filipino way when interacting with each other (Tayao, 2008). This implies that they do not (deliberately) speak "the Filipino way" when their conversational partners are not from the Philippines, as would be the case when FilDWs interact with Hong Kong children.

The majority of FilDWs, while not being native English speakers, yet fluent in English and relatively highly educated, probably falls into the group of mesolect users, as described above. Their educational level, high proficiency of English, coupled with the amount of interaction time between them and the children in the households they are employed, resulted in them being referred to as "auxiliary English teachers" by some researchers (e.g. Constable, 1997, 2007; McArthur, 2002; Poon, 2006). This may be applicable at more than one dimension. Some FilDWs may read English stories to children in their care, especially pre-schoolers. It has also been argued that Hong Kong children from homes with FilDWs may watch more English TV, compared to those from homes without FilDWs (Dulay et al., 2017). Most importantly, FilDWs probably converse exclusively in English with the children in

their care every day. All of these factors potentially enhance the children's English, opening up the possibility to several fields of inquiry.

1.5 Questions of Academic and Practical Interest

The above outline raises interesting questions, especially for those in the fields of linguistics and education. These questions include: If the English of children from households employing FilDWs is influenced via the presence of the FilDW, does it extend to academic results at school? Does it influence conversational English and/or motivation to learn/use English? Do children from households with FilDWs acquire a Filipino accent? Are their listening skills affected? What is the impact on the complexity, accuracy, fluency, and adequacy of such children's spoken English? Would being in the care of English-speaking helpers hinder L1 development?

Although Hong Kong households have been employing FilDWs for more than four decades already, it is only relatively recently that research seeking to answer some of the above questions has been undertaken. Of the few studies thus far attempting to throw light on a number of these and related questions, several do not have any language data as a basis for their conclusions. Surprisingly, it has been documented that there is a tendency for the general public to suggest that FilDWs adversely affect Hong Kong children's L2 English (Crebo, 2003; Leung, 2012; Wolfaardt, 2015). The aim of this thesis is to shed more light on the role FilDWs have on Hong Kong primary school children's language acquisition, which will be done through the following research questions (RQs):

RQ1: What effect (if any) do FilDWs have on Hong Kong primary school children's L2-English receptive skills?

RQ2: What effect (if any) do FilDWs have on Hong Kong primary school children's

L2-English productive skills?

RQ3. What effect (if any) do FilDWs have on Hong Kong primary school children's L2-English vocabulary development?

RQ4. What effect (if any) do FilDWs have on Hong Kong primary school children's L1-Cantonese vocabulary development?

Variations on some of the above questions have been partially addressed in previous research and these will be reviewed in the next chapter. Chapter 2 will start with the definition of some key terms. This will be followed by theoretical frameworks applicable to this thesis, key considerations in language acquisition and performance, and an overview of previous studies examining the relationship between FilDWs in Hong Kong homes and Hong Kong children's English proficiency. This chapter will also identify research gaps. Finally, based on insights gained from previous research, hypotheses for the current investigation will be presented. This will be followed by Chapter 3 that discusses the position of FDWs', of which FilDWs form a critical part of this study, in Hong Kong society. The methodology will be laid out in Chapter 4, results presented in Chapter 5, the main findings and their implications discussed along with recommendations for future research in Chapter 6 and conclusions drawn in Chapter 7.

Chapter 2
Literature Review

The first section of the literature review will define some key terms in light of relevant literature, while the second section will lay out the theoretical frameworks of this thesis. This will be followed by section three, giving an overview of key factors related to (second) language acquisition and performance. As Snow (1994, p. 12) correctly pointed out, it is not possible to investigate all variables and researchers should identify those most relevant to their current investigation. Section three, therefore, comprises an overview of the factors applicable to this thesis. These will be discussed in relation to each other as well as in the light of the effect that FilDWs are expected to have on each. Section four will focus on what past research found with regards to the role that FilDWs play in children's (mainly second) language acquisition. Seeing that not many such studies exist, section four constitutes a review covering all of these. This will be followed by section five, addressing the gaps in previous research, while section six will provide a summary and conclusions of this chapter.

2.1 Definition of Key Terms

2.1.1 Native Speakers, L1, L2, and FL

The above terms may seem self-explanatory, but scholars have differing views as to the meaning of each. Usually when one thinks of native speakers, what comes to mind is the language one is most comfortable in. First language (L1) may be equivalent to this, and probably is in cases of people who speak only one language fluently, or in the case of monolinguals. L2 may refer to the language one acquires at school, yet speaks it well, uses frequently and can comfortably converse in it, whereas an FL

could refer to a language that one has some command of, but does not often use (for some people their L2 could also be their FL, and the terms are sometimes used interchangeably). These may be common ways to think of the above terms, but they are certainly not the only major views. It will therefore be useful to explore some definitions and implications of these terms.

Perhaps due to its common use in and outside the field of linguistics, "native speaker" may appear the easiest of the above terms to understand, yet it has been the subject of numerous debates, with those using it as a reference point being criticised by some (e.g., Cook, 2016; Davies, 2002; Dewaele, 2018). Opponents of the term use elaborate and ostensibly logical arguments to abase the notion of a native speaker and seem to suggest that those still embracing the term are exceedingly prejudiced individuals living in an alternative world. Davies (2002, pp. 7-8) categorically claims that statements such as, "I've posted a job vacancy for a native-speaking teacher on the notice-board," and "I am looking for three non-native speakers to help with a questionnaire" are highly offensive and entails obvious racism. Cook (2016) criticises those who produce publications that "fall back" on the concept of using native speakers as a standard against which to measure language produced by L2 users. Dewaele (2018), who endorses the claims of critics such as Cook, Davies, and others, suggest that a term like L2 users may solve the "problem". But does the problem really lie with the term native speaker or is it perhaps in the minds of those who campaign against its use? Davies (2002) argues throughout his book that one can self-identify as a native speaker and that it is possible to "evolve" into a native speaker (although he admits that his argument is speculative).

Self-identification is problematic, as there is often a difference between perceived and actual competence (see 2.3.9). Instead, it would be wiser to refer to officially accepted definitions of the term native speaker, as provided by authoritative dictionaries. The Oxford Learner's Dictionary defines a native speaker as: "a person who speaks a language as their first language and has not learned it as a foreign language" (Documentation, n.d.[b]). Although not explicitly stated in the definition, it is probably implied that such a person is not a young child, who will later adopt a different language to replace their L1, as often happens in the case of immigrants' speaking a minority language as their L1. A second useful definition is that of The Cambridge Dictionary, that describes a native speaker as follows: "someone who has spoken a particular language since they were a baby, rather than having learned it as a child or adult" (Documentation, n.d.[a]). Again, it is not explicitly stated, but I assume that most would take this definition to imply that the speakers referred to here will continue to use the particular language as their L1 throughout the course of their lives. Something these definitions (implicitly) allow for is bilingualism, as people can learn two languages simultaneously as a "first language" or "since they were a baby". What they do not allow for is the argument that one can develop into a native speaker over time or that anybody could call themselves a native speaker, based on their perceived competence in a particular language. It is, however, possible, as Davies (2002) correctly argues, to reach a degree of proficiency in another language that one is almost indistinguishable from native speakers of that language.

Joseph Conrad, for example, stands out from other great English writers, as he was not a native English speaker. Far from being racist or highly offensive to call Conrad a non-native English writer, it shows the man's tremendous self-determination and

outstanding abilities as a multilingual. Despite not becoming fluent in English until his twenties and only starting his writing career at the age of 36, Conrad is remembered as one of the greatest English novelists. Through his example we can be encouraged that it is possible to rise to linguistic heights few native speakers achieve in a language that is not our own. Hence, while it is indeed possible to develop native-like competence in another language or certain domains of another language, the only possible way to be a native speaker, according to reliable reference points provided via dictionary definitions, is to learn a language as a baby and speak it as an L1.

The question now is what is meant by L1. Dewaele (2018) argues that it is preferable to use the term "first language user", as this implies a high level of proficiency in and use of the language. He also argues for the adoption of terms like "second language user" and "third language user" and suggests that such terms have the advantage that they could include those who can read, but not speak the language. I can see the usefulness of such terms, as there are indeed many people who can read some English, for example, but are not able to speak it. These terms could be employed to distinguish a language user from a speaker, with the former having a lower level of proficiency. However, the usefulness of such "proficiency" in a language is rather limited. Dewaele's argument of replacing a term like L2 speaker with L2 user, rather than using the latter as a supplement to distinguish between levels of proficiency, therefore seems more of a political than a practical one, aiming to be more inclusive (which is not necessarily always desirable).

In light of the above discussion, the definitions of native speaker, L1, L2 and FL, for the purposes of this thesis, will be as follows: a native speaker is somebody who

acquired a particular language from birth and continues using it as their dominant language throughout life; L1 is the language that one is most comfortable in, which could include more than one language in the case of those acquiring, and continue to use throughout their lives, two or more languages since birth; L2 is the language that one acquires second, has a high command of and frequently uses beyond school and work domains; FL is an additional language that one acquires or learns, but does not frequently use beyond work and school settings and does not reach the same level of proficiency as one would in an L2. Rather than striving to be inclusive, the emphasis of these definitions is on practicality. Acquisition and learning were both referred to above and the difference between the two will be laid out in the next section.

2.1.2 Acquisition vs. Learning

The terms "language acquisition" and "language learning*"* are sometimes used interchangeably. However, in the field of (first/second) language acquisition the terms have been distinguished, as their meanings entail very different theoretical assumptions. Language acquisition is a subconscious process, where one "picks up" a language implicitly and naturally, without being aware that one's language competence is developing, whereas language learning is a conscious process, where one is taught explicit knowledge about a language (Krashen & Terrell, 1995, p. 26). As Krashen (2003, p.1) puts it, learning a language is talking about grammar and language rules. For children, language development is primarily a subconscious process and those who acquire a language through an informal, intake type environment, do not need language classes to develop proficiency in a second language (Krashen, 1981b, p. 49). (Second) language acquisition does not result in immediate mastery, but the words, phrases and expressions are gradually and firmly

14

acquired (Krashen et al., 2018). This is called deep learning, which implies mastery of the L2 and enables effortless and automatic speech that does not rely on mentally translating one's expressions from L1 to L2 (Hoge, 2014, p. 99).

According to Krashen (2003, p.3), language learning entails monitoring one's own performance, for which the following three conditions must be met: (i) *knowing the rule* (which is much harder than it seems, as even the best linguists do not know all the rules, grammar text book writers know fewer rules than linguists, language teachers do not teach all the rules that appear in text books, not all rules taught are remembered and some rules are too complex to consciously apply during conversation) (ii) *focusing on correct form* (this is hard to accomplish during speech, as one has to think about meaning at the same time) and (iii) *having sufficient time* (something normal conversations do not provide). It therefore seems clear, based on the required conditions, that the conscious monitoring of one's own language is a laborious process unlikely to be maintained throughout a conversation and likely to hamper fluency for the portions of speech where it is applied. Writing facilitates conditions (ii) and (iii), although there are some popular forms of contemporary writing, like live "chat" via text messaging, that run into the same problems as speaking. Another consideration to factor in is that formal monitoring, i.e. applying metalinguistic awareness to self-correct grammar, is a stage people usually reach around the age of 12 (Krashen, 1981b, p. 35). Although language learning in the form of classes is recommended for beginner level adults (Krashen, 2003, pp. 7-8), it is not applicable in this thesis, as the investigation involves the language development of primary school children under the age of 10.

When it comes to the language development of children, meaningful interaction via

natural communication in the target language is required, with the focus on the messages conveyed, rather than correct grammatical form (Krashen, 1981b, p. 1). As Krashen (2003, p. 4) puts it, language acquisition is effortless and involuntary, with all that is required for L2 acquisition being comprehensible, interesting messages. This is not mere theory, but has been successfully applied in practice via a system called "Effortless English", with one of the seven "secrets" being that one should never study grammar rules to become fluent L2 English speakers (Hoge, 2014, pp. 79-86). Krashen et al. (2018), building on the comprehensible input hypothesis (see 2.2), said that comprehension can be aided by adding context, of which visual mode of input and background information are given as examples. These often occur naturally via input received in the course of everyday, informal conversations, which is exactly what children from homes with FilDWs get when interacting with their helpers. Hence, at least as far as such children are concerned, English as an L2 is acquired, not learnt, and throughout this thesis, L2 acquisition will be used in its more precise sense, (i.e., it will not include L2 learning).

2.2 Theoretical Frameworks of Acquiring an L2

Typical classroom exposure to an L2 generally lacks authenticity (despite many teachers' efforts to make it authentic), with one of the major differences being the type of feedback provided. Corrective feedback is not part of everyday speech, but is predominantly provided in language classrooms. In contrast to what happens in the classroom, parents would respond to *messages* conveyed by their children rather than *grammatical accuracy*, i.e. parents are unlikely to give corrective feedback to their children (Lightbown & Spada, 2013, p. 39). The L2 interaction children have with their helpers is similar to natural language acquisition found in L1 interaction between

parents and children. Daily conversations involving informal, social interaction between children and FilDWs are therefore likely to enhance L2 spoken fluency in the same way that normal interaction between parents and children increases L1 fluency. Many FilDWs help children with their homework as well, which may further augment the children's English.

Lightbown and Spada (2013, p. 61) also pointed out that L2 learners are typically exposed to a significantly smaller vocabulary sample in the classroom, compared to what L1 learners get from their home environment. Daily interaction with FilDWs in children's L2 may therefore give them exposure to a larger lexicon, strengthening their vocabulary base, which in turn facilitates L2 spoken fluency (Hilton, 2008). Besides vocabulary and fluency, various other facets of L2 English may benefit through the daily English conversations children have with FilDWs, as can be inferred when considering major hypotheses in the field of L2 acquisition.

According to the comprehensible input hypothesis, an L2, like an L1, is acquired subconsciously through comprehensible input in a low anxiety environment (Krashen, 1981a, 1994, 2003b; Krashen & Terrell, 1995). More specifically, we acquire language via comprehension of input that is slightly above our current level of competence, also known as i + 1 (Krashen & Terrell, 1995, p. 32; Krashen, 2003, p. 4). The comprehensible output hypothesis argues that students can only improve their accuracy and fluency by producing comprehensible speech (Swain & Lapkin, 1995). Take note that this hypothesis is mainly concerned with improvement of performance, rather than acquisition. Like Krashen (2003, p. 60) pointed out, a claim of the comprehensible output hypothesis is "sometimes, under some conditions, output facilitates L2 learning in ways which are different from, or enhance those of

input" (Swain and Lapkin, 1995, p. 371, cited in Krashen, 2003). Other researchers view the noticing hypothesis, stating that noticing is necessary for language processing to happen, of prime importance (Schmidt, 1995; Skehan, 1998). According to the noticing hypothesis, we need to notice the difference between our language and that of others, like parents, caregivers and teachers, in order to improve (i.e., produce language that are grammatically and phonetically more similar to that of those with a greater command of the language than ourselves). Here, again, the emphasis is on improvement, rather than acquisition. It therefore appears if the foundation of language acquisition is comprehensible input, while noticing and comprehensible output facilitate progress. After *acquiring* a language through regular comprehensible input, we can *become more competent speakers* when we regularly produce comprehensible speech, which would allow us to interact with others, notice the difference between our speech and theirs, and make necessary adjustments to further improve our speech. Even the strongest proponents of the comprehensible output or noticing hypothesis, cannot deny that output or noticing is not possible without first receiving comprehensible input.

We can acquire language in a classroom situation (formal) or outside of class (informal). Krashen (1976) divides informal environments into *exposure type* (hearing the language being spoken by others, like on TV or others having a conversation in the background, but not being addressed by them and not being involved in their conversation) and *intake type* (being addressed in the target language and involved in the conversation), with only the latter being truly effective. Case studies done in China with 15 Chinese students, aged nine to 13, learning English as an FL confirmed the importance and effectiveness of intake type input (Zhang, 2009). Although Krashen (2008) agrees that output may play a role in the (L2) language

acquisition process, he maintains that the emphasis should be on input in order to produce proficient L2 users.

The latest development on comprehensible input is known as optimal input. Optimal input is comprehensible, compelling, rich and abundant (Krashen & Mason, 2020). Krashen and Mason (2020) explain these four characteristics as follows:

(1) *comprehensible*: acquirers do not need to understand 100% of the input they receive. Input can aid comprehension, even if there are some incomprehensible bits.

(2) *compelling*: the level of interest is so high that acquirers temporarily forget that they are listening to a language that is not their L1.

(3) *rich:* language used in the input gives the acquirers support in understanding and acquiring new aspects of the language.

(4) *abundant:* as language acquisition is a gradual process, input should include sufficient repetition in different contexts in order to provide plenty of opportunity to acquire new language forms and expand vocabulary.

Another recent development on the role of comprehensible input stresses the importance of adding context to aid comprehension, a concept known as comprehension-aiding supplementation. This mainly happens through adding context to new words/expressions, with the assumption being that learners gradually and firmly acquire the new language items (Krashen et al., 2018). In a school setting, context can be added if the teacher draws pictures of the target language on the whiteboard. Those with FilDWs at home are immersed in intake type environments, where context is naturally added. This especially applies to concrete nouns, like

toothbrush, bedsheet and washing machine, where the items (many that are not commonly found in a classroom) that these words represent are typically used at home.

Furthermore, according to the Complementarity Principle, bilinguals do not have every word in their total vocabulary stored in both languages (Grosjean, 2008; 2016). The Complementarity Principle states that bilinguals use their L1 in certain domains, L2 in others, while both may be used in certain domains (Grosjean, 2016). Children from homes with FilDWs will encounter and use L2 English more in certain domains, like at home and journeys between home and school, compared to those without FilDWs, where L1 Cantonese are more likely to be used in these domains. Children in the care of FilDWs receive daily exposure to comprehensible, and arguably compelling, input and interaction with their helpers continuously facilitate noticing and comprehensible output. The presence of a FilDW therefore creates the right conditions for L2 English acquisition and growth.

Although not much research has been done to date with regards to the specific role that caregivers (other than family members, like older siblings, aunts, uncles and grandparents) play in the L2 development of normal children, a number of studies did render findings with some relevance to this thesis. These will be outlined in 2.3.1 below.

2.3 Key Considerations in Language Acquisition and Performance

2.3.1 The Role of Caregivers in L2 Acquisition

One study, comparing the language use of L1 Mandarin, L1 Italian and L1 English children under the age of 3 as a function of the input they receive from their caregivers

found that Mandarin speaking caregivers (naturally and subconsciously) emphasise verbs over nouns, whereas the opposite is true for English speaking caregivers, while Italian caregivers have roughly equal use of both (Tardif et al., 1997). These patterns are also reflected in the children's speech the caretakers interacted with every day. Although this study focused on very young children and examined L1 interaction, the pattern that children emulate the type of language they hear from caregivers, at least during the first three years of life, probably applies to L2 as well. A useful inference that can be drawn from this is the way that young children typically use language is not learnt, but acquired. The caregivers did not tell the children to use more of one word class and less of another. As these were the natural ways that the caregivers spoke, the patterns would have been produced without the caregivers themselves being aware of them. The children picked up these patterns via the input they received, as one would expect, according to Krashen's comprehensible input hypothesis.

Other research showed that the amount parents (in the case of monolingual children) and caregivers (in the case bilingual children) talk has a direct effect on children, resulting in children from households with more verbose parents/caregivers becoming more verbose themselves (De Houwer, 2011; Hart & Risley, 1995). De Houwer (2011), furthermore, concluded that input frequency is essential in order to speak a language well. This is in harmony with earlier research, showing that children from households where parents frequently use the target language outperformed those whose parents seldom use the target language to interact with their children, while such children performed better than those whose parents never use the target language at home (Krashen, 1976).

In cases where bilingual mothers are the primary care givers, recent research, involving 58 bilingual Spanish-English speaking children between the ages of 5 and 7, shows that higher maternal SES and more diverse maternal vocabulary significantly contribute to children's L2 English (but not L1 Spanish) vocabulary development (Buac et al., 2014). The researchers suggested that these findings indicate that the L1 vocabulary acquisition of young bilingual school aged children is not affected by the language input received from primary care givers, but that their L2 vocabulary acquisition is.

The most recent research investigating the role of caregivers on bilingual children's language proficiency was conducted in the Netherlands and involved 72 bilingual children (acquiring Dutch and at least one other language at home) with a mean age of 35 months (Sczepurek & Verhagen, 2021). Results showed that the amount of Dutch (the majority language) input by caregivers was a significant predictor of children's L1 vocabulary knowledge. Although this study seems to contradict the results of Buac et al. (2014), the age of participants across these two studies is not comparable. Perhaps primary caregivers have a significant impact on the L1 vocabulary of children under three, while the same does not hold true for children above five.

Based on the above findings, it is clear that input received from primary caregivers affects the language output of children in their care. With particular relevance to the research questions addressed in this thesis, it seems reasonable to expect that FilDWs, as primary caregivers, will have the following effects on the children's language that are in their care (i) L1 Cantonese vocabulary will not be influenced; (ii) L2 English vocabulary will be positively impacted; (iii) the amount of input children receive from

FilDWs will play a significant role in the children's L2 proficiency, and (iv) the magnitude of FilDWs' impact on children's vocabulary growth may be related to FilDWs' educational level as well as their own English lexicon. It is, of course, important to clarify what good language proficiency entails. This will be the subject of the next section.

2.3.2 Language Proficiency: Receptive and Productive Skills

Unlike what Dewaele (2018) suggests with his proposal of replacing the term L2 speakers with that of L2 users (those who may be able to read a language, without being able to converse in it), successful and smooth oral communication relies on a good command of both receptive and productive skills. Useful as receptive skills are, and they may indeed aid communication where one has a very patient interlocutor that is willing to entertain requests to write out most of what one wants to say, productive skills are also required to have a (relatively) fluent conversation. This is no less applicable to situations where a language is used as a lingua franca, which is very common in contemporary society where English is often not the L1 of either interlocutor. It is therefore imperative for those who wish to communicate in English as their L2 or FL on a regular basis to acquire high receptive and productive skills. Regarding the development of these, numerous authors agree that receptive skills usually develop faster than productive skills and it appears to be easier to acquire native-like receptive skills than it is to achieve native-like productive skills (Bergström et al, 2016; Webb, 2008; Yan & Nicoladis, 2009).

Webb (2008), in a cross-sectional study examining native Japanese university students studying English as an FL, found that (i) participants' English receptive vocabulary was higher than their English productive vocabulary and (ii) there is a

positive relationship between receptive and productive skills, with those having a higher English receptive vocabulary also having a superior English productive vocabulary. Finding (i) is similar to that which emerged from a subsequent four-year longitudinal study with German kindergartners learning English as an L2, where participants demonstrated superior L2 English receptive skills (receptive vocabulary and simple sentence comprehension), compared to their L2 English productive skills (expressive vocabulary) (Bergström et al, 2016). The above findings both complement that of a cross-sectional study investigating the receptive and productive L2 English skills of French-English bilingual primary school children in Canada (Yan & Nicoladis, 2009). Furthermore, Yan & Nicoladis (2009) produced evidence that primary school children learning English as an L2 can be close to the same level as monolingual English speaking children as far as receptive vocabulary is concerned, while the same is not true for productive vocabulary.

Receptive skills are not just easier to acquire, but also relatively straightforward to measure, compared to the assessment of productive skills. The reasons for this will become more apparent in the following subsection, where the numerous essential elements constituting productive skills as well as the various viewpoints in defining these elements are outlined.

2.3.3 The Complexity, Accuracy, and Fluency Triad

The combination of complexity, accuracy, and fluency (CAF) has frequently been used in previous empirical studies to assess, among others, language learning progress and language proficiency (Housen & Kuiken, 2009). Furthermore, factor analysis provides evidence that all three of the CAF triad must be taken into account in order to draw meaningful conclusions on learners' overall L2 proficiency (Housen et al.,

2012, p. 3).

Although there is agreement among most scholars that CAF forms an essential part of L2 research, no consensus exists when it comes to the definition of complexity, accuracy, and fluency. First, complexity is seen as the most challenging construct to define (Housen & Kuiken, 2009; Housen et al., 2012; Juola, 2008; Pallotti, 2009, 2015), with various definitions. For the purposes of this thesis, (syntactic) complexity refers to the number of verbs, nouns, adjectives and adverbs per independent clause, which relates to Ellis's definition, "the extent to which the language produced in performing a task is elaborate and varied (Ellis, 2003). The primary basis for evaluating syntactic complexity in this way is rooted in a method proposed by Cook and MacDonald (2012), where they use the number of verbs, nouns, and adjectives per independent clause to index syntactic complexity.

Second, accuracy, which is probably the easiest to demarcate, often refers to the degree of deviation from a norm (Hammerly, 1991; Pallotti, 2009; Wolfe-Quintero et al., 1998, all cited in Housen et al., 2012). Although some scholars (notably, Housen et al., 2012, p. 4) argue that such a definition is problematic in that it does not specify the nature and extent of the deviation, and that it would be preferable to define accuracy in terms of appropriateness and acceptability, I beg to differ. Defining a construct in terms of appropriateness and acceptability seems problematic. My view is more in accordance with that of Pallotti (2009), arguing that adequacy should be assessed *in addition to* all three constructs constituting the CAF triad. Furthermore, although being important additional elements of language proficiency, pragmatic competence and appropriateness cannot easily be measured effectively (Bachman, 1988; Sell et al., 2019).

In view of the above, this thesis will adopt a more traditional view to define accuracy by measuring it against a predetermined norm, i.e. descriptive grammar. This is chosen in favour of prescriptive grammar, as certain forms of prescriptive grammar, like whom (as in the sentence, *I do not know with whom I will go*), now appear less than the "incorrect form", who, in major corpora, like the Corpus of Contemporary American English (COCA) and the British National Corpus (BNC). Certain vocabulary items, like anyways (a popular alternative to anyway), is also common in major corpora. Also, the authenticity of descriptive grammar has been recognised for more than a quarter century already (see, e.g., McCarthy & Carter, 1995).

Third, there is consensus among scholars that fluency is an essential element of linguistic performance (e.g. Housen & Kuiken, 2009; Skehan, 2009; Yuan & Ellis, 2003), but there is no explicit agreement about the exact definition of fluency (Chambers, 1997, cited in Pinget et al., 2014; Derwing, et al., 2004; Ellis, 2009; Segalowitz, 2010, p.4). Given the diverse definitions of fluency, clarification of what constitutes L2 spoken fluency is needed.

Utterance fluency measures the number of words or syllables uttered per second or minute. This is a useful and widely used indicator of fluency, but there is more to (L2) fluency than just the number of words/syllables uttered in a given time frame. One may not always be more comprehensible when producing more syllables in a certain time frame. The words from Michael Jackson's song "Bad", for example, were uttered in just 20 seconds by John Moschitta, Jr. (in comparison to Jackson's average time of 68 seconds to perform the song), the world's fastest talking man (VideoCollectables, 2014). However, it is very hard, if not impossible, to comprehend everything Moschitta uttered in his rendition. The "slow" version of Michael Jackson is therefore preferable.

The same principle applies to language production geared towards smooth communication, as is the case in authentic interaction, and it is therefore critical that one does not just look at speed, but take comprehensibility into account as well. Slowing down, pausing or putting particular stress on certain words and/or syllables are commonly used as markers of dysfluency. However, these "dysfluency markers" are part of normal L1 speech and should therefore not by default be seen as signs of dysfluencies in L2 speakers. Rather than categorically classifying these as markers of poor fluency, one has to use sound judgement. One way of doing so is deciding whether the way something was expressed by an L2 speaker would be considered appropriate and normal if it was uttered in the same way by a native speaker. In this regard, Davies (2003) showed that mid clause pauses are plentiful in L2 speech, whereas normal L1 speech is not typically characterised by mid clause pauses. Pauses at the end of clauses are, however, not uncommon in normal L1 speech (Skehan, 2009). It therefore makes sense to classify mid clause pauses as markers of dysfluencies, but to exclude pauses at the end of clauses from such classification (unless the pauses at end of clauses are unnaturally long and hinders communication). It should also be noted that, while useful to refer to L1 speech, it is not a gold standard, as there is significant variation among L1 speakers, ranging from exceptionally good speakers at the high end to rather poor communicators at the lower end.

Spending several seconds to come up with an answer or idea is not necessarily indicative of inferior fluency either. Depending on the nature of the answers or ideas required, even the best native speakers may spend some time thinking before producing speech. Therefore, despite some studies (Foster, 1996; Foster & Skehan, 1996; Tavakoli & Skehan, 2005) using total silence time as a measure of dysfluency, it does not seem like the most reliable measure. In deciding which fluency measure/s

to implement, one would of course need to define what fluency entails.

Lennon (1990), in his pioneering work on establishing universal spoken fluency measures, distinguished between fluency in a broad and narrow sense. He pointed out that the broad sense of fluency, includes judgements on other aspects of performance, like pronunciation, that should be measured separately. The narrow sense seems to be more appropriate, as it focuses on speed of delivery, with native-like rapidity cited as a popular definition of fluency that was widely applied in the late 1980s. Since then, other definitions have been suggested, but there still does not appear to be a universal definition of spoken fluency or a standardised way of measuring it. As the definition of "native-like rapidity" has been misattributed to Lennon by Housen and Kuiken (2009) and the original work of Lennon (1990) contains a detailed discussion on the issue of defining and measuring spoken fluency, it is worth returning there and drawing out some concepts that can still be applied three decades down the line.

Firstly, it was pointed out that a language proficiency element, such as syntactic complexity, relates to linguistic knowledge, whereas fluency is a pure performance-based attribute. Today we know that vocabulary size, which can clearly be classified as linguistic knowledge, contributes to fluency. Those with a larger lexicon would be less likely to find themselves searching for the right word (which obviously hampers fluency). However, from a listener's or rater's perspective, fluency remains a performance factor. An objective assessment of fluency should not be influenced by factors such as varied vocabulary, which could be more appropriately classified as lexical density or lexical complexity.

Secondly, Lennon made it clear that native speakers' level of fluency differs among each other and even varies within the same individual, depending on factors such as, the topic and situation. Furthermore, he pointed out that there are numerous ways to operationalise fluency for native speakers, including the ability to fill time with talk, speaking in a coherent and semantically dense fashion, being able to say appropriate things in a range of contexts, and being creative with language. It therefore does not seem appropriate to define L2 fluency, based (solely) on native performance.

Thirdly, he argued that fluency comes at a price, even for the native speaker. Although his argument that native speakers cannot speak fluently without making mistakes (based on one example of a sports commentator making one mistake during a live TV broadcast), seems to lack validity, the point that there is a trade-off between fluency and accuracy has been confirmed by Skehan (2009). If this is true for native speakers, it certainly applies to L2 users, and one therefore should not, like some of the raters in Lennon's study did, take accuracy into account when assessing fluency. These are two separate indicators of proficiency and to get an objective idea of how somebody performs on each of these, they should be measured in their own right (making it possible to attain a high fluency, but low accuracy score, and vice versa).

Finally, Lennon (1990) identified numerous indicators of fluency (or dysfluency). The first of these is words per minute, which is divided into pruned and unpruned, with the former not including self-corrections and repetitions that are not for rhetorical effect. The other factors are repetitions, self-corrections, filled pauses (like "uh"), unfilled pauses, and mean number of words per run.

Considering the above-mentioned issues relating to fluency, as well as the fact that

this thesis is not dealing with absolute, but rather with relative scores (those of children from homes with FilDWs vs. those from homes without FilDWs) the definition of L2 fluency for the purposes of this study will be as follows: *the ability to produce L2 English relatively rapidly and relatively free from dysfluency markers, while applying pauses relatively effectively*. An advantage of this definition is that it will not by default regard pauses as dysfluency markers, but do so only after considering whether they hinder, enhance, or do not affect normal flow of speech. A further benefit of this definition for a study such as this is that it allows for direct comparisons between two groups, rather than comparing each group to a norm and indirectly comparing the groups to each other by calculating how far each group deviated from the idealised norm.

As alluded to earlier, in addition to CAF one should, like Skehan (2009) argues, also look at lexical performance. This is in harmony with other research, showing that L2 vocabulary affects L2 fluency (Hilton, 2008; Lightbown & Spada, 2013, p.61). It therefore seems logical to measure lexical sophistication separately when assessing children's L2 English. In this thesis, lexical performance refers to participants receptive vocabulary scores. Although one previous study (Chan & McBride-Chang, 2005) pointed to the larger vocabulary size of children cared for by FilDWs, no study to date, investigating the impact of FilDWs on children's L2 English, examined lexical performance in combination with CAF or even CAF on its own. In investigating CAF, planning time allotted to tasks, which is the subject of the next subsection, should be taken into consideration.

2.3.4 The Effect of Planning on CAF

There is agreement that planning affects CAF and this has been investigated by numerous authors (e.g. Ahmadian, 2012; Ahmadian & Tavakoli, 2011; Javad Ahmadian, et al., 2015; Ortega, 1999; Skehan, 1998). Planning is divided and subdivided into different types and subtypes, and Ellis (2009), in giving a descriptive synthesis of 19 studies investigating pre-task and within-task planning, outlines how pre-task planning is further divided into rehearsal, where students can practice the full task before performing it, and strategic planning, where they can plan the content and language to be used, but cannot rehearse. Within-task planning divides into pressured and unpressured, with the former placing a time limit on planning time and the latter not.

There is also some agreement that the effect of planning is influenced by the amount of time that students are given to plan (Skehan, 1998; Ellis, 2009). Ellis (2009), however, also pointed out that studies do not monitor what students do during the planning stage, and that one cannot rule out the possibility that they do not actually use the time given for planning to plan. He also stressed the fact that students' attitude towards planning differs, with some valuing it more than others. Those attaching high value to planning what they will say use planning time effectively, while those who do not see the need for much, if any planning, may feel bored during the time allotted for planning. This was explicitly assessed in one study, where 37.5% of interviewed subjects revealed that they did not find planning beneficial (Ortega, 1999). The validity of generalised conclusions about the effects that planning has on each component of CAF is reduced by the fact that different researchers define complexity, accuracy, and fluency in diverse ways. Ellis (2009) summarised what various

renowned researchers, across 19 studies and over 13 years, meant by complexity, accuracy, and fluency. No researchers provided the same definition for any of these constructs and even the same researchers used different definitions in different studies. It is therefore perhaps not surprising that mixed (including contradictory) results were found in the studies reviewed in Ellis (2009). Apart from time allocated to planning, student attitudes and lack of agreement among the various definitions of CAF, there are other possible reasons for the mix of results. Ellis (2009) noted that planning probably does not benefit advanced learners. He also concluded that students in a laboratory or classroom situation generally seem to benefit from planning, but that those in a test situation do not appear to get any significant benefit from planning.

Javad Ahmadian et al. (2015) did a study that considered task structure in addition to (online) planning. The clearest definition of online planning is, "when relaxed speaking conditions enable people to plan for new speaking while they are speaking" (Skehan, 2014). A structured task is defined as having, "a clear time line, a script, a story with a conventional beginning, middle and end, and appeal to what is familiar and organised in the speaker's mind" (Tavakoli & Skehan, 2005, p. 246). Javad Ahmadian et al (2015) looked at the effects of structured vs. unstructured tasks on the L2 English CAF of Iranian students. This was done in combination with examining the effects of careful online planning (unlimited time to complete task) vs. pressured online planning (five minutes allowed for task completion). Results showed that both complexity and accuracy benefit as a result of pressured online planning, but that fluency suffers. However, if careful online planning takes place in performing a structured task, good complexity, accuracy, and fluency result (Javad Ahmadian et al, 2015). If, therefore, one aims to provide optimal conditions for good CAF, giving research participants a structured task with no time limit seems like the best way to

proceed. Another important consideration in the examination of CAF is the Cognition- and Trade-off Hypotheses. This will be the subject of the next section.

2.3.5 Cognition vs. Trade-off Hypotheses

The Cognition Hypothesis argues that more complex tasks would result in an increase in both complexity and accuracy, whereas the Trade-off Hypothesis proposes that there is a natural tension between the two, implying that higher accuracy is usually accompanied by lower complexity, and vice versa (Skehan, 2009). Both hypotheses agree, however, that complexity and accuracy are produced at the expense of fluency. A relatively recent study serving as evidence to confirm this, shows that complex language trumps fluency in more complex tasks (Salimi & Dadashpour, 2012).

Although the Cognition- and Trade-off Hypotheses are seemingly contradicting each other, Skehan (2009), suggests that both hypotheses may actually be valid, as it is the type of task that determines which one applies. Dialogic tasks, through scaffolding provided by the interlocutor, as well as time to regroup and plan while the interlocutor speaks, facilitate learner performance, enabling them to produce relatively high levels of both complexity and accuracy. This is in agreement with the Theory of Cognitive Development, proposing that social interaction and cognition are intertwined, with the former potentially eliciting socio-cognitive conflicts, which in turn facilitates cognitive development (Vygotsky, 1978, cited in Chen, 2016). Using an interactive task, therefore seems to be beneficial for research participants' CAF. Apart from task type, motivation is another essential factor influencing L2 proficiency (see e.g., Csizér & Dörnyei, 2005; Dörnyei, 2009; Gardner, 2007; Tokuhama-Espinosa, 2011, pp. 48-56). Motivation will be the subject discussed under the next section.

2.3.6 Motivation in L2 Acquisition

Of the various individual differences at work in L2 acquisition, motivation has been recognised as a core component (Dörnyei, 2006). Motivation can be driven by various types of goals and there are different types of motivation. Performance goals are those where students ask themselves, "Is my ability adequate or inadequate" and mastery goals are those where they ask, "What is the best way to increase my ability, to achieve mastery?" (Dweck & Leggett, 1988). Social goals, as described by Cheng and Lam (2013) are closely related to mastery goals. An example of a social goal would be a child wanting to learn a language for the sake of facilitating communication with foreign children in the neighbourhood. Such a goal results in integrative, rather than instrumental motivation. This is important to take into account when assessing learner motivation. Those coming from households with FilDWs and relying on English to communicate with their caregivers are likely to have integrative motivation.

As a result of their daily English interaction with their helpers at home, such children's self-efficacy in English would probably be higher, compared to those from homes without FilDWs. In this regard, Lin et al. (2012) pointed out that high self-efficacy, a key factor for reading comprehension across languages, can increase language learning motivation. Furthermore, children from homes with FilDWs are probably more motivated by mastery and social goals, instead of performance goals taking the forefront, as may be true in the case of those from households without English speaking FDWs. The main advantages of mastery goals are (1) they are long term and (2) learners with mastery goals are positively motivated (Darnon, et al., 2007). This is particularly applicable to second/FL learning. One would expect children learning a new language mainly for the sake of achieving their social goals

to have a lasting, innate interest in mastering the language, which would result in superior performance and proficiency, compared to those whose primary objective of learning a language is to pass tests at school. In this regard, Dörnyei's third component in the L2 motivational self-system, namely L2 learning experience, is applicable (Dörnyei, 2019). Although Dörnyei presents the impact of the L2 teacher as a critical factor in L2 motivation, the same principle could be applied to FilDWs and their impact as "auxiliary L2 teachers".

Those learning a language simply because it is a required school subject are in all probability driven by performance- instead of mastery- and social goals. Social goals may not play an important role in motivating students who are unlikely to use English for everyday interaction. Students learning a language that is seldom used as a means of communication, yet is a compulsory school subject, probably have instrumental instead of integrative motivation (for interesting discussions on instrumental motivation and L2 acquisition see Bernat, 2006; Chen & Warden, 2005).

It is, however, in all likelihood, not the *type* of motivation that has the greatest impact on our L2 learning, but rather the *intensity* of our motivation (Gardner, 2007). In this regard it is worth mentioning that previous research showed that Hong Kong students are more motivated to study English, compared to other languages, such as Mandarin, Japanese, French and German (Humphreys & Spratt, 2008). Although Humphrey's and Spratt's study focused on tertiary students, it has been documented that realities of adult life are often the result of what has been cultivated during the formative years (Shiner, et al., 2003).

Children with FilDWs have no choice but to interact with their helpers in English on a daily basis. School children may already have some motivation to learn English, but the presence of a FilDW would generate a practical need to regularly use conversational English, and motivation of a high intensity to do so is likely to develop. Such motivation may be further augmented by social goals, such as being liked by their households' FilDWs and/or gaining approval from their parents for being able to interact easily with the FilDWs, which is in accordance with Speech Accommodation Theory (e.g. Gallois & Giles, 2015). Ease of interaction between children and FilDWs would put the parents' minds of these children at rest, knowing that there will not be communication problems between their children and the FilDWs in whose care they are, while the parents are at work. The children's continuous, natural English interaction with their helpers effectively builds their English language skills. As Dörnyei (2019) puts it, the L2 learning experience is the most powerful predictor of motivational behaviour. However, it is also important to consider the impact that birth order and siblings may have (L2) acquisition, and this will be the subject of the next section.

2.3.7 Birth Order, Siblings and Language Acquisition

It is well established that birth order and the presence of siblings could play an important role on language acquisition (see, e.g., Bridges & Hoff, 2014; Hoff-Ginsberg, 1998; Oshima-Takane et al., 1996; Pine, 1995; Shin, 2002; Wellen, 1985; Woollett, 1986). There is also evidence that children with siblings demonstrate different language performance, compared to those who are only children. (Keller, et al. 2015; Mustafa & Abishek, 2018). However, some studies investigating these factors rendered contradictory findings.

Wellen (1985), investigating interaction between mothers and children concluded that the language younger children hear and produce are affected by the presence of older siblings, with the former receiving more input, but producing only half the language when they are around their older siblings. Another study rendered similar evidence, but showed that younger siblings with stronger verbal abilities are less affected (Woollett, 1986). As far as vocabulary development is concerned, a longitudinal study of British children showed that older children's lexicon reaches 50 significantly faster than their younger siblings, but this initial advantage is not maintained with time and differences at later ages are of a stylistic nature (Pine, 1995). Bridges and Hoff (2014) produced evidence that American born Spanish-English speaking toddlers growing up in families with older siblings had superior L2-English skills, compared to those without older siblings. The reasons provided for this are (1) younger siblings get more exposure to English from their older brothers and sisters, and (2) mothers use more English to interact with their children in homes with older, school aged siblings. Oshima-Takane et al. (1996), investigating the effect of birth order on language acquisition in English speaking Canadian families with two children, found that younger siblings are at an advantage, as overheard speech between parents/caregivers and first-borns are beneficial to their language development. Younger siblings particularly benefit when it comes to the appropriate use of personal pronouns. Keller et al. (2015), on the other hand, found that first-borns demonstrate superior L1 and L2 skills, compared to their younger siblings. The reason for this appears to be that, before their younger siblings are born, first-borns enjoy a period where they get more attention from their parents/primary caregivers, which is beneficial for language acquisition.

A study involving 6 to-11-year-old Hong Kong children, where language

performance in L1 Cantonese and L2 English of 150 twins and 150 singletons were compared, found a clear twinning effect for L1, while this effect was weaker for L2 (Wong et al., 2020). The results of Wong et al. (2020) showed that singletons outperformed twins in Chinese receptive and expressive vocabulary as well as word definition, while they only did significantly better on L2 English expressive vocabulary. Furthermore, no twinning effect was found on L2 English in an older subgroup of children with a mean age of 8 years 8 months. The effect that having a twin has on L2 performance therefore seems to decrease with age. As far as the effect of being the only child on language development is concerned, Mustafa and Abishek (2018) produced evidence that Indian children with siblings perform better in their L2, compared to those who are the only child. However, another study that involved L2 and bilingual German speaking children in Switzerland showed that L2 language proficiency decreases as the number of siblings increases, regardless of whether the older siblings are already in school (Keller et al, 2015). Keller et al. (2015) pointed out the effect of siblings may depend on culture and will probably be different in a culture where older children are more involved in the upbringing of their younger siblings (as in the case of India).

The above studies suggest that birth order as well as siblings may have significant effects on children's language development. However, there is not consensus as to what the effects would be. A subject that there is agreement on is the desirability of the type of bilingualism attained. This will be laid out in the next section.

2.3.8 Additive vs. Subtractive Bilingualism

Although bilingualism is generally desirable and beneficial, it is important to note that subtractive bilingualism is something to be avoided. Subtractive bilingualism is the

acquisition of an L2 at the expense of the L1, where not even near nativelikeness is ever achieved in the L2 (Leseman, 2000). This is likely to occur in cases where those from a minority language, for example children of UK immigrants from non- English speaking countries, are learning the majority language as their L2 (Genesee, 2004). A prominent example of subtractive bilingualism comes from a nationwide study conducted in the US in the 1990s. The findings provide evidence that language shift and eventually language loss is probable in children from families speaking minority languages (mainly Spanish, but also Asian languages like Chinese, Japanese, and Korean) if these children attend immersion programs from preschool. The findings also show that those acquiring L2 English at the expense of their L1 did not reach even near nativelike English. (Fillmore, 1991). The detrimental effects of subtractive bilingualism thus come with little compensation in the form of mediocre L2 competence.

Unlike subtractive bilingualism, additive bilingualism occurs when an L2 is learnt on the basis of a well formed L1, with the L2 benefitting from the skills acquired in the L1, without a negative impact on the L1 (Leseman, 2000). Additive bilingualism, where high levels of competence in both languages are reached, happens when children from the majority language learn an L2 (Bergström et al., 2016). In Hong Kong, where Cantonese is a majority language, one would therefore expect additive bilingualism in the case of local children learning English as an L2. Advantages of additive bilingualism over subtractive bilingualism or monolingualism are numerous and include the ability to learn vocabulary in a new language easier (Tokowicz and Degani, 2015), superior performance on non-verbal working memory , episodic- and semantic memory, as well as prevention or delay of dementia (Bialystok and Craik, 2015). Previous research, involving Hispanics of low education, also showed that

objectively measured (as opposed to self-reported) high levels of bilingualism (i.e. additive bilingualism) delays the onset of Alszheimer's disease, while the same benefit was not observed for subtractive bilingualism (Golan et al., 2011). Additive bilingualism is therefore highly desirable and beneficial in various spheres. In order to achieve additive bilingualism, the results of a relatively recent study involving seventh grade school children in South Africa suggested that daily general exposure at home in both the L1 and L2 is required (Manyike, 2013). As alluded to above, the level of bilingualism one achieves could be based on self-perception or objectively measured criteria. The next section will give an overview of the differences between the two as well as factors relating to them.

2.3.9 Perceived Competence, L2 Anxiety and Willingness to Communicate

A distinction needs to be drawn between perceived and actual L2 competence. The former refers to students' self-perception of their L2 abilities, while the latter is their real competence level, as measured by tests and/or judged by native speakers (MacIntyre et al., 1998). Some fairly proficient students may not think of themselves as being very competent, while other less skilled ones may have a self-perception of being competent speakers. It is the latter group, rather than the former that is more likely to embrace L2 interaction. Those with higher perceived competence would feel more confident to communicate in their L2, even if objective test results show that they may not be quite as competent as they think. Inflated perceived competence is not cause for concern; it is problematic, though, if learners self-perceived L2 abilities are much lower than their actual competence. A major cause of underestimating one's own abilities is anxiety. The central role that anxiety plays in L2 acquisition and production is emphasised by many prominent scholars (e.g.: Denies et al., 2015; Horwitz et al., 1986; Krashen, 1981a, 1994; MacIntyre & Gardner, 1994; MacIntyre

40

et al., 1997). Anxiety is defined as the "subjective feeling of tension, apprehension, nervousness, and worry associated with an arousal in the autonomic nervous system" (Spielberger, 1983, cited in Horwitz et al, 1986). People who do not generally suffer from anxiety, but experience anxiety when learning another language have specific anxiety reactions, which hinders the learning of another language (Horwitz et al, 1986).

L2 learning anxiety is a significant stumbling block in the way to L2 proficiency. Kleinmann (1977) found that anxious students tend to avoid certain grammar structures. Other research reported even more debilitating effects of anxiety on L2 acquisition, with students either skipping class and not studying or over studying and believing that they should not attempt to speak until they can do so without making any mistakes (Horwitz et al, 1986). Fortunately, there are effective ways in dealing with L2 learning anxiety. It has been suggested more than four decades ago that spontaneous, informal conversations may be part of the solution (Savignon, 1976). Subsequent research reached a similar conclusion in that anxiety levels drop as one gets more experience in using the target language (Gardner et al., 1989). It has also been argued that frequent L2 interaction may enhance linguistic competence and lower anxiety levels (MacIntyre et al, 1997).

Children in the care of FilDWs spontaneously interact with their helpers in an informal way, similar to the L1 interaction one would expect between children and parents, every day. Daily, authentic L2 English communication should aid linguistic competence-both perceived and actual. Such regular L2 interaction is also likely to reduce, if not eradicate, L2 learning anxiety. Learners with low L2 anxiety would be more willing to communicate in their L2, which is essential to make progress.

Willingness to communicate (WTC) is regarded as a pivotal factor influencing language proficiency by numerous authors (e.g., Baghaei, 2013; Denies et al, 2015; Khajavy et al., 2016; MacIntyre et al, 1998; Yashima, 2002). When the concept of WTC was introduced in 1985 it was aimed at L1, but has since been widely applied to L2 as well (MacIntyre et al, 1998). Willingness to communicate in one's L2 would henceforth be referred to as L2WTC.

MacIntyre et al (1998) and Khajavy et al (2016) maintain that perceived communicative competence is an essential direct determinant of L2WTC, while a study with Japanese students found that L2 communication confidence and intercultural friendship are further factors having a direct impact on L2WTC (Yashima, 2002). Additional elements, influencing L2WTC in an indirect way are motivation and L2 proficiency (Khajavy et al, 2016). MacIntyre et al (1998) further argue that self-confidence, which is higher in low anxiety conditions, facilitate L2WTC. They also state that beliefs about behaviour that significant others want us to engage in shape attitudes, and that this applies to L2 interaction. Another factor influencing the level of English attainment is language aptitude. This will be the subject of the next section.

2.3.10 Language Aptitude and Working Memory Capacity

Despite all the development in the fields of linguistics and psychology over the past six decades, the Modern Language Aptitude Test (MLAT), or variations thereof, is still the most commonly used measure to assess language aptitude. Despite what the name suggests, this is not a modern test, but one that was developed in the 1950s (Siegel, 1959). Wen and Skehan (2011), in addressing the issue of contemporary measures to assess language aptitude, proposed that Working Memory (WM) be

incorporated as part of FL aptitude. They argue that WM is the key in advancing FL aptitude research, supporting their proposal with findings by numerous researchers showing strong positive correlations between WM and L2 listening, L2 reading, L2 speaking, L2 writing and bilingual interpretation. Furthermore, they showed that WM meets the three conditions (L2 learners show individual differences in WM; these differences can be reliably measured; WM plays a significant role in L2 acquisition and development) of being a component of FL aptitude. There is also agreement among various other scholars that WM is a core component of language aptitude (Dörnyei, 2006; Ellis, 2001; Miyake & Friendman, 1998). Based on the above evidence, working memory capacity (WMC) will be used as a measure of language aptitude in this thesis. What follows is an overview of this construct.

WMC is a concept from the field of cognitive psychology that has been widely recognised as a critical variable associated with various aspects of language acquisition (e.g., listening and reading comprehension and individual differences) and it contains both a storage and processing component (Just & Carpenter, 1992). The term working memory seems to have relatively recent origins. Until a few decades ago, the main memory systems known were long-term memory (LTM) and short-term memory (STM). LTM, as can be derived from its name, contains information that is available long term, which, when it comes to language proficiency, includes (among others) grammar and lexicon (Waldrop, 1987). The information in STM, as the term implies, is only available for a short time, similar to the storage component of WM (Baddeley, 1992; Waldrop, 1987). At first glance, it therefore seems if WMC can be defined simply as STM with an added dimension in the form of a processing component. It is, however, more complex than that, as will become apparent in the outline below.

The best accepted WMC model is the one developed by Baddeley and Hitch, with the most recent update added in the year 2000. Initially, the model proposed that WMC consists of a central executive, assisted by two slave systems, known as the visuospatial sketchpad and phonological loop (Baddeley & Hitch, 1974, as cited in Baddeley, 1992). The central executive manipulates information, suppresses that which is irrelevant, controls the slave systems, coordinates attentional focus, and directs retrieval from LTM, while the phonological loop briefly (approximately two seconds), holds phonological information in a phonological store, while keeping it active via the articulatory rehearsal component, and the visuo-spatial sketchpad is responsible for storage and manipulation of visuo-spatial information (Gilabert & Muñoz, 2010).

At the start of this century, the model was updated with the addition of a component known as the episodic buffer. The episodic buffer stores information in a multi-dimensional code, serving as a temporary interface between the slave systems and LTM (Baddeley, 2000). A schematic representation of the current model appears in Figure 1 on the next page.

Figure 1

Schematic representation of WMC (an adapted version of Gilabert and Muñoz, 2010)
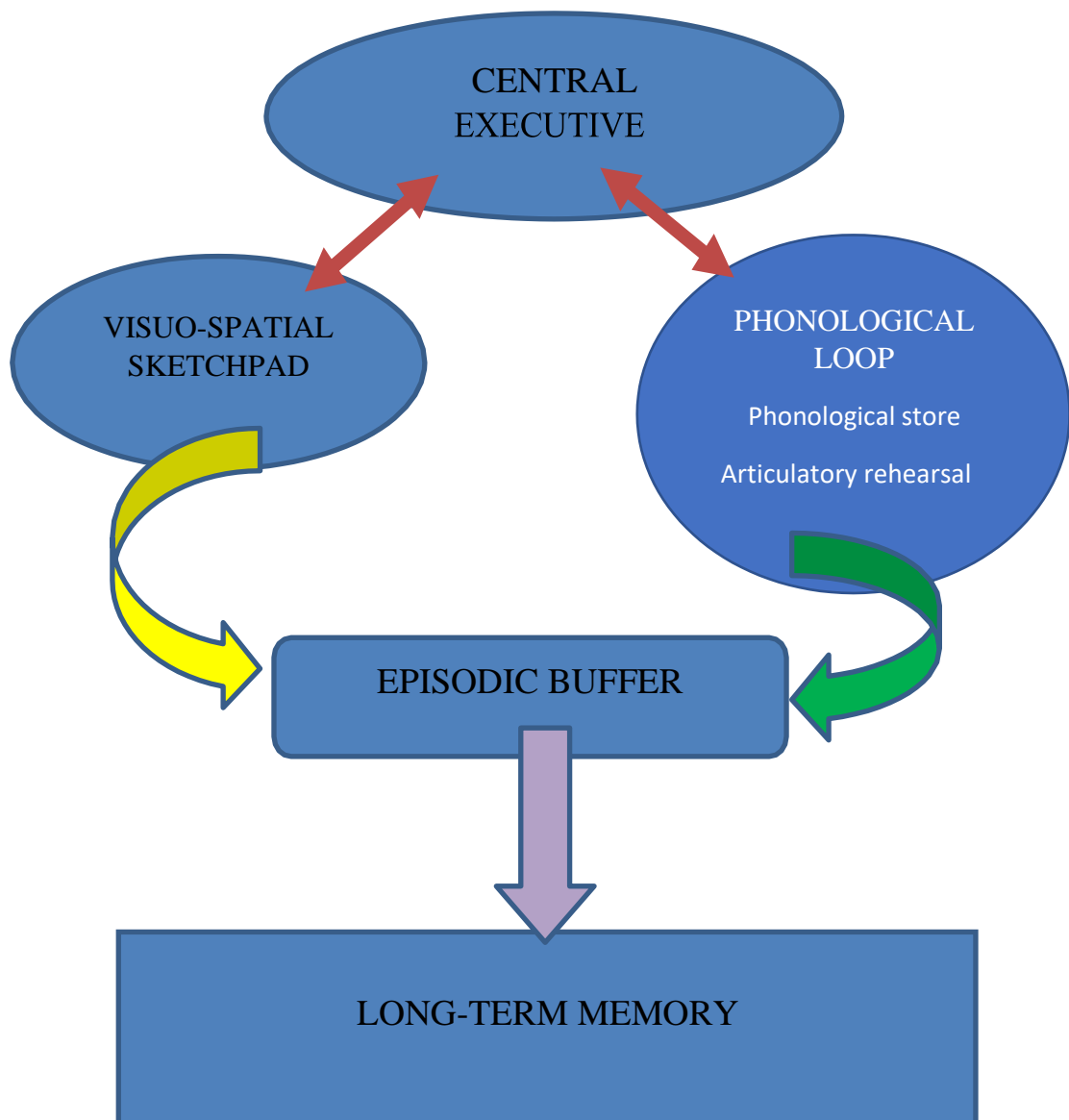
Various tests have been developed to assess different aspects of WMC. An overview of those that specifically investigate the relationship between WMC and different areas of language performance will be given below. There are several Reading Span Tests (RST) assessing both the storage (simple) and processing (complex) component of WMC. An RST typically comprises several sets of sentences that should be read by subjects for comprehension, while at the same time remembering the last word of each sentence of every set. Letter-number ordering tasks use a combination of letters

and numbers that subjects have to repeat (assessing the storage component only) or reorder and repeat (assessing both the processing and storage component). Speaking span tests, where subjects are required to remember words, presented to them in sets ranging from two to six, and use each word to produce a grammatical sentence, assess both components of WMC. Non-word repetition tasks are used to assess the storage component, and subjects are required to repeat non-words, usually ranging in number of syllables from two to nine. All of the above tests are presented orally or through a recording and are usually terminated when subjects get two items in the same block wrong. Some studies investigating the relationship between WMC and language acquisition also assess visuo-spatial memory. This is usually presented on a computer, with patterns being displayed. Some identical patterns are highlighted for a brief period (around one second) and subjects are required to click identical blocks in the order they appeared. Another test where items appear on a computer screen is a processing speed test, where subjects are presented with two strings of consonants at a time and have to decide as quickly as possible whether they are the same or different. Strings appear in order of difficulty, with shorter ones, like XDR appearing first and longer ones, like FWPFVC appearing last. Different pairs will only differ by one letter. Operation span tasks assess the storage and processing simultaneously. An example of this is alphabet recording, as used in Tirre and Peña (1992). Subjects are shown a series of letters, displayed one at a time on the computer screen, followed by a number in the range of -3 to +3. For each item, they need to adjust the letters they see according to the number (e.g., A, C, D +2 becomes C, E, F). Digit span tests (where subjects verbally repeat a set of digits they hear, usually ranging from two to nine digits) are also widely used and are usually presented orally one a one-to-one basis. Forward digit span tests exclusively assess the storage component, whereas backward digit span tests (where the digits have to be repeated in reverse order from which they

are presented to subjects) tests the processing component as well.

Research shows that the type of WMC test that correlates best with overall language proficiency is a backward digit span test (Juffs & Harrington, 2011). A further benefit of using a digit span test is that such tests have been successfully employed in previous studies with children (e.g., Kurvers & Van de Craats, 2007; Marini, Eliseeva, & Fabbro, 2019). All of the above should be interpreted in light of the following: (i) One of the authors of the MLAT test conceptualised FL aptitude as the learning rate of secondary school and university students (Carroll, 1973) and (ii) the effect of aptitude, including WMC, on the rate of learning is limited and secondary to the age at which the first meaningful exposure to the L2 commences (Long & Grenena, 2018). The effect of WMC (and other language aptitude factors) should therefore not play an overriding role in the rate of L2/FL acquisition of children under 10. There are other factors that may play an equally or more important role, and these will be laid out in the next section.

2.3.11 Other Factors Having a Significant Influence on L2 Proficiency

Previous research provided evidence that there are several other factors playing an important role in L2 proficiency. Those that are considered relevant to this thesis and that will be taken into account when analysing the impact of FilDWs are socio-economic status, the amount of English TV watched, the number of English books at home, and the amount of daily/weekly time spent reading these books. An outline of what current theory says on each of these factors will be given below.

Socio-Economic Status

The impact of socio-economic status (SES) on L2 proficiency is widely acknowledged (e.g. Buac et al, 2014; Dixon, 2011; Hoff & Tian, 2005). Hoff & Tian (2005), in discussing the results of two studies (one in China and another in the US), concluded that SES (maternal education was used to measure SES in both studies) is positively correlated with vocabulary size in children between two and four years old. Dixon (2011), in examining the role that home and school factors play in bilingual Singaporean (168 Chinese, 65 Malay and 51 Indian) K2 kindergartners' English vocabulary development also found a significant correlation between maternal education and children's lexicon. Buac et al (2014) examined the effect that primary caregivers' lexicon has on the vocabulary development of bilingual English-Spanish American children, aged five to seven. They indexed SES by primary caregivers' educational level and found a significant correlation between SES and L2 receptive and expressive vocabulary. SES did not have a significant impact on L1 vocabulary. This complements the results of a study conducted with Hong Kong kindergartners, providing evidence that SES significantly affect L2 reading, while L1 reading is unaffected (Chung et al., 2017).

All of the above studies involved children aged seven and below and agree that SES potentially influences some, but not all areas of language development, with vocabulary size appearing to be impacted the most. It therefore seems that the impact of SES on language proficiency is limited in scope. Furthermore, it appears if SES's effect is temporary. A longitudinal study, investigating the role of SES on children from kindergarten until grade five, suggests that the effect of SES greatly diminishes over time, with fourth and fifth graders from lower SES families catching up with those from higher SES homes (D'angiulli, et al., 2004). It has also been argued that the role

of SES is greatly reduced in children attending the same day care centres (Bialystok et al., 2010). Furthermore, a longitudinal study investigating the role of SES on L1 language development and reading of 262 Chinese children from ages 4 to 9, described SES as a an important, but indirect factor, and ultimately a "blunt barometer" (Zhang et al., 2013). A similar study found that SES does not significantly predict L1 literacy skills when other relevant factors are controlled for (Pan et al., (2017).

Taken together, the above findings and arguments suggest that (i) educational level (that of the mother or primary caregiver) is the main element of SES impacting children's L2 proficiency, (ii) vocabulary size is the main aspect of proficiency that is significantly influenced by SES, (iii) the effect of SES is negligible in children older than seven, and (iv) SES plays a lesser role in language performance of children attending the same school. It is therefore anticipated that FilDWs' (in the case of participants from homes with FilDWs) and mothers' (in the case of those from homes with no FilDW) educational level may have some impact on participants' L2 English vocabulary. Furthermore, considering that the children in this study are all from the same school and between eight and nine years old (86% are Grades 3-4, with the remaining 14% being Grade 2) it is also anticipated that SES will play no more than a minimal role on the language performance of participants in this study.

Amount and Type of English TV Watched

The notion that TV plays a role in (first) language acquisition was already put forward in the early 1980s, with evidence that children's vocabulary can increase and their use of formulaic sequences could be augmented by watching TV (Rice, 1983). Later research tested this correlation on L2 acquisition and produced evidence that watching

TV also has a positive effect on L2 vocabulary development (e.g., Peters & Webb, 2018; Webb, 2015). A study that specifically investigated the impact of English TV on Asian children's L2 English acquisition rendered some interesting findings. Dixon (2011), using 284 six-year-olds in Singapore as research participants, found that those primarily watching English TV at home had a significantly better L2 English vocabulary, compared to those who mainly watched TV in languages other than English. Although not assessed in Dixon's study, subsequent research (Hudon, Fennell, & Hoftyzer, 2013), with a sample of 85 Canadian toddlers, provides evidence that the type (or quality) of TV programmes watched trumps the impact of the amount of time children watch TV in the target language. Those watching high quality, age appropriate programmes had significantly higher vocabulary scores than the ones watching programmes of poor quality or not appropriate for their age. This holds true for both L1 and L2, but with higher significance for L2.

The above findings suggest that regular viewing of high quality, age-appropriate TV programs is likely to significantly contribute to L2 vocabulary growth. It is also possible, as Dulay et al (2017) pointed out, that children in households employing FilDWs may be exposed to more English TV viewing, especially TV programmes watched together with their helpers.

Number of English Books Read

Although one of the requirements of school includes reading, it is actually pleasure reading done on topics and genres of one's own interest that is most beneficial to language acquisition. Research has shown that the more reading students do in their free time (free voluntary reading), the better their grammar, comprehension and vocabulary become (Krashen, 1993, 2004; Krashen & Mason, 2017; Krashen et al.,

2017; Renandya et al., 2018). The type of reading is of less importance than that of the learner's interest, with numerous studies showing that even the reading of comic books has beneficial effects on language acquisition (Doepker et al., 2018; Guimarães et al., 2018; Mason & Krashen, 2017).

Perhaps most relevant to this thesis is a recent, longitudinal study that followed the progress of Hong Kong kindergartners until their third year in primary school. Although this paper did not investigate reading *per se*, it was an important element of the study, which rendered results showing a significant correlation between the number of English books read in their free time and children's initial L2 English vocabulary (Dulay et al, 2017). More on this study, that investigated the impact of FilDWs on certain features of language acquisition as well as other related studies will be given in the next section that focuses on FilDWs' impact on Hong Kong children's L2 acquisition.

2.4 Impact of FilDWs on Children's L2 Acquisition

Documented conversations with Hong Kong locals seem to suggest that numerous of them believe that FilDWs have a bad influence on children's L2 English. Curiously, some expressing such views lack linguistic competence themselves, with the following (verbatim) extract from an interview with a paediatrician being one such example:

> In my daily practice, I see a lot of Filipino maids bring children of their master. Quite
> a number of them talk well with a no Filipino accent. Grammar is not correct.
> Actually, they has a bad influence on children, however when I interview child's
> parents they are no need what's going on with language acquisition with their
> children because they themselves cannot speak English… My observation is not

enough the way they communicate with the maid, I would say is baby language…

Some family actually do not want their child mixing with the Filipino maid. [They]

may learn the Filipino accent. (Crebo, 2003).

It is rather ironic that the English of the doctor accusing FilDWs of speaking baby English and using incorrect grammar leaves much to be desired. These judgements, that on the surface appear to be about language, are perhaps more representative of widely held stereotypes about FilDWs. Furthermore, such conjectures are based on speculation, and there is no empirical evidence showing that normal children's L2 English will be impaired if they are left in the care of FilDWs. Interestingly, in America, the popular opinion is that interaction with full time Chinese nannies would be beneficial for American children's L2 Mandarin development (Chen, 2018; Huang, 2017). Regardless of the L2 in question, the same principle should apply to caregivers from various linguistic backgrounds. In order to develop more informed hypotheses, we will consider available evidence by reviewing what research thus far suggests is the impact that FilDWs have on Hong Kong children's L2 English. With the exception of two, that included some FDWs from countries other than the Philippines, all of these studies exclusively looked at FilDWs' influence on Hong Kong learners' L2 English. A summary of each will be given, followed by an overall review of all the studies.

Tang and Yung (2012) examined numerous factors impacting on a random sample of 15, 081 Hong Kong primary school children's academic progress. It should be noted that they did not test any of the children, but considered the data obtained from extracts of the 2001 Population Census and the 2006 Population Bi-census. All children from the sample came from middle income families. Results relevant to this

thesis revealed a strong positive correlation between the presence of a FilDW and children avoiding the setback of late schooling (repeating a school year). Interestingly, there was no significant correlation between the presence of FDWs from countries other than the Philippines and the chances of children from such households being subjected to late schooling. The researchers explained that this is in all probability due to FilDWs' superior English.

Tang and Yung (2012) also created a sub sample to investigate FDWs' influence on academic achievement in core subjects (i.e. English, maths, and Chinese) of children in whose families they serve. This was done by distributing 2240 surveys, asking for participants' academic achievements in the core subjects mentioned above, as well as characteristics of their family (whether neither, one, or both parents work and/or speak English) and the families' FDWs (their country of origin and whether they speak English). About 6.7% of the surveys were completed and returned, and the researchers ended up with 151 6 to 19-year olds, consisting of 75 boys and 76 girls. Of these, 59 came from households with an FDW, with 28 being FilDWs. Results showed a strong positive correlation between children's English scores at school and the presence of a FilDW. Children with a FilDW on average scored 9.2% higher on their English exams at school, compared to kids from households with no FDW. The impact of FilDWs proved even more significant in primary school children, who scored 18.4% higher on their English exams at school, compared to children from households without a FilDW. Indonesian FDWs had no significant impact on children's English exam scores, and no significant correlations were found between the presence of an FDW (regardless of country of origin) and children's Chinese and maths exam scores. The results of Tang and Yung's 2012 study, from both the main and sub samples, reject the assertion that FilDWs have a negative impact on children's English. It also

provides evidence that FDWs do not have a negative impact on children's L1 Chinese (although not stated in the paper, "Chinese" probably refers to Cantonese, as that is the main language in used Hong Kong.

Highly relevant to this thesis, it shows that (i) the employment of a live-in FilDW may have a positive effect on children's English ability, as expressed in school exam scores (and even on their normal progression through academic years) and (ii) the presence of a FilDW is a strong predictor of higher English exam scores in the case of primary school children, compared to high school students. The study does, however, have a major shortcoming in that no language data was used during any stage. The conclusions relevant to this thesis were based solely on correlations between the presence of an FDW and late schooling/school grades.

One of the first research projects in this area of enquiry to include language data was that of Leung (2010), investigating the impact of FilDWs on Hong Kong kindergartners' English accent. The study investigated whether these children's daily exposure to PE would result in some of PE's phonological features transferring to them. Results showed no such transfer to the children's speech and it was concluded that FilDWs' distinctive English accent has no bearing on the L2 English of children in the Hong Kong households they are employed in. However, in a similar study (Leung, 2011), it emerged that FilDWs' accent does affect the English of the children they are taking care of. Although speech production was again unaffected (no traces of PE was picked up in these children's speech), speech perception was affected. In examining receptive skills, Leung (2011) played recordings of minimal pairs produced in PE to 10 participants. Of these, six were from households that had a

FilDW since the birth of the research participant, two from homes that had a FilDW for "several years", and two from families that did not employ a FilDW up to the point of testing. Results showed that children with FilDWs were easily able to distinguish between similar sounding words (e.g. fan vs. pan vs. van) produced in PE, while those who never had a FilDW were unable to make such distinctions. Neither Leung's 2010 nor his 2011 study showed any negative impact of FilDWs on children's L2 English.

Leung's 2011 research was more revealing than that of his 2010 investigation, but it still had a significant shortcoming. The small sample size is problematic in itself and uneven groupings (the largest group being three times the size of the other two) only inflates the problem. As statistical experts pointed out, the wisest way to proceed when grouping subjects, especially in studies involving small samples, is to ensure roughly equal sample sizes for each group (Keppel & Wiggens, 2004, p. 54).

As a follow up to the above research, Leung (2012), launched an investigation of a much larger scale into FilDWs impact on children's L2 English receptive skills. Research participants comprised children aged four and a half to six from four kindergartens, and 11- to 14-year-old pupils from two secondary schools. In total 94 learners: 60 with FilDWs (experimental group) and 34 without FilDWs (control group) were assessed on their ability to comprehend single words in American English (AE), British English (BE), Hong Kong English (HKE), and PE.

Results showed that participants in the experimental group understood words in BE, AE and HKE as well as those in the control group, Leung concluded that children in Hong Kong with FilDWs are not inferior to those without FilDWs as far as word level

comprehension in the English varieties assessed in his study is concerned. The findings also provide evidence that subjects in the experimental group are superior with regards to identifying sounds of PE, as discussed in a paper that reported on Leung's 2012 study (Leu & Young-Scholten, 2013). This confirmed the conclusion of Leung's 2011 research by again showing that FilDWs may have a positive impact on children's L2 English receptive skills, enabling them to easily differentiate between similar, yet distinct, sounds.

Another paper providing evidence that FilDWs may have a positive impact on children's L2 English was done by Chan and McBride-Chang in 2005. They assessed 50 third year kindergartners in Hong Kong on their Cantonese vocabulary and grammar, English vocabulary, as well as cognitive ability. There were 28 in the experimental group (children from households with FilDWs) and 22 subjects in the control group (children from households without FilDWs). Each test was administered individually. The English test consisted of items from the Peabody Picture Vocabulary Test, 3rd edition (PPVT-III) arranged into sets of 12, according to difficulty. Words were called out to participants by the examiner, and their task was to identify the corresponding picture out of four possible choices for each item. The test was terminated after eight mistakes were made in a single set. The Cantonese tests (Hong Kong Cantonese Receptive Vocabulary Test, and Test of Grammar (TROG)-Cantonese (Hong Kong) Version) were of a similar nature, with both tests requiring participants to listen to the examiner call out a Cantonese word, after which subjects had to point to the corresponding picture (out of a choice of four). The cognitive tests consisted of the Visual Closure subtest from the Woodcock-Johnson Tests of Cognitive Ability, requiring subjects to identify up to 49 items presented in the form of distorted/incomplete pictures. The test was terminated after five mistakes

were made out of eight consecutive items.

Results showed that the presence of a FilDW helps children develop a significantly larger English vocabulary, compared to those without FilDWs. However, those from the experimental group had poorer Cantonese vocabulary. In this regard, it should be pointed out that it is not uncommon for one's L1 development to be delayed by an L2, if L2 submergence occurs during the pre-school years (Fillmore, 2000). It is therefore questionable if the poorer Cantonese vocabulary of the experimental group could be attributed to the presence of a FilDW per se. As far as Cantonese grammar is concerned, there were no significant differences between the two groups, and English grammar was not tested because the researchers stated that the children were too young to be assessed on L2 grammar. Cognitive ability correlated positively with better language skills, while the only tested factor significantly impacting on cognitive ability was the amount of time that children spent with their mothers on weekdays.

In discussing their conclusions, the researchers pointed out that the experimental group's superior English ability is probably because they needed English for daily communication with the FilDWs, as opposed to simply using it at school when required to do so in classes, where English was taught as a formal subject. This is in harmony with the findings of Cheng and Lam (2013) as far as the importance of social goals is concerned. One would be more motivated to learn a language if it would regularly be used as a lingua franca for authentic interaction, as opposed to simply being used in English classes for rather superficial communication. In cases where English is regularly used as a lingua franca, long-term social goals are more likely to be one of the motivating forces, compared to classroom situations. Overall, the findings of Chan and McBride-Chang (2005) provide evidence that Hong Kong

kindergartners from homes with FilDWs have superior L2-English vocabulary and inferior L1-Cantonese vocabulary, compared to their peers from homes without FilDWs.

A study done by Tse et al. (2009) further support the argument that FilDWs may have a positive impact on children's L2-English. They examined FilDW's influence on Hong Kong children's reading proficiency by assessing 4352 grade four students. Participants were required to read two of eight 400- to 700-word English passages from the Progress in International Reading Literacy Study (PIRLS) 2001, standardised for their age group, and answer questions about the content. All eight passages were distributed equally among subjects and results showed a strong positive correlation between subjects' reading proficiency and the presence of a FilDW at home. The correlation was significantly stronger than that between children's reading proficiency and whether or not their parents spoke some English. This study used the largest language data base to date in research investigating the impact of FilDWs on Hong Kong children's English and the results strongly support the hypothesis that FilDWs have a positive impact on at least some aspects of Hong Kong children's L2-English acquisition.

The research with the largest sample size (that did not use language data) examining the impact of FilDWs on children's L2 acquisition was conducted by Tang (2015) who analysed statistical data[6] of more than 15 000 Hong Kong primary school children. Of these, 99.2% did not speak English as an L1. 43.4% of the ones not using

---

[6] He drew inferences from statistical data provided by the Hong Kong 2001 Population Census and 2006 Population Bi Census.

English as an L1 speaks it as an L2, and the presence of a FilDW emerged as a highly significant predictor of whether or not children have conversational L2 English abilities. The results of this inquiry therefore lend further support to the hypothesis that FilDWs have a positive impact on children's L2-English acquisition. A shortcoming of Tang's paper, however, is that it did not look at how well subjects could speak English, but simply at questionnaire data, indicating whether or not they are capable of speaking English. Another distinct drawback is that no language data was used.

Wolfaardt (2015) undertook the first research that investigated the impact of FilDWs on both a receptive- (listening) and a productive skill (speaking). This study assessed the influence that FilDWs have on the L2 spoken fluency and listening comprehension of 8- to 12-year old children enrolled at CMI schools in Hong Kong. The experimental group consisted of 10 children (six boys and four girls) from households with FilDWs, while the control group was made up of 10 children (six boys and four girls) from households without FDWs. None of the participants in either group received extracurricular help with English in the form of English classes at a language school or lessons by private English tutors. Each participant from both groups was assessed in exactly the same way. They listened to a short English children's story (from the British Council) and were asked 25 fixed (in content and order) questions about it. All answers were recorded with a voice recorder and transcribed for analysis.

Results showed that participants in the experimental group consistently outperformed those in the control group by substantial margins in both receptive and productive skills. This held true even after age and gender are controlled for (younger children in the experimental group actually did better than their older counterparts in the control group, while males in the experimental group performed better than females in the control group (an unexpected result if one only considers the role of gender in linguistic competence, which usually favours females)). These results serve as evidence that children from households with FilDWs may have superior L2 English listening comprehension and spoken fluency skills, compared to similar children from homes without FilDWs.

Dulay, Tong and McBride (2017) did a longitudinal study, investigating the impact of FDWs on Hong Kong children's L1-Chinese and L2-English vocabulary skills as well as L1 character recognition and L2 word reading abilities. The study was conducted over a four-year period for L1 character recognition and L2 word reading skills, and over five years for L1 and L2 vocabulary skills. Their initial sample consisted of 194 five-year-olds, divided into three comparison groups (46 with English speaking FDWs (76% Filipinas and 24% Indonesians), 32 with Cantonese speaking FDWs (88% Indonesian, one Filipina and the other three from undisclosed countries of origin) and 116 with no FDWs (this group was primarily spoken to in Cantonese at home)). Although the sample size decreased each year, most subjects remained on board, and in the fifth year there were 142 nine-year-olds left (73% of the initial sample).

English vocabulary was assessed by using an adopted version, containing a total of 204 test items, of the Peabody Picture Vocabulary Test (Dunn & Dunn, 1997).

Chinese vocabulary was assessed through 53 test items where a word was shown to subjects, who then had to define it orally. To test Chinese character recognition, children were asked to read aloud 150 Chinese words from the *Hong Kong Test of Specific Learning Difficulties and Writing* (Ho, et al., 2000). Results showed that those with English speaking FDWs significantly outperformed the other two groups with regards to initial English vocabulary. There was no negative correlation between the presence of an English speaking FDW and Chinese vocabulary development, although those in the group with English speaking FDWs did have poorer performances when it came to initial Chinese character recognition.

In addition to assessing children's English and Chinese, the researchers also established the educational level of parents and FDWs as well as the number of books children had and how frequent these books were read to them. What follows is a summary of these variables' significant influence. Higher Chinese reading frequency impacted positively on initial Chinese vocabulary and Chinese character recognition, while higher English reading frequency had a negative impact on both. The greater number of English books children owned and higher maternal education (interestingly, English FDWs educational level was the same or higher as that of parents from the group with no FDWs) had a positive impact on both initial English vocabulary and English word reading ability, but greater number of English books children owned was also linked to slower progress in English vocabulary. The slower progress could perhaps be explained in terms of the children having a higher base vocabulary, closer to the ceiling for their age, leaving less room for imminent further progress.

None of the aforementioned studies suggests that FilDWs have a negative impact on children's L2 English. There is one study from which some evidence emerged that the L2 development of those cared for by FilDWs may suffer. Cheuk and Wong (2005), investigating the relationship of FilDWs' presence and the L2 English development of children under the age of three with a specific language impairment (SLI), found a negative correlation. There is no evidence, however, that these results could be generalised to older children or children (of any age) without an SLI. The authors also admit that it is not easy to accurately explain what exactly is meant by SLI.

The overall picture painted by previous studies suggest that, with all other things being equal, normal children with FilDWs at home may develop superior L2 English skills, compared to those without them. Although these results point in the direction of FilDWs having a positive impact on Hong Kong primary school children's L2 English, the picture is not complete, and one cannot yet claim that the sustained presence of FilDWs at home will probably result in children developing additive bilingualism in the form of better overall L2 English proficiency, without their L1 Cantonese being impeded. The reasons for this will become clearer in the next section, that lays out the gaps in previous research.

2.5 Gaps in Previous Research

If anything became clear from the few studies that investigated the influence that FilDWs have on Hong Kong children's English, it is that children from such homes have equal or better English skills in certain performance areas. The area that has been the best researched by far is pronunciation. Of the six published studies with findings

based on language data, half focused on pronunciation and all show that children in the care of FilDWs do not acquire the phonetic features of PE, while one additionally demonstrates superior comprehension of PE and no difference between groups on sound discrimination of several other English varieties. Two studies focused on vocabulary, both showing and advantage in English vocabulary for the group from homes with FilDWs, but results of these studies are in disagreement when it comes to Cantonese vocabulary. One of these shows that those from homes with FilDWs have inferior Cantonese vocabulary, while the other shows no differences between the groups, although the group without FilDWs performed better in initial Chinese character recognition in this study. The remaining published study with language data demonstrated that children from homes with FilDWs have superior reading comprehension skills.

The picture we have thus far, therefore, tells us that children from homes with FilDWs, compared to those from households with no FilDW, (1) comprehend PE better, but do not adopt phonetic features of PE in their speech, (2) have similar comprehension levels (at word level) of AE, BE and HKE, (3) have superior L2 English vocabulary, (4) display better L2 English reading comprehension skills, (5) perform better on English exams at school, while obtaining similar scores in other core subjects, including Cantonese, and (6) are inferior in initial L1 Chinese character recognition. As far as L1 Cantonese vocabulary is concerned, the jury is still out, with one study showing inferior and another similar performance. All of the above provides a useful foundation for the current study, which aims to examine some of the unaddressed areas, as well as further investigating the contradicting results on L1 Cantonese vocabulary.

This thesis primarily seeks to paint a clearer overall picture about the impact that

FilDWs have on the L2 English acquisition of Hong Kong primary school children, while a secondary, yet no less important, objective is to throw more light on FilDWs' effect on certain aspects of L1 Cantonese acquisition. The gaps it aims to fill are in the areas of (1) English listening comprehension, (2) English writing accuracy and complexity, (3) English spoken CAF, (4) English reading accuracy and fluency, and (5) Cantonese word reading. The thesis also seeks to provide some clarification on the previous conflicting results on Cantonese vocabulary.

In light of the previous research discussed, the following hypothesis, relating to the research questions of this investigation were formed:

H1: FilDWs have a significant, positive impact on Hong Kong primary school children's L2 English receptive skills.

H2: FilDWs have a significant, positive impact on Hong Kong primary school children's L2 English productive skills.

H3: FilDWs have a significant, positive impact on Hong Kong primary school children's L2 English vocabulary development.

H4: FilDWs do not have any significant impact on Hong Kong primary school children's L1 Cantonese vocabulary development.

2.6 Chapter Summary and Conclusions

The first part of this chapter defined some key terms. Critical distinctions were drawn between self-identification and objective classification through performance tests of the terms native speakers, L1, L2 and FL. A distinction was also drawn between language acquisition and language learning. Section two laid out the theoretical frameworks, of which Krashen's comprehensible input hypothesis is the most important. The second part looked at some theoretical considerations relevant to L2 acquisition. Critical to (second) language acquisition is regular comprehensible input, ideally in a natural environment. Grosjean's Complementarity Principle, stating that

not all vocabulary items are used in both languages of bilinguals, is also applicable. Section three looked at key factors related to (second) language acquisition. Motivation, perceived competence, L2 anxiety, L2WTC, parental/caregiver SES, watching English TV, and reading English books all play a role in L2 English proficiency, of which CAF, vocabulary size and listening skills form critical components. Section four considered what previous research has to say about the influence of FilDWs on the L2 English acquisition of Hong Kong children. We saw that there is no empirical support for the notion that normal children's English would be negatively impacted as a result of being in the care of FilDWs, although some evidence emerged that their Cantonese vocabulary may be adversely affected. At the same time, a great deal of evidence emerged from past studies that FilDWs may have a positive effect on various facets of children's L2 English. Section five outlined gaps in previous research investigating the impact of FilDWs on Hong Kong children's language acquisition. In seeking to fill some of these gaps, it is anticipated that evidence showing FilDWs having a positive impact on unexamined areas of English proficiency will emerge. Furthermore, given that children from homes with FilDWs are speaking Hong Kong's majority language as their first language, their L1 is unlikely to suffer as a result of learning an L2, and one can expect additive, rather than subtractive bilingualism. Thanks to their daily English interaction with FilDWs it is highly unlikely that these children would suffer from L2 anxiety. It is also likely that they would have high L2WTC and motivation to communicate in English. These factors all work together in producing competent L2 English speakers, with skills superior to those from homes without FilDWs. The current investigation seeks to provide a detailed account of FilDWs' impact on Hong Kong primary school children's L2 English acquisition as well as offering new insights on certain aspects of L1 Cantonese acquisition of these children. It is hypothesised that FilDWs will

exert a significant, positive influence on all aspects of L2 English acquisition assessed, while they will not have any significant impact on L1 Cantonese vocabulary acquisition. Seeing that FilDWs form a critical part of this investigation, the next chapter will provide an overview of their position in Hong Kong society.

Chapter 3
Position of FilDWs in Hong Kong Society

3.1 Coming to Hong Kong as a Means of Survival

FilDWs form part of a large group of nearly 400,000 FDWs in Hong Kong. These workers come to Hong Kong, a destination that is considered good for domestic work (Yap, 2015) long term in order to earn money for their families, while serving in local households. Compared to the Philippines, where at least one in five people is unemployed (Urrutia, Tampis, & Atienza, 2017) and the most typical net monthly income is 22,000 Philippine Pesos (approximately US$ 442) per month[7], the prospect of being employed in Hong Kong at a higher income, while receiving free boarding and lodging seems promising. Also, due to the shortage of local domestic workers, FDWs have been an integral part of Hong Kong society for around half a century (Tang & Yung, 2012). It is, therefore, not surprising that the number of FilDWs in Hong Kong keeps growing.

On the surface, it may appear if migrating to Hong Kong is a popular choice for women from the Philippines and Indonesia (the two largest groups of FDWs in the region). However, as a leading researcher in the field argues, many FDWs do not really have a choice, but to leave their homes and go overseas to provide for their families (Ladegaard, 2017, p.9). It is also evident from interviews with FilDWs that they are driven to Hong Kong by poverty, rather than being their first choice. The following excerpt, being a response of a FilDW that was asked why she came to Hong Kong, clearly shows this:

---

[7] https://www.averagesalarysurvey.com/philippines

Just to earn money for the future of my family, before I was single but now I have a son (1.0) a family of my own, so I have, I have to (1.0) earn for the future of my son…and then (0.5) we are poor of course, I come from a (1.5) er: farmer, my father is a farmer and (1.5) yeah, very poor, so I have to work hard here and then (0.5) and I have of course several er: three brothers and three sisters to support before, yeah and then (1.0) they went to er: I mean school, further training and I support them (Ladegaard, 2017, p. 37).

Ladegaard (2017, p. 38) points out that (i) FilDWs are typically fluent English speakers, with the hesitations marked in this extract being indicative that she is reluctant to express this identity and (ii) this is a typical case, with the poverty that drove this FilDW to Hong Kong being representative of many FDWs in Hong Kong. Perhaps there are also some who come with high expectations, but if FDWs are not aware of it already prior to their arrival in Hong Kong, they soon realise that some foreign workers are more equal than others.

3.2 Legally and Socially Marginalised

Hong Kong has a policy in place where foreigners who legally reside in the region for at least seven consecutive years can become permanent residents[8]. However, Hong Kong's top court ruled that FDWs should remain excluded from this agreement and that they can never get permanent residence by virtue of working in Hong Kong, even if they have been consecutively employed in the region for decades (Chiu & Moy, 2013). When it comes to minimum wage, FDWs are also treated differently from other employees.

---

[8] https://www.immd.gov.hk/eng/services/roa/eligible.html

Hong Kong's statutory minimum wage, which after the latest adjustment in May 2019, is HK$ 37.50[9] (about US$4.85) per hour, explicitly excludes FDWs. The pay regulations applicable to FDWs is called a minimum allowable wage (MAW) and is, as of September 2019, HK$4,630[10] (approximately US$598) per month. Employers should also provide their FDW with a room and food, or a food allowance of HK$1,121 (about US$145) per month in lieu of meals. As of May 2020, the monthly rental of a private room in a shared flat in Hong Kong is approximately HK$4,000/US$516 per month. The value of the total minimum monthly remuneration for FDWs in Hong Kong therefore adds up to around HK$9,750/US$1,258 per month, for those actually being provided with their own room (many are not). Although there are some who are treated very well and receive more than the MAW, they are a tiny minority, accounting for less than one in sixteen of FDWs in Hong Kong (Lok-Kei, 2019). Considering that there is no maximum working hours stipulated by the law for FDWs and that recent research reported that they typically work 17 hours a day, six days per week (Cheung et al, 2019), the MAW falls well short of the minimum wage.

It is unlikely that workers in any other sector would work that many hours, but as a hypothetical example, an employee doing six 17 hour shifts a week at HK$37.50, for example, would earn HK$16,575/US$2,139 (nearly double the remuneration of FilDWs) per month. This in itself already constitutes severe underpayment and violation of a law requiring employers to pay workers doing more than 40 hours per week at 1.5 times the normal rate for each additional hour worked. However, this law is rarely enforced.

---

[9] https://www.labour.gov.hk/eng/news/mwo.htm
[10] https://www.info.gov.hk/gia/general/201909/27/P2019092500606.htm

In fact, it is common for workers in Hong Kong, to labour more than 40 hours a week, without getting paid at a higher rate for the extra work hours (Ng & Leung, 2018).

Notwithstanding this unfair treatment of workers across sectors in Hong Kong, FDWs still earn much less than any other legal workers in Hong Kong. The erratic workload for many adds up to 102 hours a week, in case of those actually getting one day off every week, and around 120 hours per week for those who do not get any day off. This is two and a half to three times the recommended workload of the International Labour Organisation (ILO), which classifies 40 hours per week as normal and categorises a 48-hour workweek as excessive.[11]

Furthermore, only 18% of FDWs have bank accounts in Hong Kong, which implies that the vast majority of them are being paid in cash (Hung, 2020), and it is not unusual for them to be underpaid (Ladegaard, 2020). One of the most common ways employers cheat FDWs out of money is giving them less than the wage stated in the contract, while requiring them to sign a receipt showing that they were paid the amount stipulated in their employment contract (Collins, 2012, p. 87). Other employers would give their helpers a cheque for the full amount stated in the contract, but then require them to cash the cheque and return a portion of the money; there are also those who would pay the full wage into a bank account under the helper's name, but the ATM card is kept by the employer, who withdraws only a portion of the money, which is then paid to the FDW, while the employer keeps the rest (Collins, 2012, p. 88).

---

[11] https://www.legco.gov.hk/research-publications/english/1920issh06-working-hours-in-hong-kong-20191108-e.pdf

In 2003 legislation was introduced that require all FDWs to live on the same premises as their employers and this policy was reaffirmed by the Hong Kong High Court fifteen years later (Siu, 2018). Such a law greatly restricts the freedom of FDWs and basically means they are on call 24 hours a day, as is evident from the following extract of an interview with a parent explaining her decision of choosing a young, rather than middle aged helper: "My friends told me I should choose a young maid, because she'll have to take care of the baby, get up at night to feed the baby" (Chan, 2005). Considering that this mother followed the advice of her local friends, it can be inferred that that Hong Kong employers with babies or little children may expect their FDWs to get up at night and attend to the children's needs, in addition to performing household duties throughout the day. This also implies that they often do not get one day off every week, as required by law.

Although it is not uncommon (despite being illegal) for employers of FDWs to make them work on many of their off days in addition to their regular work days, this worsened during the outbreak of COVID-19, with FDWs being required to stay "at home", which implies staying at work and forfeiting their only day off (Hamlett, 2020). Due to the temporary lockdown in many countries around the world, requiring people to work from home, while only being allowed to go out for short periods of time and for essential purposes, like replenishing household food supply, the reader may be able to identify with FDWs to a certain extent. Many FDWs are under unofficial lockdown for as long as they are employed as helpers in Hong Kong.

As living space in Hong Kong is very limited, with the average home being just 43 square metres and even "big" homes being just 100 square metres (Lai & Fong, 2020), FDWs are locked into small living quarters with their employers. Research on the

psychological impact of the COVID-19 lockdown requirements rendered evidence that the majority of people feel that their lives are less meaningful (Mustari & Rahman, 2020), that their mental health suffers (Mucci et al., 2020), and that depression, anxiety and behavioural disorders are related to the lockdown (Sood, 2020). The lockdown has also been linked to an exponential increase in domestic violence, where women are usually the victims (Bradbury-Jones & Isham, 2020). These effects probably apply to FDWs, not just during the COVID-19 pandemic, but long term. As recent research investigating the effect of the live-in requirement of FDWs in Hong Kong showed, the overlap of work and home boundaries increases the aggression and violence FDWs are subjected to (Lai & Fong, 2020). It is likely that one of the reasons for these is the same as that of that caused by the COVID-19 lockdown, namely to be confined in a relatively small space with the same people for an extended period of time. Given that FilDWs are not family members, as in the case of those that became victims of abuse during the COVID-19 lockdown, the mistreatment they undergo is likely to be worse.

3.3. Mistreatment and Abuse

The above examples of unfair treatment, stemming from government policy, are some of the milder forms of exploitation FilDWs (and FDWs in general) in Hong Kong are subjected to. Much more serious cases of discrimination against and abuse of these women have been documented ever since last century, right up to the present. Some of the abuse reported in the 1990s include being pinched, slapped, beaten and burnt with an iron by their employers (Constable, 1996). This trend continued beyond the 20th century, with 25% of FDWs reportedly being subjected to verbal and physical abuse from employers and nearly 5% to sexual abuse (Asato, 2004). The actual abuse figures are likely to be much higher than the official ones, as research found that less

than one in five abused FDWs make official reports (Cheung et al., 2019; Hung, 2019). As Lai and Fong (2020) described it, FDWs are trapped at work, making them "safe targets" of abuse. A recent case receiving much publicity is that of an employer installing a camera in the helper's room to watch her dress, undress and shower (Siu, 2019). Although this particular employer was jailed for four months, the FDW being the victim in the case only received a nominal amount in compensation. Furthermore, many FDWs blame themselves for the abuse they suffer as their self-confidence and self-worth are gradually destroyed by the continual abusive treatment they are subjected to (Ladegaard, 2020).

Apart from being abused, many FDWs do not have proper living quarters. A recent survey revealed that only 43% have their own room (despite the law requiring each FDW to have their own room), although the actual figure may be even lower, as those who suffer the worst abuse would not have been allowed to go out on their off day or to partake in the survey (Lok-Kei, 2019).

Of those who do not have their own rooms, many are required to sleep in the toilet, under the TV or on top of the fridge (McQue, 2020). Numerous of these women do not have access to basic facilities either, as emerged from this interview with a researcher: "…they do not allow me to use hot water [for showers]…my employer said domestic helpers are stupid, dirty, rotten so we are not worthy to be respected" (Ladegaard, 2017, p. 44).

A lot of FDWs are basically treated as slaves, but they cannot leave, as they are indebted due to job agencies charging them outrageously high and illegal placement and processing fees (Chan, 2014; Ladegaard, 2013a). FilDWs typically need to pay

up to HK$ 15,000 (about US$1,935) to agencies, which is several times their monthly income (Ladegaard, 2017, p. 55). Some agencies even urge employers to get new FDWs, just months after supplying them with one, which enables these agencies to charge the same FDWs atrocious commission fees again (Chan, 2014). This is a common scam in Hong Kong, referred to as BOGOF (Buy-One-Get-One-Free), and something which first-timers are particularly susceptible to (Ladegaard, 2017, pp. 50-51).

Through scams like BOGOF and via other means, some agencies and employers alike are exploiting fellow humans bound in unseen chains. As the following heart-breaking excerpt from an interview with a FilDW in Hong Kong talking about her former employer illustrates, many FDWs are in a position of desperation and powerlessness: "…she hit me two times and she even dragged me three times, but I don't complain because I don't want to go home. I don't have money to go home…" (Ladegaard, 2017, p. 39).

There are many who, like the FilDWs quoted above, want to leave, but cannot. There are also instances of those who, after being mistreated in unimaginable ways, are unfairly and inhumanely dismissed. An example of such a case is a young FilDW who, after two months of working 16-18 hours a day and only getting scraps off the employers' plate to eat, was kicked out on a cold winter's day, with no money and no extra clothes (Ladegaard, 2017, p. 96).

Apparently, some Hong Kongese employers of FilDWs think they are incompetent and stupid because they do not speak Cantonese, which is a common reason for unfair dismissal (Ladegaard, 2017, p. 99). However, unless one is seeking the services of a

polyglot for a top paid job, it is an unrealistic requirement of employers to expect a foreign employee who speaks fluent English as a second or third language to also be a competent third/fourth language Cantonese speaker. It is certainly not something any reasonable person should expect from a FilDW. Unfortunately, the reality of many cases is a vicious cycle of Hong Kong employers making the women they employ as helpers work unreasonably long hours, resulting in lower quality work, which in turn leads to scolding and other forms of abuse (Lai & Fong, 2020). A pillar that keeps a lot of these women standing is faith in God.

Research suggests that approximately 80% of FilDWs in Hong Kong are believers in God (Yap, 2015). Faith in God is also thematic in some of the interviews with these women, as this excerpt, where a 25-year-old FilDW responds to the question how she keeps going, illustrates:

> Faith in God, and I think positive that everything has its own purpose, to make me strong, and for my family, I will uh: do everything for them, yeah, and then, just uh: pray to God every night, that because everything has its own purpose so I know this one, he will not give me this one if I cannot make it (1.0.) my faith is really very very important (Ladegaard, 2017, p. 64).

While faith in God strengthens FDWs in Hong Kong, the tense relationships between employers abusing their helpers could have a negative impact on the language acquisition of children from such homes. As Zhang et al. (2013) pointed out, children's lexicon greatly benefits from an emotionally stable home environment. Furthermore, abused FilDWs may not interact as much with children, compared to those who are treated well. In this regard, previous research showed phonological awareness, cognitive ability, and reading suffer as a result of less verbal interaction (Chung et al., 2017).

3.4 Chapter Summary and Conclusion

This chapter looked at the position FilDWs have in Hong Kong. We saw that they leave their home country as a means of survival, seeking better work opportunities in Hong Kong to support their families back in the Philippines. They are marginalised on several fronts. These include official discrimination, with the law excluding them from the regular arrangement that allows foreign workers to apply for permanent residence in Hong Kong after seven years. The MAW applied to FilDWs is also lower than the regional minimum wage applicable to all other legal workers. Furthermore, legislation requires them to live with their employers, which gives them very little free time and leaving most working more than double the hours of what is classified as excessive by the ILO. Adding insult to injury, some are also cheated out of their wages by employers who pay them less than the MAW. The picture worsens even further for nearly half facing poor living conditions, with no proper place to sleep and having access to only cold showers and very little food. Many are also defrauded by agencies, charging them outrageous placement fees, and colluding with employers towards unfair dismissal. Furthermore, it is estimated that at least a quarter of them are victims of verbal and physical abuse, while no less than 5% are sexually abused.

Households in which FilDWs are abused suffer from disharmony, tension and emotional instability. Such conditions could have a negative impact on the language acquisition of children growing up in these homes. On the other hand, those coming from emotionally stable homes, where FilDWs are treated well, may enjoy enhanced L2 English development.

Chapter 4

Methodology

4.1 Participants

4.1.1 Target Population Selection

Participants for this study are eight- to nine-year-olds, attending English Medium of Instruction (EMI) schools. Apart from EMI schools, there are also other types of schools in Hong Kong. Many schools follow a Chinese Medium of Instruction (CMI) curriculum, and there are some international schools. EMI, CMI and international schools have significant differences, one of which is the language of instruction. Many children attending international schools are native English speakers or have native-like English abilities, while most of those attending EMI schools have good, but not native-like English proficiency, and the ones attending CMI schools tend to be the weakest in English, compared to those enrolled at international or EMI schools.

Considering the very high level of English proficiency of pupils attending international schools and many being the children of native English-speaking expatriates in Hong Kong, international schools were not considered for the sample frame. Learners attending CMI schools, on the other hand, may not be proficient enough in English to complete a meaningful set of English tests and they were therefore not considered to be included in the sample frame either. That left EMI schools to choose research participants from.

In addition to the type of school attended, it is also essential to consider the age range of participants. If participants vary greatly in age, this may become a confounding

factor when comparing test scores. Furthermore, older children are likely to be more independent and therefore spend less time interacting with their helpers, compared to younger children. On the other hand, as was discussed under 2.3.9, if participants are seven years old or younger, SES may play a significant role in their vocabulary development. It was therefore decided to focus on eight- and nine-year-olds.

Further screening and information gathering were done through a parental questionnaire (see Appendix A) completed by 97 parents of children participating in the two pilot studies and the main study. One of the primary purposes of this questionnaire was to ensure that all participants come from homes with similar SES. The same questionnaire also gathered other relevant information, namely the main and secondary languages as well as the quantity (in hours per week) of interaction between parents and participants, and between helpers and participants; the number of siblings participants have, including birth order; the amount of English TV watched per week; the types of TV programmes watched; the number of English books at home; the amount of time per week participants spend reading these books; the amount of time spent using English on electronic devices, such as computers, phones and iPads; and whether participants receive extracurricular English classes.

4.1.2 Participants of the Study

A total of 64 participants participated in both the group and the individual tests of the study, and their data were analysed: 34 with FilDWs (17 males, 17 females; mean age: 8;11, SD = 6 months, age range: 8;1 to 9;10) and 30 without FilDWs (15 females, 15 males; mean age: 8;11, SD = 6 months, age range: 8;2 to 9;10). Initially, 85 participants were tested in the first stage of the study, but 21 of them were excluded

from the analyses for the following reasons: 18 participants were receiving regular additional English classes after school and three were from homes where one of the parents is a native English speaker. These are obvious confounding factors when investigating the impact of FilDWs on participants' English language proficiency. All those participating in the group stage only received a participation letter, as appears in Appendix P (i), while those participating in both stages received the participation letter appearing in Appendix P (ii).

4.1.3 Peripheral Participants

Apart from participants' parents constituting peripheral participants of this study through the completion of the parental questionnaire referred to in 4.1.1, a public survey was also conducted. Prior to this study no public survey gathering the views of Hong Kong locals on the impact that FilDWs have on various aspects of L2 English development had been done. Although previous research referred to public opinion, that was simply to their views about FilDWs' influence on Hong Kong children's L2 English in general. Such data could be useful in determining the general public's overall stance, but there is an obvious shortcoming in that various interpretations could be given to a question like, "What influence do you think Filipina helpers have on Hong Kong children's L2 English?" This could refer to children's school grades, pronunciation, fluency, etc. Furthermore, no public survey on this issue had been conducted in recent years. It was therefore decided to launch a survey that will assess the public's view on FilDWs' impact on the following aspects of Hong Kong children's L2 English: reading fluency, reading accuracy, spoken fluency, spoken grammatical accuracy, vocabulary development, pronunciation, listening comprehension, grammatical accuracy of writing, and complexity of sentences.

Considering that many Hong Kongers have low English proficiency, a bilingual Cantonese-English speaker was asked to translate the survey into Cantonese. A total of 106 participants completed the survey (see Appendix L for survey).

4.2 Materials

4.2.1 Selection of Suitable Measures

Materials for this study were selected in three stages of a pre-pilot study, two pilot studies, and the main study. In the pre-pilot study, a total of 12 tests, including psychological and linguistic measures, were administered on a one-to-one basis to three children from the target group. All three participants received small gifts for their contributions. In addition, a report and recommendations for improvement of two participating children's English were provided upon the request of their parents. The anonymised versions of these can be viewed in Appendix N. The psychological measures comprised the following: a perceived L2 competence test, L2 anxiety test, L2 WTC test and L2 motivation test (see Appendix M for these three tests). As none of the psychological measures proved to be suitable measures for participants this young, these were excluded from the next stages. The linguistic measures, with the exception of certain items on three of the tests, went smoothly. Most problematic items were replaced by others, while one was removed.

The pre-pilot stage was followed by a pilot study at an EMI school, where all the linguistic measures, with the above-mentioned modifications made, were administered to 13 participants from the target population. As for the procedures, it was decided to administer all the tests requiring written answers in a group setting, while the ones requiring oral answers would be done in a one-to-one setting. The main

reason for this split was that the administration of group tests is much less time consuming. Shortly prior to commencement of the tests, the school requested a letter confirming the format of the research. An anonymised version thereof can be viewed in Appendix C. In the pilot study, eight of the 13 participants doing the group tests also participated in the one-to-one tests. All thirteen children received gifts after their participation.

In the pilot study, the following linguistic measures were employed to assess participating children's L2 English or L1 Cantonese: a short English writing exercise, a receptive English vocabulary test, a Cantonese receptive vocabulary test, an English listening comprehension test, an English reading test, and three English oral tests, comprising (1) a picture description task (see Appendix H), (2) a casual interview/conversational task, and (3) an interactive story-telling task (see Appendix G). All three English oral tests were created for the purposes of this study.

The final four tests were conducted in a one- on-one setting. The rationale of including different oral tasks was to estimate (1) how long each task would take and (2) which task would elicit the most speech from participants. Table 1 displays the time it took to complete each task. No time limit was given, resulting in a range of times for each task. The reason for not giving a time limit on the oral tasks is based on the finding that careful online planning promotes all three elements in the CAF triad (Javad Ahmadian et al., 2015), as mentioned in section 2.3.3 about the effect of planning on CAF.

Table 1

Time spent to complete three oral tests and a reading test in a pilot study

Task	Time*
Picture description	5-9 min
Interview/conversation	3-6 min
Story telling	2-5 min
Reading	2-3 min
All tasks	12-23 min

*All times are rounded off to the nearest minute and includes explanation of task

Table 2 shows the range and mean number of words produced by participants on each of the three oral tasks. The picture description task clearly elicited the most speech (610 words per participant, on average). The interview and story-telling tasks generated a similar amount of speech, but neither of these tasks elicited even half the number of words generated by the picture description task. A further advantage of the picture description task is that it eliminates the possibility that participants would have had prior experience with the material presented to them. It was therefore decided to use the picture description task in the main study and omit the other two oral tasks.

Table 2

Number of words elicited via three individual oral tasks

Range	Mean
327-923	610
115-546	260
137-285	195

After the pilot study, two tests were added: a Cantonese task (i.e., a Cantonese written word recognition test) to assess participants' Cantonese writing vocabulary knowledge and a standard WMC test to measure individual participant's aptitude. A

multiple-choice Cantonese word recognition test was made in consultation with a native Cantonese speaking, local doctoral student who is also a Cantonese language tutor for children. It was piloted on 15 participants recruited from the same EMI school where participants of the first pilot study and the main study were drawn. As there were no problematic issues during the pilot run of this test, its original version was included for the main study.

4.2.2 Measures Used in the Main Study

After all the pre-pilot and pilot studies, eight tests were retained for the main study. The tests were: an English receptive vocabulary test, a Cantonese receptive vocabulary test, a Cantonese word recognition test, an English listening comprehension test, an English writing task, an English-speaking test, an English reading test, and a WMC test. Reliability and validity of the language tests are described in section 5.2.1 under results. What follows are some more details about each test.

4.2.2.1 English Receptive Vocabulary Test

The English receptive vocabulary test is a shortened, adapted version of the Peabody Picture Vocabulary Test, 4th edition (PPVT-4; Dunn & Dunn, 2007). The PPVT-4 assesses receptive vocabulary by requiring test takers to select, from a choice of four pictures, the one representing the word read out by the test administrator. The standard PPVT-4 version is administered on a one-to-one basis with participants asked to point to the picture they think matches the word they heard. The test is terminated once participants provide a certain number (up to eight) of consecutive incorrect answers. The differences of the version employed in this study are that (1) it was administered in a group setting, (2) it contains a fixed number of 30 items, (3) five sets of pictures

appeared below each other on a printed A4 sheet, instead of just one set of pictures on a small cardboard display, and (4) participants were required to circle the letter above the picture they thought corresponds to the word they have heard. Each correct answer is worth one mark, with a maximum score of 30.

The test used in this study consists of 120 pictures, with for the following 30 target vocabulary items: *dentist, floating, claw, uniform, gigantic, furry, violin, group, globe, vehicle, chef, squash, axe, flamingo, chimney, sorting, waist, vegetables, hyena, plumber, river, timer, catching, trunk, vase, harp, bloom, horrified, swamp,* and *heart* (for the full test, see Appendix E). Pictures for this test were presented in a handout, containing six pages of A4 paper, with each page displaying the options from which to select the answers to five items. Below is a sample item taken from the test, in which the word read out was *chef* and the correct answer was B.

| A | B | C | D |

4.2.2.2 Cantonese Receptive Vocabulary Test

This test looks similar to the English receptive vocabulary test described above, with differences being that (1) a recording of 30 Cantonese words was played, instead of reading out the target words, and (2) the target words and pictures in the test differed

from the English vocabulary test. The thirty target words are the Cantonese equivalents of the following English words: *banana, carrot, sheep, basket, coughing, factory, jacket, zoo, running, flask, garlic, airplane, writing, giraffe, hairy, curtain, tractor, farmer, church, toothpaste, jungle, sunset, piano, waterfall, kicking, building, broken, tired, angry,* and *centipede.* These words were selected based on pictures found in Cantonese books for lower primary school pupils. A former Cantonese primary school teacher confirmed that the selected words are ones that lower primary school children should know.

The target words were recorded by a native Cantonese speaker. During the test, these were played through classroom speakers connected to a computer. Before using the recording for assessment, two native Cantonese speakers listened to the recording independently and confirmed that the words are pronounced clearly and authentically. As in the case of the English receptive vocabulary test, the Cantonese version also consisted of 30 items, each worth one mark, with a maximum possible score of 30. Below is a sample item taken from the actual test. The word played for this item was the Cantonese equivalent of banana, and the correct answer is therefore A. The full test can be viewed in Appendix D.

A	B	C	D

4.2.2.3 Cantonese Written Word Recognition Test

The PPVT-4 format was also adopted for this test. However, instead of selecting a picture representing a word, participants had to choose the correct word written in Cantonese (although Cantonese is often thought of as a dialect, it is recognised as a distinct language in both spoken and written form by several linguists, e.g. Snow (2004); Bauer, (2018)) from a choice of four options for each item. The test consists of 80 vocabulary items with 20 target words. Each item comprises four Cantonese written words from which to select the correct answer. All test items are from the Hong Kong government's list of required words for the target age group (The Education Bureau of Hong Kong, 2008). The task was to select the corresponding word to the target word. As seen from the sample item below, each option on the answer sheet contained at least two Chinese characters. One of the characters is the same on each of the four options, which means participants had to pay careful attention and could not easily guess the right answer. A sample item of this test appears below, while the full test can be viewed in Appendix I.

元素   (b) 元首   (c) 元宵   (d) 元帥

The same Cantonese speaker who recorded the words of the Cantonese receptive vocabulary test made a recording for this test. During the test, participants were required to circle the item that they judged to be the written form of the Cantonese word they heard on the recording played to them. Every correct answer on this test is worth one mark and the maximum score is 20.

4.2.2.4 English Listening Comprehension Test

A 2-minute children's story, entitled *The Bird King*, was used for this test, which can

be found on the British Council's website[12]. During this test, participants heard the audio and saw the animation without any subtitles to the story (see below).

After listening to the story, participating children had to answer 20 questions about it (see Appendix F for the test). Below is a sample question used in the test:

> *Why did the parakeet say they should make him king?*

> (Answer: because of its wonderful colours).

4.2.2.5 English Writing Task

The writing task was to write about what you usually do on weekends. More detailed instructions were as follows:

> As you write, think about this: what's your favourite weekend activity? Do you prefer to be indoors or outdoors? Are there any things you must do during weekends that you don't really like? What's the best weekend you've ever had?

---

[12]https://learnenglishkids.britishcouncil.org/short-stories/the-bird-king

Participants were given 15 minutes to complete the writing assessment on a sheet of A4 paper. They were instructed to pay attention to spelling and punctuation as they write.

4.2.2.6 English Speaking Test

The English-speaking test required each participant to describe the same set of pictures. A total of 15 colour photos, taken by the author and depicting images familiar to participants, were used. The rationale of including a relatively large number of pictures were twofold.

Firstly, as emerged from the pre-pilot and pilot run of this test, different pictures elicit a varying amount of speech for different participants. Hence, the inclusion of more pictures ensured that the set would elicit enough speech for analyses. Secondly, the first three pictures were used as practice items. The pictures were arranged from simple to complex. In order to determine the level of complexity of the pictures from a non-native speaker's perspective, two L2 English speakers from China (one a senior undergraduate student majoring in business and the a other doctoral student majoring in English) were asked to arrange the pictures from simple to complex. The order they agreed on was similar to my initial judgement of complexity and was used during the test. Below appears a sample picture from the set that participants had to describe (see Appendix H for the rest of the pictures).

Participants were presented with a photo album, displaying one photograph at a time, with their task being to describe each. Prior to commencement of the test they were told to describe what they see in enough detail so a person not seeing the photo should have a clear idea what is in it. They were instructed to not simply say something like, *I see a bird*, but to be more specific, referring to details such as colours, the background, season and time of day.

4.2.2.7 English Reading Test

Each participant was required to read the same passage aloud, while they were recorded as they read. They were presented with the text printed on an A4 page and could commence reading when they were ready. The passage for the reading test, taken from Smith and Boyle (2008), appears below.

I am a plant. Some of my leaves are in the shape of a pitcher. So, people call me a pitcher plant. Some people have seen monkeys drinking water from my pitchers'. They give me another name: monkey cups. Don't look down upon my 'pitchers'. They are not just water containers. My 'pitchers' are very colourful and they are filled with liquid. They also give off sweet smell. Many insects are attracted by the colours and the smell. They climb into the 'pitchers' to get some 'honey', but they can never climb out because the 'pitchers' are very slippery. What happens to the insects? Their bodies are dissolved by the liquid in my 'pitchers'. They become my food. Yes, you are right. I am a plant, eating insects.

4.2.2.8 Working Memory Capacity Test

This is a subtest of the standardised test battery, Clinical Evaluation of Language Fundamentals, fourth edition (CELF-4) (Semel, et al., 2003), which consists of 15 items, with two task types, namely a *forward digit span task* (assessing the storage component) and a *backward digit span task* (assessing the processing component). Each item had a pair of a fixed number of digits (e.g., 1 (a) "3-5" and 1 (b) "7-2") that participants should repeat after hearing them (i.e., *forward digit span task*; e.g. the correct answers are "3-5" and "7-2") or reverse the order and then repeat (i.e., *backward digit span task*; e.g., the correct answers are "5-3" and "2-7"). The first eight items were a forward digit span task, and the last seven a backward digit span task. In both tasks, the question consisted of a pair of two digits, with a digit added to each subsequent question until the number of the digits was nine for the forward digit span task and eight for the backward digit span task. Participants continued with the test until they incorrectly answered both pairs of a question. When this happened during the forward span task, the participant moved to the backward span task, continuing until they got both parts of the same question wrong, at which point the test was terminated. This explains the big range in times it took to complete this test.

Participants who got items early in both sections of the test wrong finished much quicker than those making no mistakes until the latter stages of each leg.

One mark was awarded for the correct answer of each part of every pair on all items. This made the maximum possible scores 16 (8 questions × 2 marks) and 14 (7 questions × 2 marks) for the forward- and the backward span tasks respectively, giving a total possible score of 30. Participants had to repeat every digit in the correct order (i.e., the same order in which it was read to them for the forward task and reverse order for the backward task) to receive any score. For example, if "5-0-9-1" was read to them in the forward span task, one mark was awarded for answering "5-0-9-1". When a participant incorrectly repeated (e.g., "4-0-9-1"), missed a digit (e.g., "5-9-1"), or mixed up the order in any way (e.g., "5-0-1-9"), they received no score.

4.3 Procedures

The same EMI school where the pilot studies were conducted agreed that the rest of the study could be done there as well. The conditions were that I had to teach two complimentary chess lessons every week for two semesters, issue each participant with a participation letter, and give each of them a small gift. Upon completion of the chess lessons, the school arranged the times and premises that participants whose parents returned the consent forms can be tested.

The eight tests were divided and conducted in two stages, namely: stage one, containing five tests in a group setting (see Table 3 for a summary), and stage two, with three one-to-one tests (see Table 5 for a summary). The classroom size for the group tests allowed for a maximum of 15 participants to be seated individually and far enough from each other that they were not able to copy each other's answers. As

a result, group testing was conducted in six separate sessions, after school, to test all 64[13] participants. The school provided a bilingual Cantonese-English speaking teaching assistant for each group testing session to help with distribution, explanation and collection of test papers.

Table 3 lists the tasks done in the group setting as well as the time each task required. The total testing time for the five group tests was approximately 50 minutes. Six weeks after completion of the group tests (after school), the one-to-one tests with the same participants commenced in the school library during school hours. Table 4 displays the time range required for each individual test, and it took 8-22 minutes for each participant to finish the three individual tests.

Table 3

Time required to complete tasks in group setting

Task	Time*
English picture vocabulary test	7 min
Cantonese picture vocabulary test	7 min
Cantonese word recognition	7 min
English writing	17 min
English listening comprehension	12 min
All tasks	**50 min**

*Time is rounded off to the nearest minute and includes task explanation, and handing out and collecting of tests (approximately 2 min/task).

Table 4

Time required to complete tests in one-to-one setting

Task	Time*
English speaking test (picture description)	5-12 min
English reading test	1-2 min
WMC test (digit span)	2-8 min
All tasks	**8-22 min**

*All times are rounded off to the nearest minute and includes explanation of task

---

[13] Initially, 85 participants were tested, but 21 were excluded for reasons outlined under 4.1.2.

4.4 Scoring

4.4.1   Transcriptions

All recordings for the reading and speaking tests were transcribed for analysis by the author and the full transcriptions can be found in Appendix K. The first three photographs in the speaking test were treated as practice items and transcriptions are the 90 seconds from the fourth picture onwards. Using fixed, predetermined segments of recordings to transcribe for analyses is normal practice. Sato (2014), for example, used the first minute of recorded speech for analyses, while the time of 90 seconds used in this thesis is exactly the same as that employed by Mota (1995). Transcriptions were checked for fluency, grammatical accuracy and syntactical complexity. For illustrative purposes, two extracts from actual transcripts will be used below.

Extract 1
01:43-01:56 uhm it is (pause) a stu:dent sitting (pause) sitting on a (pause) sitting (pause) bel (pause) sitting under the tree: doing its homework and writing (pause) thing:s. [**13 words, 18 syllables, 13s, 14DFM, 2GE, 1S, VNAA: 8**]

Extract 2
01:30-01:44 with (pause) (NA) blue: face (pause) cli:mbing: (pause) on: (pause) a tree (pause) and it has four legs. [**12 words, 13 syllables, 14s, 6DFM, 1GE, 2S, VNAA: 7**]

The words/parts in red are indicative of grammatical errors, while colons mark elongated sounds. Underlined parts indicate dysfluency markers (false starts, inappropriate silences/pauses, repetitions, elongated words, and hesitations). The abbreviations following the participant's turn indicate the following: DFM = dysfluency markers, GE = grammatical error/s, S = number of sentences (every independent clause is counted as a sentence for calculation purposes, as recommended in Cook & MacDonald (2012)), while VNAA = verbs, nouns, adjectives and adverbs.

False starts and repetitions are not brought into the equation when calculating GE, S and VNAA.

In Extract 1 all pauses are underlined as dysfluency markers, since every one of them appears in the middle of a clause. The first grammatical error in this extract relates to the incorrect use of articles. No tree has previously been identified by this participant, so the indefinite article *a* should be used, instead of the definite article *the*. The second grammatical error is the incorrect choice of pronouns. The homework referred to by the participant is done by a female student, requiring the possessive determiner *her*, instead of the possessive pronoun *its*. The calculation of VNAA was done as follows: 4 verbs (*is*, *sitting*, *doing*, *writing*) + 4 nouns (*student*, *tree*, *homework*, *things*) = 8.

In Extract 2 the red letters NA indicate that there is no article where the indefinite article *a* should have been used. The second and final pauses in this extract are not underlined as dysfluency markers, as they appear at the end of independent clauses. Such pauses are considered normal and natural (Skehan, 2009). This extract contains two adjectives (*blue* and *four*), two verbs (*has* and *climbing*) and three nouns (*face*, *tree*, *legs*), making the total of VNAA 7.

A trained linguist (a native English speaker and final year undergraduate student in linguistics at the University of Cambridge, with three years of experience in transcribing audio recordings for linguistic analyses) listened to 26 (20.31%) randomly selected recordings and checked the transcriptions thereof. The levels of agreement between the author and this person's transcriptions were as follows: (1) *Reading:* WPM 99.59%; Accuracy: 99.60% (2) *Speaking:* Fluency 1 98.58%, Fluency 2 98.77%, Fluency 3 90.54%, Accuracy 99.89%, Syntactic Complexity 1 100%, Syntactic Complexity 2 99.40%. The overall level of agreement on all of these measures is 98.03%.

4.4.2 Calculation of Scores

Scores on both the English receptive vocabulary tests and the Cantonese tests are the sum of correct answers converted to a percentage score. In other words, if a participant answered 24/30 questions correctly, it would be expressed as a score of 80. Listening comprehension scores were calculated in a similar fashion, with the difference being that it is possible to answer some questions partially correct, in which case half a point would be earned. If, for example, 12 questions were answered correctly and one partially correct, it will add up to 12.5/20, which translates into a score of 62.5. An example of a partially correct answer is: "under the eagle" to the question asking where the sparrow was hiding. The fully correct answer is: "under the eagle's wing".

Syntactic complexity scores of both writing and speaking were calculated in two ways. The first measure is an adapted version of that used by Cook and MacDonald, 2012. They calculate complexity by dividing the total number of verbs, nouns and adjectives (VNA) by the total number of sentences produced. Useful as this method is, it does have a shortcoming, as will be illustrated with two sample sentences below:

Example 1: The girl sings beautifully. [**VNA: 2, VNAA: 3**]

Example 2: The beautiful girl sings. [**VNA: 3, VNAA: 3**]

Example 1 contains four words in total, including the noun *girl* and the verb *sings*. This makes the syntactic complexity score of this sentence two, according to the original method used by Cook and MacDonald (2012). Example 2, which is very similar to the first, additionally contains the adjective *beautiful*, giving it a complexity score of three. However, it is easy to see that *beautiful* is already present in the first

example. The only differences are that it appears after, rather than before, the verb and contains the suffix *ly*. If anything, a prefix, infix or suffix makes a word more, instead of less complex. Although we are dealing with syntactic, rather than lexical complexity in the analysis, it does not seem reasonable that one four-word sentence should be classified as one and a half times more complex than another, where the only differences are that the less complex sentence has a different word order and a modified, longer form of a word contained in the more complex sentence. It would be more accurate to classify these sentences as equally complex. A modified application, where we also consider adverbs, will do exactly this. In such an adapted version of Cook and Macdonald's method, instead of ignoring the adverb *beautifully* that appears in Example 1, it will be included in the calculations, resulting in a complexity score of three for the sentence in Example 1. Note also, that the score does not change for the sentence in Example 2. Both are now, rightfully, classified as equally complex.

The adapted version is therefore more accurate than the original, but it still does not tell the full story. In some cases, in order to get a clearer, more accurate picture of syntactic complexity, additional information is required. Two further examples are given below to illustrate this:

Example 3: Two fat men make hot tea quickly. [**VNAA: 7**]

Example 4: Your money in the envelope lies neatly next to mine under the crockery in the cupboard above the refrigerator. [**VNAA: 7**]

Example 3 contains seven words in total and is comprised of three adjectives (*two, fat, hot*), two nouns (*men* and *tea*), one adverb (*quickly*) and one verb (*make*). This

gives it a complexity score of seven. Example 4 contains 19 words, including five nouns (*money, envelope, crockery, cupboard, refrigerator*), one adverb (*neatly*), and one verb (*lies*). According to the adapted version of Cook and Macdonald's method, proposed above, these two sentences are of equal complexity. This is a more accurate classification than the original version, that would not consider the adverb *neatly*, thus making the sentence in Example 4 less complex than that in Example 3. However, even the adapted version's classification that assigns equal complexity to both examples does not capture the fact that Example 4 contains nearly three times as many words as the first. It would therefore be more accurate to include the additional classification of words per sentence to be used in conjunction with the first, that solely considers VNAA. Furthermore, it should be noted that none of the additional words contained in the second example are false starts or repetitions.

Applying the conclusions drawn from the above discussion, calculation of the two measures employed to capture syntactic complexity scores were done as follows: (1) VNAA/S and (2) Words/S. For example, a participant that produced 100 VNAA and 200 words in 30 sentences[14] during the 90 second transcribed extract will have a Syntactic Complexity 1 score of 3.33 and a Syntactic Complexity 2 score of 6.66 (100/30 and 200/30, rounded off to the second decimal) according to these measures. Syntactic complexity was calculated in a similar fashion for writing.

Grammatical accuracy scores as well as those on the third fluency measure were arrived at by calculating the number of grammatical errors/dysfluency markers per 100 words and deducting that from 100. Should a participant's speech include, for example, 10 grammatical errors and 35 dysfluency markers per 100 words, their

---

[14] Not including repetitions and false starts.

accuracy and Fluency 3 scores would be 90 and 65, respectively. Dysfluency markers were not included in the calculation of grammatical accuracy scores. Fluency 3 scores were calculated similarly as in Lennon (1990).

The calculation of the first and second fluency measures is a simple division of the number of words (first measure) or syllables (third measure) by 1.5 (90 seconds equals one and a half minutes), which gives the number of words/syllables per minute. If, for example, a participant produced 120 words and 180 syllables, their Fluency 1 and Fluency 2 scores would be 80 (120/1.5) and 120 (180/1.5) respectively. As in the case of the third fluency measure, as well as grammatical accuracy scores, parts identified as dysfluency markers were not included in the calculation of Fluency 1 and 2, as recommended by Lennon (1990). Expressing fluency in wpm. has previously been done by Oh and Lee (2012), while syllables per minute was a employed by De Jong and Perfetti (2011). Reading fluency scores were derived from number of correct words read per minute, as in Pretorius and Spaull (2016).

4.5 Chapter Summary and Conclusions

This chapter started by describing the target population selection, gathering of background information, as well as the preliminary test stages. Background information of participants were gathered via parental questionnaires, and participants for all test stages were selected from a pool of EMI children, aged between eight and nine. A bilingual Cantonese/English survey, seeking the opinion of Hong Kongers with regards to the impact of FilDWs on Hong Kong primary school children's L2 English was also conducted.

During the pre-pilot study, conducted with the aim of establishing which tests would be suitable in later stages and what adjustments should be made to tests, three pupils from the target age group individually did four psychological and eight language tests. All language tests, with some adjustments to certain tests, were used in the first pilot study, while the psychological measures, which proved to be unsuitable for this age group in their L2, were excluded.

During the pilot study, launched at the premises of a primary school, all four tests requiring written answers were done in a group setting, while the remaining four tests, requiring oral answers, were administered on a one-to-one basis. Participants for both pilot studies, as well as the main study were recruited from the same EMI school that made students available for testing, after parental consent and the researcher teaching 60 complimentary chess lessons at the school. After the first pilot study, the Cantonese word recognition test was piloted and added as a measure for the main study.

The main study, involving 64 participants that took five group and three individual tests, was conducted at the school premises over several weeks. Major adjustments made, based on the outcomes of the pilot studies, include the replacement of two oral measures by of a digit span (forward and backward) WMC test and Cantonese written word recognition test. The picture description task, eliciting the most speech, was the oral task retained for the main study.

All speech generated by the oral task was recorded, of which 90s was transcribed. The entire reading test was also recorded and transcribed. Three fluency-, two

complexity, and one accuracy measure were used for the transcribed parts of the oral test. The same complexity and accuracy (with the addition of punctuation) measures used in the oral test were also employed when scoring the writing test.

Together, all 10 measures employed in the main study provide a good overall picture on the background of participants, the Hong Kong public's opinion of FilDWs' influence on Hong Kong children's English language proficiency, and most importantly, FilDWs' impact on participants' language development.

Chapter 5

Results and Findings

This chapter will display all test results and findings, elaborating on some where further explanation is needed. With the exception of family size comparisons and the public survey, where it would not be applicable, independent t-tests were performed to test for the significance of differences between the two groups. The order of display will be as follows: findings from the parental questionnaires and the public survey, followed by reliability and validity of the language tests, the results of the English language tests, Cantonese language tests, and finally the WMC test.

5.1 Findings from Peripheral Tests

5.1.1 Parental Questionnaires

The first set of key findings emerging from the parental questionnaires relates to family size. As can be seen from Table 5, the number of children per household is very similar across groups, with the majority of participants from both groups (+FilDW: 57.57% and -FilDW: 53.3%) coming from families with two children. The second most common in each group is participants that are only children, accounting for nine participants (27.27%) for those from homes with FilDWs and 10 (33.33%) for those from homes without. Only five (15.15%) participants from homes with FilDWs come from families with three or more children, while the same is also true for just four (13.3%) participants from homes without FilDWs.

Table 5

Family size comparison

Number of children	+FilDW (*N* = 33*)	-FilDW (*N* = 30)
1	9 (27.27%)	10 (33.30%)
2	19 (57.57%)	16 (53.30%)
3	4 (12.12%)	4 (13.33%)
4	1 (3.03%)	0

*One parental questionnaire from the group with a FilDW was not returned.

Figure 2 shows, as far as birth order is concerned, the distribution is also similar across groups, with 23 (69.69%) from the group with FilDWs being the only or oldest child in the family, while the same is true for 19 (63.33%) of the participants from households without FilDWs. Approximately a quarter (24.25% and 26.67%, respectively) of the participants from each group is the youngest child, while only two participants (6.06%) from the group with FilDWs and three (10%) from the group with no FilDW are the middle child in their family. Furthermore, it was established that all participants are from homes where at least one parent has a full-time job, while none of the participants come from homes with a single parent. Finally, gender distribution and mean age across groups are identical, with age range being almost identical.

Figure 2

Birth order

1 = oldest/only child

2 = youngest child

3 = middle child
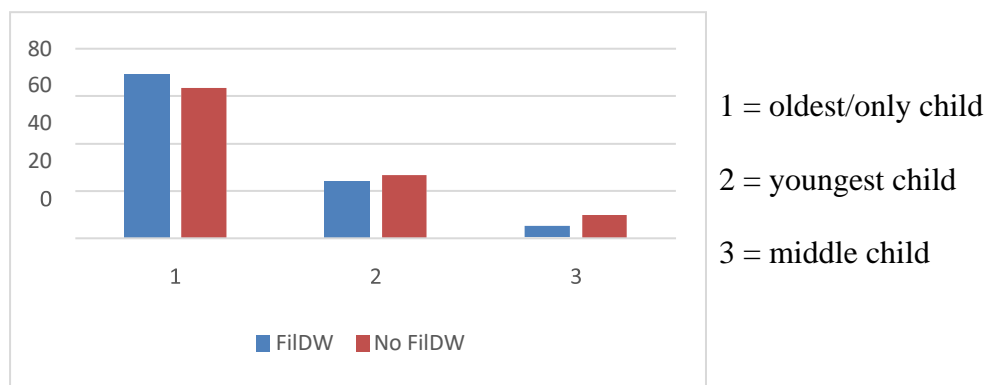
The second set of important findings from the parental questionnaires relates to SES, home literacy, and home language interaction/exposure. Table 6 shows that, with the exception of the number of reported weekly hours of interaction between parents and participants, where a marginally significant difference emerged (p <.10), there were no significant differences between the two groups on SES, home literacy, and home language interaction/exposure. The large range in number of books at home for each group helps explain the big standard deviations for this variable. In the group with FilDWs the participant with the least number of English books at home, reportedly had only 30, while the one with the most had "more than 1000", which was by far the most and more than double that of participants with the second most. In the group without FilDWs, the range was even bigger, with the lowest number of English books at home being reported as 20, while the largest is still 1000 or more, but in this group's case the parents of four participants indicated that they had at least 1000 English books at home.

Table 6

Mean comparisons of SES, home literacy, and home language interaction/exposure

Variables	+FilDW ($N = 33*$)		-FilDW ($N = 30$)		
	M	SD	M	SD	p-value
SES^	4.15	0.94	3.86	1.25	.252
Eng. books at home	220	196	281	338	.364
Reading Eng. books**	8h04	5h22	7h54	12h21	.911
Watching Eng. TV**	3h23	2h30	4h10	3h44	.319
Electronic device in Eng.**	3h15	2h23	3h20	3h18	.691
Interaction with parents**	26h56	12h29	34h32	17h43	.052[†]
Interaction with FilDWs**	29h16	17h35	N/A	N/A	N/A

*One parental questionnaire from the group with a FilDW was not returned.
**The duration for the activity is marked in the number of hours per week.
^SES is represented by maternal educational level, coded on a 6-point Likert scale, as follows: 1 = Secondary school; 2 = Post-secondary certificate; 3 = Associate degree; 4 = Bachelor's degree; 5 = Master's degree; 6 = Doctoral degree
[†]marginally significant at 90% CI

5.1.2 Public Survey

As can be seen from Table 7, the majority of respondents to the public survey indicated that they are of the opinion that FiLDWs would either have no influence or a negative impact on most aspects of L2-English proficiency that opinions were sought on through the survey. According to public opinion, FiLDWs are only expected to have a positive impact on spoken fluency, vocabulary development and listening comprehension, while the respondents to the survey expect a negative impact on spoken grammatical accuracy and pronunciation, with no expected impact on reading accuracy, grammatical accuracy of written texts or syntactic complexity. Mostly, public opinion does not reflect reality, as can be seen from the English language test results, displayed under 5.2.2.

Table 7

Results of public survey

Aspect of English proficiency		
Reading *fluency*	14	39
Reading *accuracy*	18	25
Spoken fluency	19	66
Spoken grammatical accuracy	52	22
Vocabulary development	18	59
Pronunciation	61	22
Listening comprehension	11	66
Grammatical accuracy of written texts	31	21
Complexity of sentences	26	16

5.2 Results from Main Tests

5.2.1 Reliability and Validity of Language Tests

Reliability of tests refers to the degree of consistency a test measures what it is intended to measure. Test validity, according to the American Psychological Association (APA), refers to "appropriateness, meaningfulness, and usefulness of the specific *inferences made from test scores*…The inferences regarding specific uses of a test are validated, not the test itself." (APA, 1985, p. 9). In other words, if the same participants take tests measuring the same or similar constructs at different points in time and obtain similar scores, the tests can therefore be classified as reliable. As far as validity is concerned, the focus is on the inferences drawn from tests, as opposed to the tests per se. Let us consider a reading test as an example. If the objective is to compare the reading speed of two groups and we infer that (assuming that the same administrator gave the test under the same conditions to both groups) the group reading at 150 wpm are faster readers than the group achieving 100 wpm on the same test, it would be a valid inference. Below is an outline of measures applied.

First, reliability of measures used in this thesis were established from the fact that the scores of participants in the group stage were similar to that obtained by the same participants in the one-to-one stage (see p.112 for scores), administered six weeks after conclusion of the group tests. To check reliability of the tests, correlations among them were examined. Overall, there was a high correlation between the English measures used in the group (variables 3 to 7 in Table 9) and individual tests (variables 8 to 15 in Table 9). More specifically, out of five group measures, all three English measures from the group stage on which significant differences between the two groups of participants emerged (receptive vocabulary, listening comprehension and writing accuracy) significantly correlated with all English measures in the one-to-one

stage. It is also noteworthy that the three measures used for assessing spoken fluency significantly correlated with each other, while the same is true for the two measures employed to assess spoken complexity. This provides evidence that all fluency measures measured the same construct, while the same can also be said for both complexity measures.

Although Writing complexity 1 (from the group tests) only correlated significantly with English Receptive vocabulary and Reading fluency (from the individual tests), while Writing complexity 2 (from the group tests) significantly correlated with only Reading fluency (from the individual tests), Writing complexity 1 and 2 significantly correlated with each other, providing evidence that they measured the same construct. Furthermore, there were no significant group differences found on Writing complexity 1 or 2. Considering that all English measures administered during the group stage on which significant differences were found between the two groups correlated significantly with all the individual tests administered to the same participants six weeks later, acceptable test reliability can be assumed. For details of all correlations, refer to Table 9 below.

Second, validity of measures was tested via the Content Validity Index (CVI), as described in Waltz et al. (2010; 2017) and employed to test validity of language tests by Ozer et al. (2014). As can be derived from its name, the CVI aims to establish the extent to which the content of a test adequately represents the domain that the test is supposed to measure. In employing the CVI, the objectives of the test to be validated are explained to at least two experts. These experts are asked to judge the relevancy of each item on the scale in light of the test's objectives (Waltz et al., 2017, pp. 211-212).

There are two types of CVI, namely Scale (S-CVI) and Item CVI (I-CVI) (Rodriguez et al., 2017). The CVI (S-CVI and I-CVI) both rely on expert judges, rating the relevancy on the following 4-point Likert scale: 1 = not relevant, 2= somewhat relevant, 3= quite relevant, 4 = very relevant (Ozer et al., 2014). The highest CVI is 1.0. When two experts are involved in constructing I-CVI (as is the case for the tests employed in this thesis), an S-CVI of 1.0 is achieved when both rate all test items as 3 or 4. (Waltz et al., 2017, p. 212). An S-CVI of .80 or higher indicates acceptable validity (Polit & Beck, 2006). When two judges are involved, an S-CVI of 0.80 is achieved when at least 80% of test items are judged as "quite or "very" relevant by *both* judges. For example, if a test has 10 items and one judge rates all items as "quite or "very" relevant, while the other does the same for only eight items, the S-CVI is not the average of the two judges (which would be .90), but .80, as *both* judges agreed on the high relevancy of 80% (not 90%) of test items. As the content validity judgement that the CVI relies on are based on subject expertise by judges, this validation should not be confused with face validity, which is merely the appearance of validity by laymen. (Waltz et al., 2017, pp. 212-214).

The ultimate objective of an I-CVI is to arrive at an S-CVI. In this thesis, two of the tests employed (the English writing task and English reading test) were essentially items in themselves and only S-CVI was calculated for these. Both S-CVI and I-CVI were employed for the other tests, with the exception of the WMC test, which is a standardised scale.

Two judges were selected, based on their linguistic repertoires and level of expertise. Judge 1 was a postdoctoral fellow in linguistics at the time the evaluation was done,

while Judge 2 is an experienced language teacher at a local Hong Kong school, with both judges being Cantonese-English bilinguals. They formed a desirable combination, with the first judge having a strong academic and theoretical background in linguistics, while the second judge had many years of expertise in language teaching and testing. The judges did not know each other and had no contact with each other before or during the test evaluation. They independently applied the CVI to all language measures, after each received an individual, detailed briefing on the purpose of every test, as well as a full explanation of how to employ the CVI.

Following the evaluation of the above-mentioned experts, the S-CVIs of language measures used in this thesis were established, with each test's being displayed in Table 8 below:

Table 8

Scale Content Validity Index of language tests

Test	S-CVI
1. English Listening Comprehension Test	1.0
2. English Reading Test	1.0
3. English Writing Test	1.0
4. English Picture Description Test	1.0
5. English Receptive Vocabulary Test	1.0
6. Cantonese Receptive Vocabulary Test	0.87
7. Cantonese Written Word Recognition Test	1.0

As can be seen from the above S-CVIs, with the exception of the Cantonese Picture Vocabulary Test, all measures employed in this thesis achieved the highest S-CVI of 1.0. The 0.87 of the Cantonese Picture Vocabulary test is also well above the 0.80 threshold of acceptability. All measures can therefore be accepted as valid.

Table 9

Correlations of the Variables of the Main Tests

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Cantonese RV	--															
2. Cantonese WWR	.210	--														
3. Listening	.127	.163	--													
4. Writing complexity 1	.008	.160	.239	--												
5. Writing complexity 2	.121	.121	.160	.679**	--											
6. Writing Accuracy	.118	.091	.657**	.221	.149	--										
7. Receptive vocab.	.010	.074	.539**	.300*	.097	.664**	--									
8. Reading fluency	.217	.100	.618**	.254*	.343*	.659**	.518**	--								
9. Reading accuracy	.047	.162	.600**	.157	.198	.533**	.306*	.415**	--							
10. Speaking Fluency 1	.050	.035	.455**	.171	.134	.391**	.448**	.475*	.186	--						
11. Speaking Fluency 2	.060	.052	.430**	.228	.160	.380**	.412**	.440**	.402**	.971**	--					
12. Speaking Fluency 3	−.004	.172	.562**	.138	.100	.446**	.534**	.485**	.294*	.853**	.836**	--				
13. Speaking accuracy	−.047	−.149	.282*	.203	.232	326*	417*	.323**	.331**	.442*	.402**	.400**	--			
14. Speaking Complexity 1	−.117	.008	.296*	−.123	.011	.327**	.433**	.365**	.123	.367**	.292*	.455**	.200	--		
15. Speaking Complexity 2	−.097	.046	.324**	−.150	−.072	.336**	.468**	.301**	.170	.363**	.298*	.455**	.170	.881*	--	
16. WMC	−.069	.074	.172	.233	.266*	.290*	.230	.315*	.230	.207	.175	.100	.060	.091	.070	--

Note: All variables refer to English measures, unless indicated otherwise. *p* < .05, **p* < .01, two-tailed. *N* = 64. RV = receptive vocabulary WWR = written word recognition. WMC = Working Memory Capacity.

5.2.2 Results of English Language Tests

Results of the English language tests done by children participating in the main study are displayed in Table 10 on the next page. Participants from homes with FilDWs obtained significantly higher scores on all measures except writing length and writing complexity. Results are displayed in corresponding order of the research questions, with the first variable addressing RQ1, the next 12 RQ2 and the last one RQ3.

The reason for including numerous measures for RQ2 is based on the fact that productive skills are harder to master than receptive skills, and therefore gives a better indication of language proficiency. Although reading comprehension is a widely used measure to assess receptive skills, a large sample of more than 4,000 participants (Tse et al., 2009) already provided convincing evidence that FilDWs have a positive impact on Hong Kong children's reading comprehension. It was therefore decided to exclusively use listening comprehension, which was not employed in previous studies investigating the impact of FilDWs on Hong Kong children's L2 English, to assess receptive skills in this thesis.

Table 10

Results of L2-English language tests

RQ	Variables	+FilDW (*N* = 34)		-FilDW (*N* = 30)		
		M	*SD*	*M*	*SD*	*p*-value
1	Listening comprehension	78.65	9.11	54.50	18.09	<.001***
2	Reading accuracy	97.99	1.89	95.99	4.36	<.05*
	Reading fluency	140.09	18.31	116.30	19.59	<.001***
	Writing length	96.88	30.32	89.23	29.50	.312
	Writing complexity 1^	6.45	1.43	6.23	1.48	.551
	Writing complexity 2^^	11.22	2.53	10.81	2.43	.510
	Writing accuracy	91.05	4.58	81.30	7.63	<.001***
	Spoken fluency 1[1]	95.36	15.72	69.93	14.55	<.001***
	Spoken fluency 2[2]	116.14	20.96	88.75	19.71	<.001***
	Spoken fluency 3[3]	68.65	10.88	41.02	17.38	<.001***
	Spoken accuracy	95.79	2.75	92.69	3.99	<.01**
	Spoken complexity 1^	5.48	1.36	3.96	0.97	<.001***
	Spoken complexity 2^^	9.26	2.37	6.68	1.54	<.001***
3	Receptive vocabulary	93.76	3.69	82.87	9.15	<.001***

[1]: Words per minute; [2]: Syllables per minute; [3]: Percentage of dysfluency markers subtracted from total words; ^ number of verbs, nouns, adjectives and adverbs per sentence; ^^ number of words per sentence; *95% CI **99% CI, ***99.9% CI

5.2.3 Results of Cantonese Language Tests

As can be seen in Table 11, displaying the outcomes of the tests that addressed RQ 4, results indicate that the means of participants with FilDWs is slightly higher than those from homes without FilDWs. However, the differences between the groups are statistically non-significant.

Table 11

Results of L1-Cantonese tests

Variables	+FilDW (*N* = 34)		–FilDW (*N* = 30)		
	M	*SD*	*M*	*SD*	*p*-value
Receptive vocabulary	91.21	7.38	90.57	9.09	.757
Word recognition	92.32	7.67	90.93	12.80	.595

5.2.4 Results of the WMC Test

Table 12, displaying the scores of the WMC test, shows that participants from households with FilDWs obtained slightly higher WMC scores. However, the differences on all of these are non-significant.

Table 12

Mean scores of the WMC Test

	+FilDW (*N* = 34)		-FilDW (*N* = 30)		
Variables	*M*	SD	*M*	SD	p-value
Storage component	10.47	2.26	9.53	1.93	.081[†]
Processing component	5.88	2.29	5.53	2.06	.527
WMC (total)	16.24	4.07	15.07	3.39	.220

[†]marginally significant at 90% CI

5.3 Research Questions and Results

Returning to the RQs and hypotheses, the results suggest the following answers:

RQ1: What effect (if any) do FilDWs have on Hong Kong primary school children's L2-English receptive skills?

H1: FilDWs have a significant, positive impact on Hong Kong primary school children's L2 English receptive skills.

Children from homes with FilDWs performed significantly better in the English listening comprehension test (78.65 vs. 54.50; $p < .001$). This result provides evidence that FilDWs have a positive effect on Hong Kong primary school children's L2-English receptive skills. This means that we can accept H1.

RQ2: What effect (if any) do FilDWs have on Hong Kong primary school children's L2-English productive skills?

H2: FilDWs have a significant, positive impact on Hong Kong primary school children's L2 English productive skills.

With the exception of writing complexity, participants with FilDWs outperformed those from homes with no FilDW on all the English productive skills assessed. More specifically, test results suggest that Hong Kong children from homes with FilDWs are more fluent readers, as their mean reading fluency speed of 140[15] words per minute is significantly ($p < .001$) faster than that of participants from homes without FilDWs, who achieved a mean speed of 116 words per minute. Children from homes with FilDWs also read much more accurately (97.99% vs. 95.99%; $p < .025$). The differences in accuracy scores were even higher for speaking (95.79% vs. 92.69%; $p < .010$) and writing (91.05% vs. 81.30%, $p < .001$), with the higher scores in each case being that of participants from homes with FilDWs. Participants from homes with FilDWs also produced significantly more complex speech, with the complexity scores on the oral test being 5.48 vs. 3.96 ($p < .001$) and 9.26 vs. 6.68 ($p < .001$). Finally, children from homes with FilDWs produced much more fluent speech at 95[16] vs. 70 words per minute ($p < .001$), 116 vs. 89 syllables per minute ($p < .001$), and 69%[17] vs. 41% fluent speech ($p < .001$). Taken together, these scores provide convincing evidence that FilDWs have a positive impact on Hong Kong primary school children's L2-English productive skills. This means that we can accept H2.

RQ3. What effect (if any) do FilDWs have on Hong Kong primary school children's L2-English vocabulary development?

H3: FilDWs have a significant, positive impact on Hong Kong primary school children's L2 English vocabulary development.

---

[15] Reading speed displayed here is rounded off to the nearest whole number. Refer to Table 10 for original figures.

[16] Words and syllables per minute displayed here are those from Table 10, rounded off to the nearest number.

[17] Percentage scores displayed here are rounded off numbers of those appearing in Table 10.

Participants from homes with FilDWs performed significantly better (93.76 vs. 82.87; $p < .001$) on the English receptive vocabulary test. This provides evidence that FilDWs have a positive impact on Hong Kong primary school children's L2-English vocabulary development. This effect is also reflected in the fluency scores, as speakers with a stronger vocabulary base usually speak more fluently. This means that we can accept H3.

RQ4. What effect (if any) do FilDWs have on Hong Kong primary school children's L1-Cantonese vocabulary development?

H4: FilDWs do not have any significant impact on Hong Kong primary school children's L1 Cantonese vocabulary development.

Children from homes with FilDWs obtained marginally higher scores on the Cantonese receptive vocabulary test (91.21 vs. 90.57; $p = .757$) and the Cantonese written word recognition test (92.32 vs. 90.93; $p = .595$), but the differences are non-significant. This provides evidence that FilDWs do not have any impact on Hong Kong primary school children's L1-Cantonese vocabulary development, which means that we can accept H4.

Overall, the above results indicate that the stereotypical views of the general public that FilDWs may have a negative influence on certain aspects of Hong Kong children's L2 English acquisition, while having no impact on most facets, are not well founded. On the contrary, the results suggest that FilDWs are more likely to have a positive influence on numerous facets of primary school children's L2 English. The time (more than 29 hours per week, on average) children in this study spend with their helpers appears to be a pivotal contributing factor to their L2 English supremacy.

5.4 Chapter Summary and Conclusions

This chapter presented the results of the entire set of measures employed in the main study, including reliability and validity measures of the language tests used. We saw that all participants come from two parent families, while the majority in both groups have one or no sibling, with most of those who have siblings being the oldest. Groups are also similar on SES, home literacy, and language of interaction with parents. No significant differences between groups emerged from the WMC and Cantonese language tests either. Participants from both groups also obtained similar scores on English writing complexity and length. On all other English measures (receptive vocabulary, listening comprehension, reading accuracy and fluency, writing accuracy, and spoken CAF) participants from the group with FilDWs obtained significantly higher scores, with p values of $< .001$ in most cases. This contrasts with what Hong Kong residents participating in the public survey said, with their views being that FilDWs would have either no effect or a negative impact on six of the nine English language skills that opinions were sought on. Based on the language test results administered in this study (of which all achieved high validity scores, while all English measures also showed acceptable reliability), a more objective conclusion would be that FilDWs have a highly significant, positive impact on most aspects of children's L2 English, while there does not seem to be a trade-off effect on L1 Cantonese.

Chapter 6

Discussion

6.1 Interpretation of Results and Findings

6.1.1 Interpretation of Findings from Parental Questionnaire

The parental questionnaires revealed that Cantonese is used as the main or only language of communication between parents and participants for both groups. There are only four exceptions, with parents of one household from the group employing FilDWs using English as the main language, those of one home without a FilDW using Mandarin as the main language and parents from two households without FilDWs using English as the main language. If there was an advantage on English language interaction between parents and children at home, it would be in the group without FilDWs, as twice as many parents from this group, compared to the group with FilDWs, reported that they use English as the main language at home. Considering, however, that it is only for one (3%) with FilDWs and two (6.67%) of households without FilDWs where this holds true, we can safely assume that the main difference of home language use between the two groups lies with the presence of a FilDW.

According to parental questionnaires, on average, participants communicated more than 29 hours per week with their helpers, and all had a FilDW for at least seven years. The additional L2 English input participants with FilDWs received up to this point in their lives therefore adds up to well over 10,500 hours (29 hours $\times$ 52 weeks $\times$ 7 years = 10,556 hours). On the other hand, the additional English input of approximately one hour per week (refer to Table 6) that participants from homes

without FilDWs reportedly receive via TV and electronic devices, like computers and iPads, adds up to about 427 hours (1 hr × 427 (average age of participants in weeks) = 427 hours) for their entire lives at the point data for this study was collected. The total extra L2 English input that participants from homes with FilDWs at the time of this study received is therefore 25 times that of the additional English input those from homes without FilDWs received via TV and electronic devices.

Furthermore, considering that the average educational level of FilDWs in this study is a post-secondary certificate, with thirteen (nearly 40%) holding degrees, a level of education placing one in the category of intellectuals (Tardif et. al, 1997), and only five (less than 15%) did not complete high school, children from homes with FilDWs receive quality English input via their helpers. This is of paramount importance, as caregivers with higher education contribute significantly to L2 vocabulary development (Buac et al., 2014).

Regarding the number of books at home, one would expect participants with the most books to do the most reading as well. In the case of the participant with more than 1,000 books at home from the group with FilDWs, this is almost true, as he reportedly spends 20 hours per week reading English books (nearly two and half times as long as the group mean of 8 h 4 min), while the highest number of hours per week spent on English reading reported for this group is 21. In the group without FilDWs, however, the expectation that the participant with the most English books would spend the most or nearly the most time on English reading does not hold true at all. Three of the four participants who reportedly have at least 1,000 English books at home, spend less time than the group mean of 7 h 54 min on reading (four, five, and

six hours respectively). Although the fourth one, that reportedly spends 10 hours per week reading English books is above the mean, there are two participants from her group who reportedly spend more time on reading English books during an average week.

When looking at participants with the lowest number of books at home in each group, neither of these spend the least amount of time in their group reading from these books every week. In the group with FilDWs, the participant with only 30 books at home, reportedly spends seven hours a week (about an hour less than the group mean of 8h04 min) reading from them. Although this is below the group mean, several participants in this group reportedly spend less time reading English, with the lowest reported times being only one hour, in the case of two participants.

From the group without FilDWs, the participant who only has 20 English books at home, reportedly spends around three hours a week (less than half the time of the 7 h 54 min mean) reading from them. This, although being well below the group mean, is not the lowest. Four participants in this group reportedly spend two hours or less per week on English reading, while five participants with more than 20 English books reportedly also spend just three hours a week reading them.

Taking into account the lack of congruency between the number of books at home and reported hours spent reading these books, it therefore appears if the reported time spent on reading from available sources at home is a more reliable indicator of home literacy factors than the number of English books owned.

As far as the amount of time watching English TV is concerned, no differences in the amount of time spent watching English TV was found between the groups of participants in this thesis. This is contrary to the assumption that children from homes with FilDWs will watch more English TV (Dulay et al, 2017). There is some logic behind this, as children without a helper, especially those who are only children, may be inclined to watch more TV than those who have more people to interact with at home. This may compensate for time children purportedly spend watching English TV with their helpers. Considering the treatment of helpers in Hong Kong, it is also doubtful that FilDWs would typically spend a significant amount of time watching TV.

Regarding home language interaction, figures obtained from this questionnaire reveal that participants from households *without* FilDWs interact, one average, 7 h 34 minutes per week more with their parents, compared to those with FilDWs. This per se is unsurprising, as one would expect more interaction between parents and children from homes without a helper, as this implies that one of the parents probably works from home or is a housewife/husband, which would naturally lead to more interaction between parent/s and children. Considering that most interaction between parents and participants (in both groups) takes place in Cantonese, it is somewhat surprising, however, that this marginally significant difference ($p = .052$), does not translate into any advantage on either of the Cantonese tests for participants from homes without FilDWs.

The additional 7 h 28 min of interaction between parents and participants in the group without FilDWs amounts to a total of just under 3,500 hours during participants' lives up to the point of this study, when factoring in that the mean age of participants

without FilDWs is eight years 11 months (7 h 28 min × 52 weeks × 8 years 11 months = 3,462 hours). The fact that Cantonese in most cases (66.7% for participants without FilDWs and 71.4% for those with FilDWs) is the main, but not only language spoken at home between parents and participants, should also be brought into the equation. Hence, some of the interaction between parents and children take place in Mandarin and English, which implies that the additional Cantonese input children from homes without FilDWs get from their parents falls well under the 3,462 hours indicated above. The 10,556 hours advantage in the form of additional L2 English input/interaction via their helpers at home that the group with FilDWs enjoy over the one without FilDWs would therefore be more than three times greater than the advantage the latter has over the former, as far as parental L1 Cantonese home input is concerned.

Although it was requested that FilDWs be interviewed to get a better idea of their English spoken CAF, only two out of 34 households agreed for this to be done. I did, however, observe some of the participants' interaction with their helpers on the public bus from the school to the MTR, and on each occasion FilDWs displayed a good command of English.

6.1.2 Interpretation of Findings from the Public Survey

The public survey revealed that generally Hong Kong residents do not think that the impact of FilDWs would benefit Hong Kong children's English much. In fact, the majority of respondents indicated that they expect FilDWs to have a negative impact on English pronunciation (61% of respondents) and grammar (52% of respondents). Furthermore, most respondents were of the opinion that FilDWs will have no impact

on English reading accuracy (57% of respondents) or complexity of sentences (58% of respondents).

One respondent to the survey, a retired Hong Kong teacher, felt so strongly about FilDWs' negative impact that he volunteered additional information, not covered in the survey. The following is a verbatim extract of what he said during a WhatsApp conversation: "This type of un-English mother tongue is virtually neither fish nor fowl... and perpetuate their problematic english structes and fossilized errors." Like the paediatrician criticising the English of FilDWs (see section 2.4 on p. 51), this former teacher's English is far from perfect. His negative and derogatory remarks, which would not be suitable to include here, are indicative of the deep-rooted stereotypes some Hong Kong locals formed about FilDWs.

Perhaps not surprisingly then, it was only on a third of the aspects that opinions were sought on where most respondents thought FilDWs would have a beneficial effect. This is still somewhat encouraging, especially if we consider the large majority (66%) that indicated they think FilDWs would have a positive impact on both English fluency and listening comprehension, while 59% were of the opinion that children's English vocabulary would improve thanks to the presence of a FilDW. Hopefully, this is an indication that the general public in Hong Kong is starting to realise the potential of FilDWs. The language test results done in this study could potentially strengthen welcoming sentiments towards FilDWs, resulting in the same positive attitude Americans have towards Chinese nannies and their impact on American children's Mandarin (Chen, 2018; Huang, 2017).

6.1.3 Interpretation of Language Test Results

The results of the English language tests clearly indicate that children from homes with FilDWs have a larger L2 English lexicon and superior L2 English listening, speaking CAF, reading accuracy and fluency, and writing accuracy. Furthermore, as no significant differences between the two groups emerged on either of the Cantonese tests (as displayed in Table 10, p. 111), the superior English skills displayed by participants from homes with FilDWs do not entail a trade-off effect in the form of inferior Cantonese skills. This complements results of previous research that found no difference between the presence of a FilDW and Hong Kong children's exam scores in Chinese, while English exam scores of those from homes with FilDWs were significantly higher (Tang & Yung, 2012). As expected, however, according to both Robinson's cognition hypothesis and Skehan's trade-off hypothesis, results of the picture description task show a trade-off between accuracy and fluency for both groups.

In both groups, this trade-off was heavily in favour of accuracy. The relevant results indicate that, in both groups, the mean of grammatical accuracy scores is above 90, while the means of spoken fluency 3 scores are below 70 in both groups (+FilDW: 68.65; -FilDW: 41.02). This imbalance does not come as a surprise, as it has been discussed in previous research (Wang, 2014). Perhaps the much higher accuracy, relative to fluency, scores could be because participants have been conditioned through pedagogical practices to focus more on accuracy (leading to self-corrections when they notice a grammatical error in their speech). This over emphasis on spoken accuracy at the expense of fluency could potentially be remedied if English teachers only correct grammar of writing tasks and refrain from doing so during oral English classes, which would be in line with what Hoge (2014, pp. 79-86) argues. As for the

implication that the high emphasis on accuracy has for the oral test conducted in this thesis, the self-corrections are indicative that participants took the tests seriously, increasing the reliability of scores.

I suspect that all participants would have obtained higher fluency and lower accuracy scores if they did the same tests at their homes, instead of at school (a setting where mistakes are usually frowned upon). If we consider that children with English speaking helpers are likely to spend much more time engaging in English conversations away from school, I also suspect that the gap in fluency scores would have increased even further in favour of those from homes with FilDWs. Unfortunately, as is often the case when testing children, parents did not agree to have tests done at home and it was therefore not possible to test this hypothesis.

The significantly higher scores on the listening comprehension test by participants from homes with FilDWs complements the results of Leung (2011, 2012), that showed an advantage of word level L2 English comprehension of children with FilDWs, as well as that of Wolfaardt (2015) that provided evidence that FilDWs have a positive impact on Hong Kong children's L2 English listening comprehension. The results are also in line with that of Tse et al. (2009), that showed a strong positive correlation between the presence of a FilDW and children's reading comprehension scores. As listening and reading comprehension are both receptive skills, we therefore have strong evidence that Hong Kong primary school children with FilDWs at home have superior English receptive skills, compared to their peers from homes without FilDWs. This comes as no surprise, as nearly two thirds of the general public in Hong Kong (typically holding a negative view of FilDWs) conceded that FilDWs would probably have beneficial effect on children's English listening skills.

The statistically significant superior performance on the English receptive vocabulary test by participants from homes with FilDWs confirms the results of the two previous studies examining this (Chan & McBride-Chang, 2005; Dulay et al., 2017). Further solidifying the claim that FilDWs have a positive effect on Hong Kong children's L2 English vocabulary are (i) the fact this finding holds true even when the additional factor of WMC employed in this study is considered and (ii) participants are drawn from the same school.

If we take into account that primary school exams are typically done in written form, the far superior accuracy scores on the English writing test complement the finding of Tang and Yung (2012), where it was shown that primary school children from homes with FilDWs perform much better on English exams at school. This is particularly interesting, as one is often able to notice and correct one's own mistakes easier during a writing task, compared to an oral task. The fact that children from homes without FilDWs still displayed much lower accuracy in their writing are indicative that they may not be aware of the mistakes they are making. It can therefore not be argued that their lower accuracy scores during the oral test may be due to carelessness associated with the relatively informal nature of the task.

Complementing the results of Tse et al. (2009), where it was found that children from homes with FilDWs have superior reading comprehension, the results of the reading assessment in this study show that FilDWs may be a contributory factor in better reading speed and accuracy as well. Although reading comprehension per se was not assessed, recent research shows that higher reading speed of texts is a direct result of superior reading comprehension (Carretti et al., 2020).

No previous study investigating the impact of FilDWs on Hong Kong children's L2 English considered the effect that FilDWs potentially have on spoken CAF. The results of this study provide evidence that L2 oral English of children growing up in households with FilDWs is characterised by significantly superior complexity, accuracy and fluency. The superior fluency scores are in line with previous research that found a strong positive correlation between the presence of FilDWs and L2 spoken fluency (Wolfaardt, 2015). Considering that language practice involving extended periods of meaningful participation is required for the automatization of L2 skills (Dörnyei, 2019), it comes as no surprise that children from homes with FilDWs outperformed those from homes with no FilDWs. Children from homes without FilDWs, simply do not have the same amount of meaningful participation in English language activities, like conversations. Thus, for school aged children, FilDWs provide significant, additional (to school) opportunities for children to actively participate in authentic English activities. In the case of preschoolers, FilDWs may be the primary providers of such opportunities.

The results of the Cantonese tests suggest that the presence of FilDWs at home does not have an adverse effect on Cantonese receptive vocabulary or word reading of Hong Kong primary school children above eight years old attending EMI schools. The findings on Cantonese receptive vocabulary are in harmony with that of Dulay et al. (2017). On the other hand, results also contradict an earlier finding that showed poorer Cantonese vocabulary in children from homes with FilDWs (Chan & McBride-Chang, 2005), by demonstrating that FilDWs do not have a negative impact on L1 Cantonese vocabulary. Furthermore, the similar performance of both groups on reading Cantonese words written in Chinese characters in the current study seems to contradict the results of Dulay et al. (2017), which showed inferior performance by

children from homes with FilDWs on initial Chinese character recognition. However, considering that the age of participants in this study is comparable to that of those partaking in the latter stages of Dulay et al. (2017), while being two and a half to four years higher than that of the children in Chan and McBride-Chang (2005), it is possible that the L1 disadvantages observed in participants from homes with FilDWs in these studies may only apply to younger children whose age is below six.

Other major differences between participants of this study as well as the way they were tested, compared to the study of Dulay et al. (2017), are (1) all participants from the present study were drawn from the same school, minimising the effects of SES, and (2) all participants were tested exclusively by the researcher at the same location (school premises). Dulay et al. (2017) had participants from various schools (which may include CMI, EMI and international schools), and the participants were tested at various locations (each at their home) by numerous research assistants. Given the vast differences between the types of schools in Hong Kong, particularly with regards to the language of instruction, as well as potential effects different test administrators and locations may have on results, the present study's findings may be more robust, compared to that of Dulay et al. (2017).

Numerous studies (e.g. Buac et al., 2014; Chung et al., 2015; Dixon, 2011; Hoff & Tian, 2005; Lin et al., 2012; Liu et al., 2015; Pan et al., 2017; Wong et al., 2020; Zhang et al., 2013) showed that SES could be an important factor influencing language, especially L2, performance and proficiency. As no significant group differences emerged in the SES of the current study's participants, the superior performance on the L2 English language tests from those coming from homes with a FilDW can be stronger associated with the presence of a FilDW, rather than SES.

6.2 Implications of Results and Findings

The results of the language tests add to the existing evidence (e.g., Buac et al., 2014; De Houwer, 2011; Hart & Risley, 1995; Krashen, 1976; Tardif et al., 1997) that home language environment, particularly that of primary care givers, plays a significant role in children's language proficiency and performance. More specifically, this study shows that a FilDW at home could be a critical factor in Hong Kong primary school children's L2 English acquisition. As FilDWs have been employed in large numbers in Taiwan (Lan, 2003a; 2003b; 2006), where English is also spoken as an L2, the same may apply to Taiwanese children's L2 English.

Children having a practical need to daily communicate in L2 English outside of school, as in the case of those in the care of FilDWs, would probably develop a higher level of perceived competence, more confidence to use English, and greater L2 proficiency, resulting in significantly higher L2WTC (inside and outside of school) than those from households without English speaking helpers. Parents leaving their children in the care of FilDWs while they are at work would logically require the children to obey the instructions of the FilDWs and expect them to get along well with their helpers. This may foster the development of an intercultural friendship between the children and FilDWs. Therefore, one could reasonably expect that children in households employing FilDWs will form positive attitudes with regards to regularly using L2 English for communicative purposes, inside and outside of English class. The above can probably also be applied to children in Taiwan coming from households with FilDWs.

Although L2WTC, L2 language anxiety and L2 motivation were not formally assessed, it was clear during the one-to-one tests that all participants from homes with

127

FilDWs had high L2WTC, no L2 language anxiety and high motivation to communicate in their L2. This was apparent from their fluent speech, relaxed demeanour as well as their talkativeness before and after the testing. In line with the argument of MacIntyre et al. (1997), we can expect the frequent L2 English interaction between children and FilDWs to lower L2 anxiety in children from homes with FilDWs. It is also reasonable to infer that, thanks to their regular interaction with FilDWs, these participants have higher perceived L2 competence, which is beneficial to L2 performance (see 2.3.9). Considering this in conjunction with the number of prompts required to elicit speech from several participants coming from homes without FilDWs, their lower overall fluency as well as a few of them appearing very nervous (with a couple explicitly telling me they are nervous), we may conclude that children from homes with FilDWs are better equipped with affective factors for L2 English learning. This again probably holds true in a broader context, beyond Hong Kong and may also apply to children in Taiwan from homes with FilDWs.

As Dörnyei (2019) pointed out, L2 learning experience has proved, across several studies, to be a very strong predictor of L2 motivation, and engagement is another key contributing factor in cultivating L2 motivation. The average interaction time of 29 hours per week between children and FilDWs, as reported in the parental questionnaires of this study, suggests that children who grew up in homes with FilDWs have a strong L2 learning experience from a very young age. In other words, the daily English interaction between children and FilDWs over several years implies a high level of engagement, which is further reason to believe that such children (including those in Taiwan) would have high L2 English motivation.

Despite not being native English speakers, the positive effects of FilDWs on Hong

Kong primary school children's English are clearly demonstrated through the results of the English language tests administered during this investigation. Furthermore, English is increasingly being used as a lingua franca (Ambele & Boonsuk, 2020; Sifakis, 2017; Suzuki, 2019) and learning to do so from one's childhood years is a very useful skill to acquire.

Many learners of English no longer favour native English speakers as teachers (Walkinshaw & Duong, 2012; Wu & Ke, 2009). Research suggests, however, that the one area of language acquisition where native speakers are still preferred as the ideal model is pronunciation (Walkinshaw & Duong, 2012). While no claim is made in this thesis that FilDWs would enhance Hong Kong children's English pronunciation, it is imperative to look at the bigger picture and realise that pronunciation is just one facet of language acquisition. This is also reflected in the findings of the public survey, showing that the same respondents holding the opinion that FilDWs would have a negative impact on Hong Kong children's English pronunciation does not necessarily hold that view for other aspects of the language. In fact, some of those who fear a detrimental effect on children's English pronunciation, also believe that FilDWs would have a positive impact on children's English listening and fluency. Also, the same students indicating that their ideal pronunciation models are native speakers still said that they do not have a general preference for native English speakers to teach them English (Walkinshaw & Duong, 2012).

A practical implication of this study is that Hong Kong parents with children attending EMI schools can expect significant improvements in their children's L2 English receptive- and productive skills, and vocabulary, without a trade-off effect on L1 Cantonese vocabulary, if they employ a Filipina helper long term.

Unfortunately, as laid out in chapter 3, FDWs (including FilDWs) in Hong Kong receive little or no recognition, do not enjoy the same rights as most other workers in Hong Kong, and many have been subjected to the BOGOF scam as well as numerous forms of mistreatment, including verbal, physical and sexual abuse. Although not justified, some of the abuse stem from Hong Kong employers' general low regard for FDWs. If this view is changed, it may result in better treatment of FilDWs and FDWs on a whole. While it is welcoming that the Hong Kong government recently increased the penalty against agencies exploiting FDWs sevenfold (Chung & Mak, 2020), it is disconcerting that Hong Kong employers have been treating FDWs worse during the ongoing Covid-19 pandemic (Lui et al., 2021).

Given the significant positive impact that FilDWs have on local, bilingual Hong Kong children's L2 English acquisition, it is hoped that the present study's findings would contribute in changing the general negative view towards them, giving them more recognition and improving their status as well as their living and working conditions in Hong Kong. Hiring English tutors to help children improve their English proficiency could be costly, and if more parents realise that FiLDWs are effective auxiliary teachers, it could result in better treatment of FilDWs.

As far as FDWs' current living and working conditions, as well as them receiving full wages are concerned, recent research argued that FilDWs' English proficiency could be used as a strength in "bargaining" to get better treatment (Tong & Jiang, 2020). There are some Hong Kong parents, educators and academics that appreciate FilDWs' contribution to local children's English proficiency and they could perhaps, through word-of-mouth, contribute to a paradigm shift towards a more positive view, coupled

with better treatment of FilDWs.

Finally, as Norton (1997) argued, the question "Who am I?" stems from the question "What can I do?". If we consider this in light of the finding of Ladegaard (2020) showing that FDWs often blame themselves for the abuse they suffer, as a result of their low self-perception, the results from the language tests of this thesis may increase FilDWs' sense of self-worth. If FilDWs in Hong Kong realise that they are not "just helpers", but key contributors to children's L2 English acquisition, they are likely to develop a more positive self-perception. This, in turn, could potentially reduce the problem of societal inequalities among ethnic groups, mentioned by Norton (1997). In order for the thesis results to achieve such an impact, they need to be available to a wider audience. In November 2019 I presented some of the results at a seminar (Wolfaardt, 2019) at which a press officer was present, who published part of the presented results in an online newspaper (Lumicao, 2019). Further presentations and press coverage are planned.

6.3 Recommendations and Implications for Future Research

The data collected through the oral tests in this investigation could potentially be analysed further in a future study for aspects not measured in this thesis. These include pragmatic competence and pronunciation.

As receptive skills (regardless of whether it is L1, L2 or FL) are typically acquired prior to productive skills, it would be interesting if future research does a comparative study (young children from homes with FilDWs vs. those from homes without) on receptive skills of participants younger than those assessed in this thesis. It would be particularly revealing if groups are compared on both their L1 and L2/FL. This would

establish whether younger children from homes with FilDWs initially have inferior L1 receptive skills, as a result of receiving much less L1 input at home or whether they are on par as far as L1 receptive skills are concerned and superior on the same in their L2.

Although a Cantonese productive vocabulary test would have rendered more insightful results in the current study, due to practical reasons, such as the researcher's lack of linguistic competence in Cantonese, a Cantonese receptive vocabulary test was administered instead. As productive skills are harder to acquire (Bergström et al, 2016; Webb, 2008; Yan & Nicoladis, 2009) and thus indicative of higher mastery level, a future study comparing the L1 Cantonese productive skills of similar groups to the ones assessed in this thesis would help establish whether there is a difference in more advanced Cantonese skills between children from homes with FilDWs, compared to those from homes with no FilDW.

The successful implementation of a modified PPVT test in a group setting during this study (see 4.2.2.1, p. 83) gives future researchers the option of doing the same when comparing receptive vocabulary of two or more groups in studies with relatively large samples, involving children of a similar age or older as those participating in this study. This will save a substantial amount of time, although it should be noted that it may not be feasible with very young children that may not be able to answer test questions independently. A further practical implication for future studies can be drawn from the WMC testing of the present study. Considering that the WMC test used in this study was not very time consuming (eight minutes or less per participant) and was administered with ease, future studies investigating the impact of FilDWs on Hong Kong primary school children's language acquisition may be able to include

more than one English WMC test. In the administration of a WMC test, it may also be advantageous to use a recording for all items, instead of reading them out (as the instructions of the WMC test used in this thesis prescribe). The benefit of using a recording is that each participant would receive the exact same rendition of every item, instead of the presentation being subjected to inevitable variation that accompanies oral presentation.

While EMI schools are preferable when researching L2 English ability, a replication of the current study at a CMI school may render very interesting comparative data as far as participants' L1 Cantonese abilities are concerned. Unlike at EMI schools, most classes at CMI schools are conducted in Cantonese. This greater exposure to participants' L1 should lead to higher scores on Cantonese tests. A possible question to pursue in further research is whether the L1 of children from households with or those from homes without FilDWs would benefit more from the additional Cantonese exposure.

The frequent self-corrections during the picture description tasks, often involving grammar points, like gender marking, are perhaps indicative that children in Hong Kong start to monitor their own L2 speech much earlier than at the age of 12, as previous research suggested (Krashen, 1981b, p. 35). This could perhaps be linked to the differences in the education systems of western (as in the case of participants referred to in Krashen's work) and eastern countries. It would be interesting to do a comparative study on the frequency of self-corrections between primary school children growing up in the east and those living in the west.

In light of the Complementarity Principle (Grosjean 2008; 2016), it would be

interesting if a future study designs a vocabulary test consisting of lexical items representing objects that one would expect to find only/mainly at home. Such a domain specific vocabulary test may increase the gap even further in favour of participants from homes with FilDWs, as children from homes with FilDWs would encounter such lexical items far more frequent, compared to those coming from households without FilDWs.

Although not the focus of this thesis, it could be insightful if a future study looking into the role that FilDWs play on Hong Kong children's L2 English acquisition bring multi competence, as outlined by Cook and Wei (2016), into the equation. Multi competence is the knowledge of two languages in one mind, impacting both languages' lexicon, pragmatics, phonology, syntax, writing and concepts (e.g. categorising objects in terms of shape or subdividing colours into various types of blue, green, etc.). A study involving very young children that have not yet had significant exposure to English at school would make for an interesting comparison between a group of (essentially) L1 Cantonese speakers and bilingual Cantonese-English speakers from homes with FilDWs. Insights that such a study could render include, for example, whether these groups conceptualise Cantonese words differently from each other and whether their Cantonese phonology differs.

One of the many ways FilDWs are being stigmatised is the labelling of PE as inferior to other English varieties, with parents expressing concern that their children may acquire a PE accent (see 2.4) and the majority of respondents to the public survey indicating that they think FilDWs would have a negative impact on children's English pronunciation. Although no specific measure to assess English pronunciation was used in this thesis, it should be safe to assume that the "adverse" effect feared by the

public does not refer to minute idiosyncrasies, only detectable by sophisticated software, but to clear pronunciation differences (sounding more like PE) that are apparent during children's speech. Such differences were not observed among any of the participants during any of the tests or during interaction with them before and after the tests. This is in line with previous research investigating the impact of FilDWs on Hong Kong children's English pronunciation (Leung, 2012; Leung & Young-Scholten, 2013). It therefore appears if children from homes with FilDWs do not acquire a PE accent. Taking into account that the youngest participants in this study were already in their second year of primary school and that almost all Hong Kong children attend kindergarten from the age of three (Wong & Rao, 2015), the possibility that they may have initially acquired some features of PE, which disappeared through the influence of their English teachers at kindergarten and primary school cannot be ruled out. This is potentially an interesting field of inquiry to pursue in future research.

Chapter 7

Conclusion

Overall, the results indicate that FilDWs have a positive impact on the L2 English proficiency of Hong Kong primary school children attending an EMI school, without a trade-off effect on L1 Cantonese. More specifically, participants with FilDWs obtained superior scores on tests measuring L2 English receptive skills, L2 English productive skills and L2 English vocabulary, while no differences emerged from the scores on the L1 Cantonese receptive vocabulary or L1 Cantonese word reading test. Although correlation does not mean causation, the evidence presented in this thesis, together with that obtained from previous studies, provides a strong argument that FiLDWs may indeed be directly responsible for the superior English displayed in the children they interact with in English for several thousand hours over many years.

In conjunction with Krashen's comprehensible input hypothesis, the results of this thesis demonstrate a clear L2 English advantage by those being exposed to intake type input in English (i.e., the group with FilDWs) for several years from a young age. Participants with FilDWs not only demonstrated superior L2 English spoken fluency and accuracy, as one would expect according to Krashen's theory, but their speech is also characterised by significantly higher syntactic complexity.

The results are also in harmony with Dörnyei's arguments that the L2 learning environment and learner engagement are key components to L2 motivation, which in turn facilitates L2 proficiency and performance. The fact that the group with FilDWs also performed significantly better on the English listening comprehension task and receptive vocabulary test provides evidence that regular interaction in the target

136

language strengthens children's lexicon and comprehension skills in addition to CAF, even if the interaction is not with native speakers. All of the above serve as evidence that L2 in children is acquired, not learnt, thus lending support to Krashen's comprehensible input hypothesis. Furthermore, the similar overall scores on the WMC tests serve as evidence that participants from both groups are not different when it comes to aptitude.

During my interaction with the participants from the group with FilDWs, the children not only referred to their helpers with respect, but also with fondness, and they were happy to see each other after school. After some of the testing sessions, I walked to the same bus stop as some of the participants and their helpers and took the same bus to the MTR. This gave me the opportunity to witness the close relationship between participants and their helpers. The FilDWs would carry the children's schoolbags, and some would greet them with a hug and use endearing terms, such as "sweety" when addressing the children. They would joke and tease each other, talk about the child's day at school, what they will eat for dinner, etc. (all in English). This is in stark contrast to what an abused FDW reported in an interview with a researcher, from which the following is an extract:

> …there are four floors, seven cars, the only domestic helper there is me (1.5) if I made a mistake and apologised I'll get beaten instead, that's why I cannot stand working there and finally I ran away (0.5) and reported to the police […] there are two children in the house (3.0) but I never touched them, they forbid me to touch them, they say I'm dirty (Ladegaard, 2017, p. 138)

Heartless employers treating FDWs in the inhumane fashion as described in the above extract are not only making the lives of their employees miserable and setting an

atrocious example for their children, but they are shooting themselves in the foot. If such employers treat their helpers with respect and allow them to frequently interact with and build a relationship with the children, the children's L2 English development would greatly benefit. Parents not allowing FDWs to interact with children is probably a small percentage, though, and the major issue is more with the treatment of FDWs and the excessive hours they often work, attending to children. The productivity of overworked and tired employees in any profession suffers. Therefore, apart from the long working hours' detrimental effect on FilDWs, children in their care are also deprived of optimal educational benefits via their helpers.

Considering that the majority of households employing FDWs expect their helpers to take care of children (Lai & Fong, 2020), this would affect at least 200,000 children, but probably many more, as the average number of children under 15 that couples in Hong Kong had according to 2016 census data (excluding those who do not have children) is 1.4[18]. Furthermore, consistent with the data emerging from the parental questionnaire in this thesis, it was found that the vast majority (96%) of respondents in the study of Lai and Fong (2020) completed at least high school. This implies that FilDWs have the capacity of having an even greater positive impact on Hong Kong children's L2 English, if they are treated better. Ironically, recent research showed that FDWs taking care of children are more likely to be scolded (Lai & Fong, 2020).

The findings from the public survey, although being indicative that the general public in Hong Kong maintain negative stereotypes about FDWs, does offer some hope that this may be changing. This stems from the fact that on one third of the items, the

---

[18] https://www.bycensus2016.gov.hk/en/Snapshot-04.html

majority of respondents indicated that they think FilDWs would have a positive impact on children's L2 English. It is the hope that the results of the language tests done in this thesis, providing more evidence than any previous study that FilDWs have a positive impact on Hong Kong primary school children's L2 English, would further contribute in changing public opinion on FilDWs for the better.

References

Ahmadian, M. J. (2012). The effects of guided careful online planning on complexity, accuracy and fluency in intermediate EFL learners' oral production: The case of English articles. *Language Teaching Research*, *16*(1), 129-149.

Ahmadian, M. J., & Tavakoli, M. (2011). The effects of simultaneous use of careful online planning and task repetition on accuracy, complexity, and fluency in EFL learners' oral production. *Language Teaching Research*, *15*(1), 35-59.

Ambele, E. A., & Boonsuk, Y. (2020). Voices of learners in Thai ELT classrooms: a wake up call towards teaching English as a lingua franca. *Asian Englishes*, 1-17.

American Psychological Association, American Educational Research Association, & National Council on Measurement in Education. (1985). Standards for educational and psychological testing. American Psychological Association.

Asato, W. (2004). Negotiating spaces in the labor market: Foreign and local domestic workers in Hong Kong. *Asian and Pacific migration journal*, *13*(2), 255-74.

Bachman, L. F. (1988). Problems in examining the validity of the ACTFL oral proficiency interview. *Studies in Second Language Acquisition*, *10*(2), 149-164.

Baddeley, A. (1992). Working memory. *Science*, *255*(5044), 556-559.

Baddeley, A. (2000). The episodic buffer: a new component of working memory? *Trends in cognitive sciences*, *4*(11), 417-423.

Baddeley, A. D., & Hitch, G. (1974). Working memory. In *Psychology of learning and motivation* (Vol. 8, pp. 47-89). Academic press.

Baghaei, P. (2013). Development and psychometric evaluation of a multidimensional scale of willingness to communicate in a foreign language. *European journal of psychology of education*, *28*(3), 1087-1103.

Bauer, R. S. (2018). Cantonese as written language in Hong Kong. *Global Chinese*, *4*(1), 103-142.

Bautista, M. L. (2008). Investigating the grammatical features of Philippine English. In Bautista, M. L. S., & Bolton, K. (Eds.). *Philippine English: Linguistic and Literary,* (pp. 201-218). Hong Kong University Press.

Bergström, K., Klatte, M., Steinbrink, C., & Lachmann, T. (2016). First and Second Language Acquisition in German Children Attending a Kindergarten Immersion Program: A Combined Longitudinal and Cross-Sectional Study. *Language Learning*, *66*(2), 386-418.

Berko, J. (1958). The child's learning of English morphology. *Word*, *14* (2-3), 150-177.Berry, R. S. Y., & Williams, M. (2004). In at the deep end: Difficulties experienced by Hong Kong Chinese ESL learners at an independent school in the United Kingdom. *Journal of Language and Social Psychology*, *23*(1), 118-134.

Bialystok, E., Barac, R., Blaye, A., & Poulin-Dubois, D. (2010). Word mapping and executive functioning in young monolingual and bilingual children. *Journal of cognition and development*, *11*(4), 485-508.

Bialystok, E., & Craik, F. (2015). Cognitive consequences of bilingualism: Executive control and cognitive reserve. *The Cambridge handbook of bilingual processing*, 571-585.

Bolton, K & Butler, S. (2008). 'Lexicography and the description of Philippine English vocabulary'. In Bautista, M. L. S., & Bolton, K. (Eds.). *Philippine English: Linguistic and Literary,* (pp. 175-200). Hong Kong University Press.

Bradbury-Jones, C., & Isham, L. (2020). The pandemic paradox: the consequences of COVID-19 on domestic violence. *Journal of clinical nursing: https://onlinelibrary.wiley.com/doi/epdf/10.1111/jocn.15296*

Bridges, K., & Hoff, E. (2014). Older sibling influences on the language environment and language development of toddlers in bilingual homes. *Applied psycholinguistics*, *35* (2), 225-241.

Brown, A. (1993). The role of test-taker feedback in the test development process: Test-

takers' reactions to a tape-mediated test of proficiency in spoken Japanese. *Language Testing*, *10*(3), 277-301.

Buac, M., Gross, M., & Kaushanskaya, M. (2014). The role of primary caregiver vocabulary knowledge in the development of bilingual children's vocabulary skills. *Journal of Speech, Language, and Hearing Research*, *57*(5), 1804-1816.

Bureau, E. (2008). Lexical items with English explanations for fundamental Chinese learning in Hong Kong schools (中英對照香港學校中文學習基礎字詞). *Chinese Language Education Section, Curriculum Development Institute, Hong Kong Government*.

Carretti, B., Toffalini, E., Saponaro, C., Viola, F., & Cornoldi, C. (2020). Text reading speed in a language with a shallow orthography benefits less from comprehension as reading ability matures. *British Journal of Educational Psychology*, *90*, 91-104.

Carroll, J. B. (1973). Implications of aptitude test research and psycholinguistic theory for foreign-language teaching. *Linguistics*, *11*(112), 5-14.

Chambers, F. (1997). What do we mean by fluency? *System*, *25*(4), 535-544.

Chan, A. H. N. (2005). Live-in foreign domestic workers and their impact on Hong Kong's middle class families. *Journal of Family and Economic Issues*, *26*(4), 509-528.

Chan, J. (2014). Research on malpractices of employment agencies, the adequacy of existing legislation for regulation and avenues for restoring justice. *Migrants Review: Researches and Essays on Migrants Domestic Workers in Hong Kong*, 37-49.

Chan, T. Y., & McBride-Chang, C. (2005). Environment and bilingualism for Hong Kong kindergartners: The impact of foreign domestic workers on early language learning. *Journal of Psychology in Chinese Societies, 6*(2), 179-193.

Chen, L. (2018). Chinese-American parents invest in a multilingual future for their children. *South China Morning Post*. Retrieved from: https://www.scmp.com/news/china/society/article/2168422/chinese-american-parents-invest-multilingual-future-their

Chen, M. H. (2016). Theoretical Framework for Integrating Higher-order Thinking into L2 Speaking. *Theory and Practice in Language Studies*, *6*(2), 217.

Cheng, R. W. Y., & Lam, S. F. (2013). The interaction between social goals and self-construal on achievement motivation. *Contemporary Educational Psychology, 38*, 136-148.

Cheuk, D., & Wong, V. (2005). Specific Language Impairment and Child Care by a Domestic Helper. *Archives of Paediatric and Adolescent Medicine, 159*(8), 714–720.

Cheung, E (2017). Minimum wage for foreign domestic helpers raised by 2.3 per cent, but worker advocates are unhappy. *South China Morning Post:* http://www.scmp.com/news/hong-kong/education-community/article/2113423/minimum-wage-foreign-domestic-helpers-hong-kong

Cheung, J. T. K., Tsoi, V. W. Y., Wong, K. H. K., & Chung, R. Y. (2019). Abuse and depression among Filipino foreign domestic helpers. A cross-sectional survey in Hong Kong. *Public health*, *166*, 121-127.

Chiu, A., & Moy, P. (2013). Foreign helpers' plea for permanent residency fails. *South China Morning Post:* https://www.scmp.com/news/hong-kong/article/1199312/hong-kongs-top-court-rejects-domestic-helpers-appeal-permanent

Chung, K. K. H., Liu, H., McBride, C., Wong, A. M. -Y., & Lo, J. C. M. (2015). How socioeconomic status, executive functioning and verbal interactions contribute to early academic achievement in Chinese children. *Educational Psychology*, *37*(4), 402–420.

Chung, R. Y. N., & Mak, J. K. L. (2020). Physical and mental health of live-in female migrant domestic workers: a randomly sampled survey in Hong Kong. *American behavioral scientist*, *64*(6), 802-822.

Collins, J (2012). Understanding your rights: what you really need to know to protect your rights as a foreign domestic worker in Hong Kong. Helpers for Domestic Helpers.

Constable, N. (1996**).** Jealousy, Chastity, and Abuse: Chinese Maids and Foreign Helpers in Hong Kong**.** *Modern China, 22*(4), 448-479.

Constable, N. (1997). *Maid to order in Hong Kong: An ethnography of Filipina helpers.* Cornell University Press.

Constable, N. (2007). Maid to order in Hong Kong: Stories of migrant workers. Cornell University Press.

Cook, H. G., & MacDonald, R. (2012). Tool to evaluate language complexity of test items. *Unpublished manuscript. Madison, WI: WIDA Consortium, Wisconsin Center for Education Research:* http://www.cal.org/create/conferences/2012/pdfs/handout-2-cook.pdf

Cook, V. (2016). Where is the native speaker now? *TESOL quarterly*, *50*(1), 186-189.

Cook, V., & Wei, L. (Eds.). (2016). *The Cambridge handbook of linguistic multi-competence*. Cambridge University Press.

Cookson, S. (2009). Zagreb and Tenerife: Airline accidents involving linguistic factors. *Australian Review of Applied Linguistics*, *32*(3), 22-1.

Crebo, E. C. (2003). *Filipina domestic helpers in Hong Kong and their role in English language learning* (MA dissertation, The University of Hong Kong (Pokfulam, Hong Kong)).

Csizér, K. & Dörnyei, Z. (2005). The internal structure of language learning motivation and its relationship with language choice and learning effort. *The Modern Language Journal*, *89*(1), 19-36.

D'angiulli, A., Siegel, L. S., & Maggi, S. (2004). Literacy Instruction, SES, and Word-Reading Achievement in English-Language Learners and Children with English as a First Language: A Longitudinal Study. *Learning Disabilities Research & Practice*, *19*(4), 202-213.

Darnon, C., Butera, F., & Harackiewicz, J. M. (2007). Achievement goals in social

interactions: Learning with mastery vs. performance goals. *Motivation and Emotion*, *31*(1), 61-70.

Davies, A. (2003). *The native speaker: Myth and reality* (Vol. 38). Multilingual Matters Ltd.De Houwer, A. (2011). Language input environments and language development in bilingual acquisition. *Applied Linguistics Review*, *2*, 221-240.

De Jong, N., & Perfetti, C. (2011). Fluency training in the ESL classroom: An experimental study of fluency development and proceduralization. Language Learning 61(2), 533–568.

Denies, K., Yashima, T., & Janssen, R. (2015). Classroom versus societal willingness to communicate: Investigating French as a second language in Flanders. *The Modern Language Journal*, *99*(4), 718-739.

Dewaele, J. M. (2018). Why the dichotomy 'L1 versus LX user'is better than 'native versus non-native speaker'. *Applied Linguistics*, *39*(2), 236-240.

Deterding, D. (2013). *Misunderstandings in English as a lingua franca: An analysis of ELF interactions in South-East Asia* (Vol. 1). Walter de Gruyter.

Dimaculangan, N. G., & Gustilo, L. E. (2017). Lexical patterns in the early 21st century Philippine English writing. *Advanced Science Letters*, *23*(2), 1094-1098.

Dixon, L. Q. (2011). The role of home and school factors in predicting English vocabulary among bilingual kindergarten children in Singapore. *Applied Psycholinguistics*, *32* (1), 141-168.

Documentation. (n.d.). In *Cambridge.org dictionary*: https://dictionary.cambridge.org/dictionary/english/native-speaker

Documentation. (n.d.) In *Oxfordlearnersdictionaries.com*: https://www.oxfordlearnersdictionaries.com/definition/english/native-speaker

Doepker, G. M., McGrail, E., & Rieger, A. (2018). Using Comic Books to Improve Three Elementary Students' Reading and Writing Skills: A Multi-Case Study Analysis.

Read An Online Journal for Literacy Educators, *4*(6), 4-27.

Dörnyei, Z. (2006). Individual differences in second language acquisition. *AILA Review*, *19*(1), 42-68.

Dörnyei, Z. (2009). The L2 motivational self-system. *Motivation, language identity and the L2 self*, *36*(3), 9-42.

Dörnyei, Z. (2019). Towards a better understanding of the L2 Learning Experience, the Cinderella of the L2 Motivational Self System. *Studies in Second Language Learning and Teaching*, *9*(1), 19-30.

Dörnyei, Z., & Skehan, P. (2003). Individual differences in second language learning. *The handbook of second language acquisition*, 589-630.

Dulay, K. M., Tong, X., & McBride, C. (2017). The Role of Foreign Domestic Helpers in Hong Kong Chinese Children's English and Chinese Skills: A Longitudinal Study. *Language Learning*, *67*(2), 321-347.

Dunn, L. M., & Dunn, L. M. (1997). *Peabody picture vocabulary test* (3rd ed.). Circle Pines, MN: American Guidance Service.

Dunn, L. M., & Dunn, D. M. (2007). *PPVT-4: Peabody picture vocabulary test*. Pearson Assessments.

Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological review*, *95*(2), 256-273. Ellis, N. C. (2001). Memory for language. In P. J. Robinson (Ed.), *Cognition and Second Language Acquisition* (pp. 33–68).

Ellis, R. (2009). The differential effects of three types of task planning on the fluency, complexity, and accuracy in L2 oral production. *Applied Linguistics*, *30*(4), 474-509.

Evans, S., & Morrison, B. (2017). English-medium instruction in Hong Kong: Illuminating a grey area in school policies and classroom practices. *Current Issues in Language Planning*, *18*(3), 303-322.

Fillmore, L. W. (1991). When learning a second language means losing the first. *Early childhood research quarterly*, *6*(3), 323-346.

Fillmore, L. W. (2000). Loss of family languages: Should educators be concerned? *Theory into practice*, *39*(4), 203-210.

Foster, P. (1996). Doing the task better: How planning time influences students' performance. *Challenge and change in language teaching*, 126-135.

Foster, P., & Skehan, P. (1996). The influence of planning on performance in task-based learning. *Studies in second language acquisition*, *18*(3), 299-324.

Gan, Z. (2012). Understanding L2 speaking problems: Implications for ESL curriculum development in a teacher training institution in Hong Kong. *Australian Journal of Teacher Education*, *37*(1), 43-59.

Gardner, R. C., Moorcroft, R., & Metforda, J. (1989). Second language learning in an immersion programme: Factors influencing acquisition and retention. *Journal of Language and Social Psychology*, *8*(5), 287-305.

Gardner, R. C. (2007). Motivation and second language acquisition. *Porta Lingaurum, 8*, 9-20.

Genesee, F. (2004). What do we know about bilingual education for majority language students. *Handbook of bilingualism and multiculturalism*, 547-576.

Gilabert, R., & Muñoz, C. (2010). Differences in attainment and performance in a foreign language: The role of working memory capacity. *International Journal of English Studies*, *10*(1), 19-42.

Gollan, T. H., Salmon, D. P., Montoya, R. I., & Galasko, D. R. (2011). Degree of bilingualism predicts age of diagnosis of Alzheimer's disease in low-education but not in highly educated Hispanics. *Neuropsychologia*, *49*(14), 3826-3830.

Gonzales, A. (2008). A favorable climate and soil: A transplanted language and literature. In M. L. S. Bautista & K. Bolton (Eds.), *Philippine English: Linguistic and literary*

perspectives, (pp. 13-28). Hong Kong University Press.

Gonzales, W. D. W. (2017). Language contact in the Philippines: The history and ecology from a Chinese Filipino perspective. *Language Ecology*, *1*(2), 185-212.

Grosjean, F. (2008). *Studying bilinguals*. Oxford University Press.

Grosjean, F. (2016). The complementarity principle and its impact on processing, acquisition, and dominance. *Language dominance in bilinguals: Issues of measurement and operationalization*, 66-84.

Guimarães, C., Oliveira Machado, M. C., & Fernandes, S. F. (2018). Comic Books: A Learning Tool for Meaningful Acquisition of Written Sign Language. *Journal of Education and Learning*, *7*(3), 134-147.

Hamlett, T. (2020). Hong Kong fights the coronavirus by…scrapping domestic workers' day off? *Hong Kong Free Press:* https://hongkongfp.com/2020/02/02/hong-kong-fights-coronavirus-scrapping-domestic-workers-day-off/

Hammerly, H. (1991). *Fluency and accuracy: Toward balance in language teaching and learning*. Clevedon: Multilingual Matters Ltd.

Hart, B., & Risley, T. R. (1995). *Meaningful differences in the everyday experience of young American children*. Paul H Brookes Publishing.

Hilton, H. (2008). The link between vocabulary knowledge and spoken L2 fluency.

Ho, C. S. H., Chan, D. W. O., Tsang, S. M., & Lee, S. H. (2000). The Hong Kong test of specific learning difficulties in reading and writing. *Hong Kong: Hong Kong Specific Learning Difficulties Research Team*.

Hoff, E., & Tian, C. (2005). Socioeconomic status and cultural influences on language. *Journal of communication Disorders*, *38*(4), 271-278.

Hoff-Ginsberg, E. (1998). The relation of birth order and socioeconomic status to children's language experience and language development. *Applied Psycholinguistics*, *19*(4), 603-629.

Hoge, A. J. (2014). *Effortless English: Learn to speak English like a native*. Effortless English.

Horwitz, E. K., Horwitz, M. B., & Cope, J. (1986). Foreign language classroom anxiety. *The Modern language journal*, *70*(2), 125-132.

Housen, A., & Kuiken, F. (2009). Complexity, accuracy, and fluency in second language acquisition. *Applied linguistics*, *30*(4), 461-473.

Housen, A., Kuiken, F., & Vedder, I. (2012). 'Complexity, accuracy and fluency: Definitions, measurement and research'. In Housen et al. (Eds.).

Huang, Z (2017). Teach your children Mandarin the Jared and Ivanka way, for $75,000 and up a year. *Quartz:* https://qz.com/961992/teach-your-kids-mandarin-the-jared-kushner-and-ivanka-trump-way-for-75000-and-up-a-year/

Hudon, T. M., Fennell, C. T., & Hoftyzer, M. (2013). Quality not quantity of television viewing is associated with bilingual toddlers' vocabulary scores. *Infant Behavior and Development*, *36*(2), 245-254.

Hudson, R. F., Lane, H. B., & Pullen, P. C. (2005). Reading fluency assessment and instruction: What, why, and how? *The Reading Teacher*, *58*(8), 702-714.

Hung, J. (2019). What Hong Kong can do to stop abuse of domestic helpers. *South China Morning Post*: https://www.scmp.com/lifestyle/article/3030429/what-hong-kong-can-do-stop-abuse-domestic-helpers

Hung, J. (2020). Hong Kong Hurts Itself By Financially Excluding Foreign Domestic Workers. *The Diplomat*: https://thediplomat.com/2020/02/hong-kong-hurts-itself-by-financially-excluding-foreign-domestic-workers/

Hsia, H. C., & Smales, P. (2010). Project: The Power to Organise and Engage: The Use of ICT by Women Migrant Domestic Workers' Organisations. In *Thailand: Asia Pacific Forum on Women, Law and Development*.

Javad Ahmadian, M., Tavakoli, M., & Vahid Dastjerdi, H. (2015). The combined effects of

online planning and task structure on complexity, accuracy and fluency of L2 speech. *The Language Learning Journal*, *43*(1), 41-56.

Juffs, A., & Harrington, M. (2011). Aspects of working memory in L2 learning. *Language Teaching*, *44*(2), 137-166.

Juola, P. (2008). Assessing linguistic complexity. In K. Sinnemäki, M. Miestamo, & F. Karllson (Eds.), *Language complexity: Typology, contact, change* (pp. 89-108). Amsterdam: John Benjamins Publishing Company

Just, M. A., & Carpenter, P. A. (1992). A capacity theory of comprehension: individual differences in working memory. *Psychological review*, *98*, 122-149.

Kaur, J. (2011). Intercultural communication in English as a lingua franca: Some sources of misunderstanding. *Intercultural Pragmatics*, *8*(1), 93-116.

Keller, K., Troesch, L. M., & Grob, A. (2015). First-born siblings show better second language skills than later born siblings. *Frontiers in psychology*, *6,* 1-10.

Khajavy, G. H., Ghonsooly, B., Hosseini Fatemi, A., & Choi, C. W. (2016). Willingness to communicate in English: A microsystem model in the Iranian EFL classroom context. *Tesol Quarterly*, *50*(1), 154-180.

Language Learning Journal, *36*(2), 153-166.

Kleinmann, H. H. (1977). Avoidance behavior in adult second language acquisition. *Language learning*, *27*(1), 93-107.

Krashen, S. D. (1976). Formal and informal linguistic environments in language acquisition and language learning. *Tesol Quarterly*, 157-168.

Krashen, S. D. (1981a). Bilingual education and second language acquisition theory. *Schooling and language minority students: A theoretical framework*, 51-79.

Krashen, S. D. (1981b). *Second language acquisition and second language learning*. Pergamon Press Ltd.

Krashen, S. D. (1993). *The power of reading*. Colorado: Libraries Unlimited.

Krashen, S. D. (1994). The input hypothesis and its rivals. *Implicit and explicit learning of languages*, 45-77.

Krashen, S. D. (2003a). Dealing with English fever. In *Selected papers from the twelfth international symposium on English teaching* (pp. 100-108).

Krashen, S. D. (2003b). *Explorations in language acquisition and use*. Heineman.

Krashen, S. D. (2004). *The power of reading: Insights from the research*. Libraries Unlimited.

Krashen, S. D. (2008). Language education: Past, present and future. *Relc Journal*, *39*(2), 178-187.

Krashen, S. D., Lee, S. Y., & Lao, C. (2017). *Comprehensible and compelling: The causes and effects of free voluntary reading*. ABC-CLIO.

Krashen, S., & Mason, B. (2017). Sustained silent reading in foreign language education: An update. *Turkish Online Journal of English Language Teaching (TOJELT)*, *2*(2), 70-73.

Krashen, S., & Mason, B. (2020). The optimal input hypothesis: Not all comprehensible input is of equal value. *CATESOL Newsletter*, *5*.

Krashen, S., Mason, B., & Smith, K. (2018). Some New Terminology: Comprehension-Aiding Supplementation and Form-Focusing Supplementation. *Language Learning and Teaching*, *60*(6), 12-13.

Krashen, S. & Terrell, T. (1995). *The natural approach: Language acquisition in the classroom*. Exeter: BPC Wheatons Ltd.

Kurvers, J., & Van de Craats, I. (2007). Memory, second language reading, and lexicon: A comparison between successful and less successful adults and children. In *Low-educated adult second language and literacy acquisition. Proceedings of the second annual forum* (pp. 65-80).

Ladegaard, H. J. (2012). The discourse of powerlessness and repression: Identity construction in domestic helper narratives. *Journal of Sociolinguistics*, *16*(4), 450-482.

Ladegaard, H. J. (2013a). Beyond the reach of ethics and equity? Depersonalisation and dehumanisation in foreign domestic helper narratives. Language and Intercultural Communication, *13*(1) 44-59.

Ladegaard, H. J. (2013b). Laughing at adversity: Laughter as communication in domestic helper narratives. *Journal of language and social psychology*, *32*(4), 390-411.

Ladegaard, H. J. (2014). Crying as communication in domestic helper narratives: Towards a social psychology of crying in discourse. *Journal of Language and Social Psychology*, *33*(6), 579-605.

Ladegaard, H. J. (2015). Coping with trauma in domestic migrant worker narratives: Linguistic, emotional and psychological perspectives. *Journal of Sociolinguistics*, *19* (2), 189-221.

Ladegaard, H. J. (2017). *The Discourse of Powerlessness and Repression: Life Stories of Domestic Migrant Workers in Hong Kong*. Taylor & Francis.

Ladegaard, H. J. (2020). Language competence, identity construction and discursive boundary-making: Distancing and alignment in domestic migrant worker narratives. *International Journal of the Sociology of Language*, *2020*(262), 97-122.

Lai, Y., & Fong, E. (2020). Work-related aggression in home-based working environment: Experiences of migrant domestic workers in Hong Kong. *American Behavioral Scientist, 64*(6), 722-739.

Lan, P. C. (2006). *Global Cinderellas: Migrant domestics and newly rich employers in Taiwan*. Duke University Press.

Lan, P. C. (2003a). Political and social geography of marginal insiders: Migrant domestic workers in Taiwan. *Asian and Pacific Migration Journal*, *12*(1-2), 99-125.

Lan, P. C. (2003b). " They have more money but I speak better English!" Transnational encounters between Filipina domestics and Taiwanese employers. *Identities: Global Studies in Culture and Power*, *10*(2), 133-161.

Lennon, P. (1990). Investigating fluency in EFL: A quantitative approach. *Language learning*, *40*(3), 387-417.

Leseman, P. P. (2000). Bilingual vocabulary development of Turkish preschoolers in the Netherlands. *Journal of Multilingual and Multicultural Development*, *21*(2), 93-112.

Leung, A., H.-C. (2010). An apparent dissociation between input and outcome in child L2 acquisition: L2 English-accent acquisition in Hong Kong. In K. Clackson, Z. Absi, M. Ogawa, M. Ono, C. Patterson, and V. Villafaña (eds.). *Language at the University of Essex (LangUE) 2009 Proceedings*, Department of Language and Linguistics, University of Essex. 58-69.

Leung, A. H.-C. (2011). I know [pɪlɪpɪno] but I say [fɪlɪpɪno]: An investigation into Filipino foreign domestic workers' influence on Hong Kong Chinese's L2 English phonology acquisition. *Poznań Studies in Contemporary Linguistics PSiCL*, *47*(1), 81-95.

Leung, A. H.-C. (2012). Bad influence? – an investigation into the purported negative influence of foreign domestic workers on children's second language English acquisition. *Journal of Multilingual and Multicultural Development*, *33*(2), 133-148.

Leung, A.H.C. & Young-Scholten, M. (2013) Reaching out to the other side: Formal-linguistics-based SLA and Socio-SLA. *Applied Linguistics Review, 4*(2), 259-290.

Leung, L. C. (2017). Intersectional Challenges: Marginalization of Ethnic Minority Sexual Assault Survivors in Hong Kong. *Affilia*, *32*(2), 217-229.

Li, D. C. (1999). Linguistic convergence: Impact of English on Hong Kong Cantonese. *Asian Englishes*, *2*(1), 5-36.

Li, D. C. (1999). The functions and status of English in Hong Kong: A post-1997 update. *English World-Wide*, *20*(1), 67-110.

Li, D. C. (2009). Towards 'biliteracy and trilingualism' in Hong Kong (SAR): Problems, dilemmas and stakeholders' views. *AILA Review*, *22*(1), 72-84.

Liang, C. (2016). Maids in Hong Kong: Protecting Foreign Domestic Workers. *Migration*

Policy Institute: https://www.migrationpolicy.org/article/maid-hong-kong-protecting-foreign-domestic-workers

Lin, D., Wong, K. K, & McBride-Chang, C. (2012). Reading motivation and reading comprehension in Chinese and English among bilingual students. *Reading and Writing*, *25*, 717–737.

Lightbown, P. M. & Spada, N. (2013). *How languages are learned* (Vol. 4). Oxford: Oxford University Press.

Lok-Kei, S. (2019). More than 70 per cent of foreign domestic helpers in Hong Kong work over 13 hours a day, Chinese University survey shows. *South China Morning Post*: https://www.scmp.com/news/hong-kong/society/article/2185976/more-70-cent-foreign-domestic-helpers-hong-kong-work-over-13

Long, M. H., & Granena, G. (2018). Sensitive periods and language aptitude in second language acquisition. *Bilingualism: Language and Cognition*, *21*(5), 926-927.

Lumicao, V. B. (2019). Survey shows Filipina maids help HK kids speak better English. *The Sun Hong Kong:* http://www.sunwebhk.com/2019/11/survey-shows-filipina-maids-help-hk.html

Lui, I. D., Vandan, N., Davies, S. E., Harman, S., Morgan, R., Smith, J., Wenham, C. & Grépin, K. A. (2021). "We also deserve help during the pandemic": The effect of the COVID-19 pandemic on foreign domestic workers in Hong Kong. *Journal of Migration and Health*, *3*, 100037.

MacIntyre, P. D., Dörnyei, Z., Clément, R., & Noels, K. A. (1998). Conceptualizing willingness to communicate in a L2: A situational model of L2 confidence and affiliation. *The Modern Language Journal*, *82*(4), 545-562.

MacIntyre, P. D., & Gardner, R. C. (1994). The subtle effects of language anxiety on cognitive processing in the second language. *Language learning*, *44*(2), 283-305.

MacIntyre, P. D., Noels, K. A., & Clément, R. (1997). Biases in self-ratings of second language proficiency: The role of language anxiety. *Language learning*, *47*(2), 265-287.

Mahmoodi, M. H., & Moazam, I. (2014). Willingness to Communicate (WTC) and L2 Achievement: The Case of Arabic Language Learners. *Procedia-Social and Behavioral Sciences*, *98*, 1069-1076.

Manyike, T. V. (2013). Bilingual literacy or substantive bilingualism? L1 and L2 reading and writing performance among Grade 7 learners in three township schools Gauteng Province, South Africa. *Africa Education Review*, *10*(2), 187-203.

Marini, A., Eliseeva, N., & Fabbro, F. (2019). Impact of early second-language acquisition on the development of first language and verbal short-term and working memory. *International Journal of Bilingual Education and Bilingualism*, *22*(2), 165-176.

Mason, B., & Krashen, S. (2017). Self-selected reading and TOEIC performance: Evidence from case histories. *Shitennoji University Bulletin*, *63*, 469-475.

McArthur, T. 2002. *The Oxford guide to world English*. Oxford University Press.

McCarthy, M., & Carter, R. (1995). Spoken grammar: what is it and how can we teach it? *ELT journal*, *49*(3), 207-218.

McQue, K. (2020). Hong Kong's labor law aid and abet the abuse of foreign domestic workers. *GlobalVoices*: https://globalvoices.org/2020/02/16/hong-kongs-labor-laws-aid-and-abet-the-abuse-of-foreign-domestic-workers/

Mellor, D., & Moore, K. A. (2013). The use of Likert scales with children. *Journal of pediatric psychology*, *39*(3), 369-379.

Miyake, A., & Friedman, N. P. (1998). Individual differences in second language proficiency: Working memory as language aptitude. *Foreign language learning: Psycholinguistic studies on training and retention*, 339-364.

Mota, M. B. (1995). Working memory capacity and L2 fluent speech production.

Unpublished MA dissertation. Florianópolis: UFSC.

Mucci, F., Mucci, N., & Diolaiuti, F. (2020). Lockdown and isolation: psychological aspects of COVID-19 pandemic in the general population. *Clinical Neuropsychiatry*, *17*(2), 63-64.

Mustafa, M. N., & Abhishek, B. P. (2018). Does Sibling Stimulation in Children Facilitate Proficiency in Second Language? *International Journal of Bionics and Bio-Materials*, *4*(2), 1-4.

Mustari, S., & Rahman, M. Z. (2020). The Effect of the Corona Disaster on Women: lock down and Corona virus from the lens of Social science. *SocArXiv. May*, *23*.

Ng, J. Y. (2020). Why domestic workers are the unsung heroes of Hong Kong's coronavirus crisis. *Hong Kong Free Press:* https://hongkongfp.com/2020/04/10/why-domestic-workers-are-the-unsung-heroes-of-hong-kongs-coronavirus-crisis/

Ng, Y. & Leung, R. (2018). Will Hong Kong's problem with long working hours ever come to an end? *South China Morning Post:* https://www.scmp.com/news/hong-kong/politics/article/2136552/will-hong-kongs-problem-long-working-hours-ever-come-end

Noels, K. A., Pelletier, L. G., Clément, R., & Vallerand, R. J. (2003). Why are you learning a second language? Motivational orientations and self-determination theory. *Language learning*, *53*(S1), 33-64.

Norton, B. (1997). Language, identity, and the ownership of English. *TESOL quarterly*, *31* (3)**,** 409-429.O'Connor, A. (2017). *The Nature of Prejudice*. CRC Press.

Oh, M., & Lee, H. (2012). The effects of task complexity and task condition on learner language. *Korean Journal of Applied Linguistics, 28*(4), 39–68.

O'Neal, G. (2016). Intelligibility and Segmental Phoneme Repair Strategies in English-as-a-Lingua-Franca Interactions among Chinese and Japanese Speakers of English. *Chinese Journal of Applied Linguistics*, *39*(4), 379-400.

Ortega, L. (1999). Planning and focus on form in L2 oral performance. *Studies in second language acquisition*, *21*(1), 109-148.

Oshima-Takane, Y., Goodz, E., & Derevensky, J. L. (1996). Birth order effects on early language development: do secondborn children learn from overheard speech? *Child development*, *67*(2), 621-634.

Ozer, I., Fitzgerald, S. M., Sulbaran, E., & Garvey, D. (2014). Reliability and content validity of an English as a Foreign Language (EFL) grade-level test for Turkish primary grade students. *Procedia-Social and Behavioral Sciences*, *112*, 924-929.

Pallotti, G. (2009). CAF: Defining, refining and differentiating constructs. *Applied Linguistics*, *30*(4), 590-601.

Pallotti, G. (2015). A simple view of linguistic complexity. *Second Language Research*, *31*(1), 117-134.

Pan, J., Kong, Y., Song, S., McBride, C., Liu, H., & Shu, H. (2017). Socioeconomic status, parent report of children's early language skills, and late literacy skills: A long term follow-up study among Chinese children. *Reading and Writing*, *30*, 401–416.

Peters, E., & Webb, S. (2018). Incidental vocabulary acquisition through viewing L2 television and factors that affect learning. *Studies in Second Language Acquisition*, *40*(3), 551-577.

Pine, J. M. (1995). Variation in vocabulary development as a function of birth order. *Child Development*, *66*(1), 272-281.

Pinget, A. F., Bosker, H. R., Quené, H., & De Jong, N. H. (2014). Native speakers' perceptions of fluency and accent in L2 speech. *Language Testing*, *31*(3), 349-365.

Polit, D. F., & Beck, C. T. (2006). The content validity index: are you sure you know what's being reported? Critique and recommendations. *Research in nursing & health*, *29*(5), 489-497.

Poon, A. Y. (2010). Language use, and language policy and planning in Hong Kong. *Current*

issues in language planning, *11*(1), 1-66.

Poon, A. Y., & Lau, C. M. (2016). Fine-Tuning Medium-of-Instruction Policy in Hong Kong: Acquisition of Language and Content-Based Subject Knowledge. *Journal of Pan-Pacific Association of Applied Linguistics*, *20*(1), 135-155.

Poon, F. K. C. (2006). Hong Kong English, China English and World English. *English Today 22*(2), 23-28.

Pretorius, E. J., & Spaull, N. (2016). Exploring relationships between oral reading fluency and reading comprehension amongst English second language readers in South Africa. *Reading and Writing*, *29*(7), 1449-1471.

Pun, J., & Macaro, E. (2019). The effect of first and second language use on question types in English medium instruction science classrooms in Hong Kong. *International Journal of Bilingual Education and Bilingualism*, *22*(1), 64-77.

Rahayu, G. (2020). Indonesia EFL Teachers' Perceptions about Teaching English as Lingua Franca. *Language-Edu*, *9*(1). **Missing page numbers**

Renandya, W. A., Krashen, S., & Jacobs, G. M. (2018). The Potential of Series Books: How Narrow Reading Leads to Advanced L2 Proficiency. *LEARN Journal: Language Education and Acquisition Research Network*, *11*(2), 148-154.

Reynolds-Keefer, L., Johnson, R., Dickenson, T., & McFadden, L. (2009). Validity issues in the use of pictorial Likert scales. *Studies in Learning, Evaluation, Innovation and Development*, *6*(3), 15-25.

Rice, M. (1983). The role of television in language acquisition. *Developmental Review*, *3*(2), 211-224.

Rodrigues, I. B., Adachi, J. D., Beattie, K. A., & MacDermid, J. C. (2017). Development and validation of a new tool to measure the facilitators, barriers and preferences to exercise in people with osteoporosis. *BMC Musculoskeletal disorders*, *18*(1), 1-9.

Salimi, A., & Dadashpour, S. (2012). Task complexity and language production dilemmas

(Robinson's Cognition Hypothesis vs. Skehan's Trade-off Model). *Procedia-Social and Behavioural Sciences, 46*, 643-652.

Sato, M. (2014). Exploring the construct of interactional oral fluency: Second Language Acquisition and Language Testing approaches. *System*, *45*, 79-91.

Savignon, S. J. (1976). Communicative Competence: Theory and Classroom Practice.

Schmidt, R. (1995). Consciousness and foreign language learning: A tutorial on the role of attention and awareness in learning. *Attention and awareness in foreign language learning*, *9*, 1-63.

Sczepurek, N. S., & Verhagen, J. (2021, June 23-25). *The Role of Caregivers' Language Input in Early Bilingual Learners: Relating Caregivers' Code-switching and Proficiency to Children's Receptive Vocabulary.* [Paper presentation]. Conference on Multilingualism. Konstanz, Germany.

Sell, F., Renkwitz, K., Sickinger, P., & Schneider, K. P. (2019). Measuring pragmatic competence on the functional and lexical level: The development of German high-school students' requests during a stay abroad in Canada. *Journal of Pragmatics*, *146*, 106-120.

Semel, E., Wiig, E. H., & Secord, W. A. (2003). Clinical evaluation of language fundamentals, (CELF-4) The Psychological Corporation. *San Antonio, TX*.

Shin, S. J. (2002). Birth order and the language experience of bilingual children. *Tesol Quarterly*, *36*(1), 103-113.

Siegel, L. (1959). Review of Modern Language Aptitude Test and Management Aptitude Inventory. *Journal of Counseling Psychology*, *6*(4), 319-320.

Sifakis, N. C. (2017). Teacher education in the post-modern era: introducing a transformative dimension in the teaching of English as a lingua franca. *Selected papers on theoretical and applied linguistics*, *18*, 345-353.

Siu, J. (2018). Why foreign domestic helpers in Hong Kong must live in their employers'

home. *South China Morning Post*: https://www.scmp.com/news/hong-kong/community/article/2133377/why-hong-kong-wants-foreign-domestic-helpers-live-their

Siu, J. (2019). Hong Kong domestic helper sues ex-employer for secretly filming her in the shower, demands apology. *South China Morning Post*: https://www.scmp.com/news/hong-kong/law-and-crime/article/2186680/hong-kong-domestic-helper-sues-ex-employer-secretly

Skehan, P. (1998). *A cognitive approach to language learning*. Oxford University Press.

Skehan, P. (2009). Modelling second language performance: Integrating complexity, accuracy, fluency, and lexis. *Applied Linguistics*, *30*(4), 510-532.

Skehan, P. (2014). Task-based Performance and Task-based Instruction: Research Contributions [Powerpoint slides]: http://www.tblsig.org/wp-content/uploads/2014/05/Skehan-Osaka-May-2014.pdf

Smith, A. & Boyle, N. (2008). *Excel in comprehension 4B.* Hong Kong: Popular Learning.

Snow, D. (2004). *Cantonese as written language: The growth of a written Chinese vernacular* (Vol. 1). Hong Kong University Press.

Snow, R. E. (1994). Abilities in academic tasks. In Sternberg, R. J., & Wagner, R. K. (Eds.). *Mind in context: Interactionist perspectives on human intelligence (pp. 3-37).* Cambridge University Press.

Sood, S. (2020). Psychological effects of the Coronavirus disease-2019 pandemic. *Research & Humanities in Medical Education*, *7*, 23-26.

Spielberger, C. D. (1983). Manual for the State-Trait Anxiety Inventory STAI (form Y) (" self-evaluation questionnaire").

Suzuki, A. (2019). What Does 'Teaching English as a Lingua Franca'Mean? Insights from University ELF Instructors. In *Innovation in Language Teaching and Learning* (pp. 141-160). Palgrave Macmillan, Cham.

Swain, M., & Lapkin, S. (1995). Problems in output and the cognitive processes they generate: A step towards second language learning. *Applied linguistics*, *16*(3), 371-391.

Tang, S. H. K. & Yung, L. C. W. (2012). *Maids Or Mentors? The Effects of Live-in Foreign Domestic Workers on School Children's Educational Achievement in Hong Kong*. University of Western Australia, Business School, Economics.

Tang, S. H. K. (2015). *Parents, Migrant Domestic Workers, and Children's Speaking of a Second Language: Evidence from Hong Kong* (No. 15-04).

Tavakoli, P. & Skehan, P. (2005). Strategic planning, task structure, and performance testing. *Planning and Task-Performance in a Second Language*, *11*, 239-273.

Tayao, M. L. G. (2004). The evolving study of Philippine English phonology. *World Englishes*, *23*(1), 77-90.

Tayao, M. L. G. (2008). A lectal description of the phonological features of Philippine English. In M. L. S. Bautista & K. Bolton (Eds.), *Philippine English: Linguistic and literary perspectives*, (pp. 157-174). Hong Kong University Press.

Tokowicz, N., & Degani, T. (2015). Learning second language vocabulary: Insights from laboratory studies. *The Cambridge handbook of bilingual processing*, 216-233.

Tokuhama-Espinosa, T. (2001). *Raising Multilingual Children: Foreign Language Acquisition and Children*. Bergin and Garvey.

Tong, Y., & Jiang, N. (2020). Much Ado about Nothing? Do foreign domestic workers in Hong Kong benefit from capital accumulation? *American Behavioral Scientist*, *64*(6), 823-840.

Tse, S. K., Lam, R. Y., Loh, E. K., Ip, O. K., Lam, J. W., & Chan, Y. M. (2009). English-speaking foreign domestic helpers and students' english reading attainment in Hong Kong. *Chinese Education & Society*, *42*(3), 49-65.

Tupas, R., & Martin, I. P. (2017). Bilingual and mother tongue-based multilingual education in the Philippines. *Bilingual and multilingual education,* 247-258.

Urrutia, J. D., Tampis, R. L., & Atienza, J. E. (2017, March). An analysis on the unemployment rate in the Philippines: A time series data approach. In *Journal of Physics: Conference Series* (Vol. 820, No. 1, p. 012008). IOP Publishing.

Valle, A. B. (2011). The language of seafaring: Standardized conventions and discursive features in speech communications. *International Journal of English Studies*, *11*(1), 35-53.

VideoCollectables. (2014, February 5). *World's fastest talking man sings Michael Jackson's BAD in 20 seconds.* [Video]. YouTube. https://www.youtube.com/watch?v=4X4Fy8YqysY

Vygotsky, L. (1978). Interaction between learning and development. *Readings on the development of children*, *23*(3), 34-41.

Waldrop, M. M. (1987). The workings of working memory; the central thesis of cognitive science is that the mind is an information processor; the study of reading gives a unique insight into how that processor works. *Science*, *237*, 1564-1568.

Walkinshaw, I., & Duong, O. T. H. (2012). Native-and Non-Native Speaking English Teachers in Vietnam: Weighing the Benefits. *Tesl-Ej*, *16*(3), 1-17.

Waltz, C., Strickland, O. L., & Lenz, E. (2010). *Measurement in nursing and health research*. Springer Publishing Company.

Waltz, C., Strickland, O. L., & Lenz, E. (2017). *Measurement in nursing and health research (5th ed.)*. Springer Publishing Company.

Wang, L., & Kirkpatrick, A. (2018). Students' and parents' perceptions of trilingual education in Hong Kong primary schools. *International Journal of Multilingualism*, 1-18.

Wang, Z. (2014). Developing Accuracy and Fluency in Spoken English of Chinese EFL Learners. *English language teaching*, *7*(2), 110-118.

Webb, S. (2008). Receptive and productive vocabulary sizes of L2 learners. *Studies in Second language acquisition*, *30*(1), 79-95.

Webb, S. (2015). Extensive viewing: Language learning through watching television. In *Language learning beyond the classroom* (pp. 175-184). Routledge.

Wellen, G. J. (1985). Effects of older siblings on the language young children hear and produce. *Journal of Speech and Hearing Disorders 50*, 84-99.

Wen, Z., & Skehan, P. (2011). A new perspective on foreign language aptitude research: building and supporting a case for" working memory as language aptitude". *Ilha do Desterro A Journal of English Language, Literatures in English and Cultural Studies*, *60*, 15-44.

Wolfaardt, J. F. (2015). *Hong Kong primary school children's second language acquisition: The impact of Filipina domestic workers* (MA Dissertation, Hong Kong Baptist University (Kowloon Tong, Hong Kong)).

Wolfaardt, J. F. (2019, November 4). *The impact of Filipina domestic workers on the language acquisition of Hong Kong primary school children* [Seminar presentation]. English Department Seminar Series, Hong Kong Baptist University, Kowloon Tong, Hong Kong. https://www.facebook.com/bu.mals/posts/496051557612511

Wolfe-Quintero, K., Inagaki, S., & Kim, H.-Y. (1998). *Second language development in writing: Measures of fluency, accuracy, and complexity.* Honolulu, HI: University of Hawaii, Second Language Teaching & Curriculum Center.

Wong, J. M., & Rao, N. (2015). The evolution of early childhood education policy in Hong Kong. *International Journal of Child Care and Education Policy*, *9*(1), 3. https://link.springer.com/article/10.1007/s40723-015-0006-y

Wong, S. W. L., Cheung, H., Zheng, M., Yang, X., McBride, C., Ho, C. S. -H., & Leung, J. S. -M., Chow, B. W. -Y., & Waye, M. M. Y. (2020). Effect of twinning on Chinese and English vocabulary knowledge. *Child Development*, *91*(6), 1–12.

Woollett, A. (1986). The influence of older siblings on the language environment of young Children. *British Journal of Developmental Psychology 4*, 235-245.

Wu, K. H., & Ke, C. (2009). Haunting Native Speakerism? Students' Perceptions toward Native Speaking English Teachers in Taiwan. *English Language Teaching*, *2*(3), 44-52.

Yan, S., & Nicoladis, E. (2009). Finding le mot juste: Differences between bilingual and monolingual children's lexical access in comprehension and production. *Bilingualism: Language and Cognition*, *12*(3), 323-335.

Yap, V. C. (2015). The religiosity of Filipina domestic workers in Hong Kong. *Asian anthropology*, *14*(1), 91-102.

Yashima, T. (2002). Willingness to communicate in a second language: The Japanese EFL context. *The Modern Language Journal*, *86*(1), 54-66.

Zhang, S. (2009). The Role of Input, Interaction and Output in the Development of Oral Fluency. *English Language Teaching*, *2*(4), 91-100.

Zhang, Y., Tardif, T., Shu, H., Li, H., Liu, H., McBride-Chang, C., Liang, W, & Zhang, Z. (2013). Phonological skills and vocabulary knowledge mediate socioeconomic status effects in predicting reading outcomes for Chinese children. *Developmental Psychology*, *49*(4), 665–671.

Note: **Participant** refers to the **child participating in the research**

Participant's name: _____ age: _____

1. Is the participant your only child? Please select the applicable answer.

(a) Yes

(b) No, I have _____ children and the participant is the

   (i) oldest

   (ii) youngest

   (iii) middle child

2. How many **hours a week** does the participant spend watching **English** TV?

3. What types of **English** TV programmes does the child watch (May tick more than one)?
- Cartoons
- Documentaries
- Game shows
- Sports
- Others

4. Approximately how many **English** books do you have at home?

   _____ books

5. How many hours per week are spent on reading **English** books (either the participant reading or somebody reading to them)?

   _____ hours per week

6. Does the participant use English at home on an electronic device (e.g. computer, ipad, phone, etc.)? Please select the applicable answer.

(a) No

(b) Yes, and the **total weekly** time is about (i) less than an hour

                                       (ii) 1-2 hours

                                       (iii) 2-5 hours
                                       (iv) 5-10 hours
                                       (v) more than 10 hours

7. In what language(s) does interaction between the participant and **parents** take place? In case there is more than one, please list all (linguistically, Mandarin and Cantonese are 2 languages) and indicate which is the main language of interaction.

   Main language _____ Other(s): _____

8. Approximately how many **interaction hours a day** are there between participant and **parents**?

9. What is the occupation of the participant's:

(a) mother _____

(b) father _____

10. Please select the highest qualification attained by the participant's:

(a) **Mother**	(b) **Father**
(i) Secondary school	(i) Secondary school
(ii) Post-secondary certificate	(ii) Post-secondary certificate
(iii) Associate degree	(iii) Associate degree
(iv) Bachelor's degree	(iv) Bachelor's degree
(v) Master's degree	(v) Master's degree
(vi) Doctoral degree	(vi) Doctoral degree

11. In what language(s) does interaction between the participant and the **household's helper** take place? In case there is more than one, please name all and indicate which is the main language of interaction.

Main language:_____Other(s): _____

12. Please select the highest educational level attained by the **household's helper**.

(i) Elementary school

(ii) **Some** secondary school

(iii) **Completed** secondary school

(iv) Post-secondary certificate

(v) Associate degree

(vi) Bachelor's degree

12. Approximately how many **interaction hours a day** are there between the participant and the **household's helper**?

_____hours per day

Appendix B: Consent form

Dear Parents,

My Name is Francois Wolfaardt, and I am pursuing a PhD in Second Language English Acquisition at Hong Kong Polytechnic University, under the supervision of Dr. Sun-A Kim. Thank you for agreeing to participate in "the Impact of Caretakers on HK Children's English Acquisition project". This project's primary purpose is to investigate the influence that Filipina domestic workers (FilDWS) have on the second language English acquisition of primary school children in Hong Kong; a secondary aim is to test if FilDWS have any impact on their Cantonese vocabulary acquisition.

We still need your consent for each stage, so please tick each box if you agree to the details of the study.

I,_____(Signature:_____), agree for my child _____to participate in language assessment as detailed below:

Stage 1: Group Tests

- **Language Proficiency Test (3 in English & 2 in Cantonese)**
    - Completed by: student
    - Duration: 45 minutes
    - □ I agree to allow my child to participate in the group language proficiency test.

Stage 2: Individual Language Test
Reading, picture description and Working Memory Capacity Test (all in English)
    - Completed by: student
    - Duration: 30 minutes
    - □ I agree to allow my child to participate in the individual language test.

- **Questionnaire**
    - Completed by: parent
    - Duration: 10 minutes
    - □ I agree to complete the questionnaire.

- **Short Interview**
  - o Completed by: helper (for households with helpers from the Philippines)

- Duration: 5-8 minutes
  - o Note: [1]audio-recorded
  - □ I agree to allow my domestic helper to participate in the interview.

A letter of completion will be given for your child's participation in the research. Your input is crucial for our research, and if you are interested in the results, these would be shared with you upon completion of the study.

□ I would like to receive more information on the study, which can be sent to me via email:_____.

If you have any questions about the research, please feel free to contact me at francois.wolfaardt@_____ or my supervisor Dr Sun-A Kim at sun-a.kim@

Notes:

[1]The interviews will be audio recorded, and participants have the right to review and request deletion of the audio records. The recorded data will be stored on password protected storage.

Data with personal identifiers will be anonymised as transcriptions and analyses are done. The anonymised data will only be referred to for analytical purposes during presentation of the results.

Participation in this project is voluntary and your child can withdraw from the project at any time without negative consequences. No action on your part is required if you give consent for your child to participate in the study.

Appendix C: Letter to School Principal

<div align="right">4 May, 2018</div>

Dear Principal Skinner,

My Name is Francois Wolfaardt, and I am pursuing a PhD in Second Language English Acquisition at Hong Kong Polytechnic University, under the supervision of Dr. Sun-A Kim. Thank you for allowing the research on "*the Impact of Caretakers on HK Children's English Acquisition*" to be conducted at Springfield Elementary school. This project's primary purpose is to investigate the influence that Filipina domestic workers (FilDWS) have on the second language English acquisition of primary school children in Hong Kong; a secondary aim is to test if FilDWS have any impact on their Cantonese vocabulary acquisition.

Families who agree to participate in the study will be requested to complete/

have their children/helpers complete the tasks as listed below:

Stage 1: Preliminary Questionnaire and Test

- **Questionnaire (see the attached)**
  - Completed by: parents

- **Group Language Proficiency Test (Date: May 11th, 2018)**
  - 3 in English & 2 in Cantonese
  - Completed by: student
  - Duration: 45 minutes **(Pick up time: 5pm)**

Stage 2: Individual Language Test (During school hours)

- **Reading, picture description and Working Memory Capacity Test (all in English)**
  - Completed by: student
  - Duration: 30 minutes
  - Note: [1]audio-recorded

- **Short Interview (by appointment after school)**
  - Completed by: helper (for households with helpers from the Philippines)
  - Duration: 5-8 minutes
  - Note: [1]audio-recorded

A certification of completion will be given to acknowledge every child's participation in the research. The data is crucial for our research, and if you are interested in the results, these would be shared with you upon completion of the study.

If you have any questions about the research, please feel free to contact me at francois.wolfaardt@ or my supervisor Dr Sun-A Kim at sun-a.kim@

Notes:
[1] The interviews will be audio recorded, and participants have the right to review and request deletion of the audio records. The recorded data will be stored on password protected storage.

Data with personal identifiers will be anonymised as transcriptions and analyses are done, which is expected to be completed by August 2018. The anonymised data will only be referred to for analytical purposes during presentation of the pilot study in 2019.

Participation in this project is voluntary and participants can withdraw from the project at any time without negative consequences.

Appendix D: Cantonese Picture Vocabulary Test[1]

Name: Age: Gender:

1.   **A**   B   C   D

2.   A   B   **C**   D

3.   A   **B**   C   D

4.   **A**   B   C   D

5.   A   B   C   **D**

---

[1] Letters above correct answers are bold.
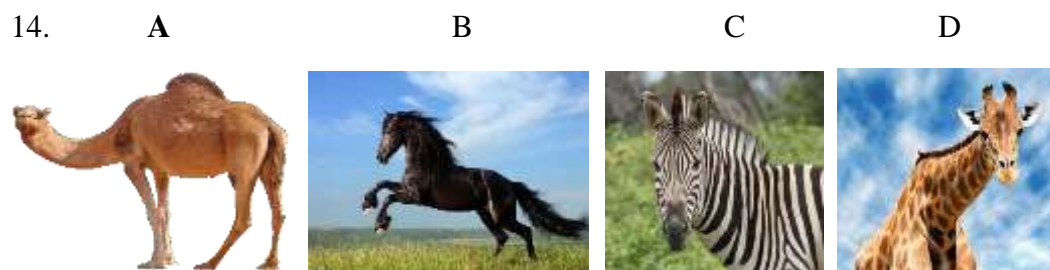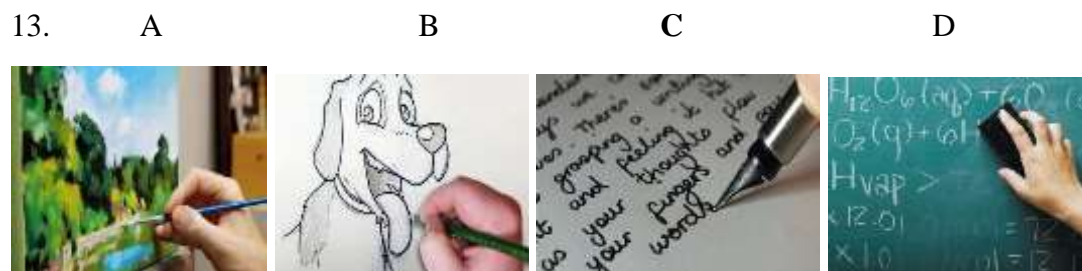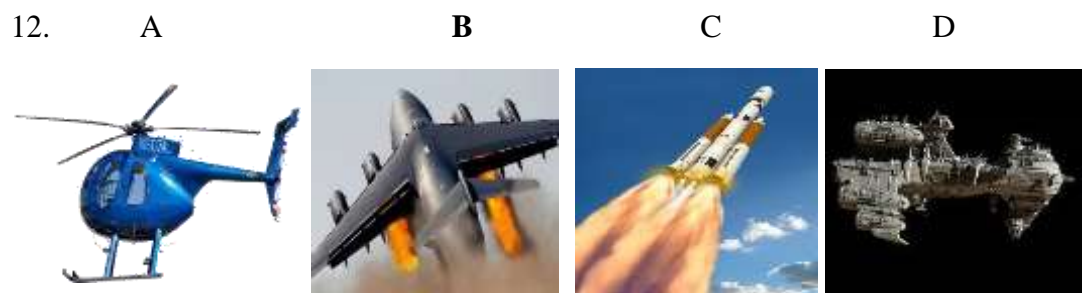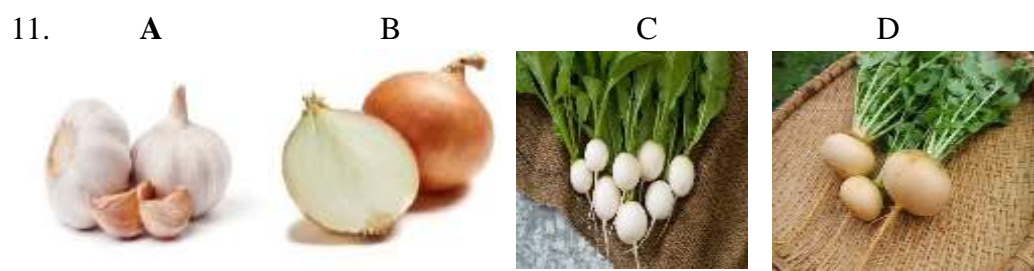
6.

| A | B | **C** | D |

7.

| A | **B** | C | D |

8.

| A | **B** | C | D |

9.

| **A** | B | C | D |

10.

| A | **B** | C | D |

11. A   B   C   D

12. A   **B**   C   D

13. A   B   **C**   D

14. **A**   B   C   D

15. A   **B**   C   D

173

16.   **A**   B   C   D

17.   A   B   **C**   D

18.   A   B   C   **D**

19.   A   **B**   C   D

20.   A   **B**   C   D

21.   A   B   **C**   D

22.   A   B   **C**   D

23.   A   B   **C**   D

24.   **A**   B   C   D

25.   A   B   C   **D**

26.　　　A　　　　　　**B**　　　　　　C　　　　　　D

27.　　　**A**　　　　　　B　　　　　　C　　　　　　D

28.　　　**A**　　　　　　B　　　　　　C　　　　　　D

29.　　　A　　　　　　B　　　　　　C　　　　　　**D**

30.　　　A　　　　　　**B**　　　　　　C　　　　　　D

Appendix E: English Picture Vocabulary Test[2]

Name: Age: Gender:

1.   **A**   B   C   D

2.   A   B   C   **D**

3.   A   **B**   C   D

4.   A   B   C   **D**

5.   **A**   B   C   D

---

[2] Letters above correct answers are bold.

6.　　**A**　　　　　　　B　　　　　　C　　　　　　D

7.　　　A　　　　　　　B　　　　　　C　　　　　　**D**

8.　　**A**　　　　　　　B　　　　　　C　　　　　　D

9.　　　A　　　　　　　B　　　　　　**C**　　　　　　D

10.　　　A　　　　　　**B**　　　　　　C　　　　　　D

178

11.   A   **B**   C   D

12.   A   B   **C**   D

13.   **A**   B   C   D

14.   A   B   C   **D**

15.   A   B   C   **D**

16.   **A**   B   C   D

17.   A   B   **C**   D

18.   A   **B**   C   D

19.   A   B   **C**   D

20.   A   **B**   C   D

21. A   B   **C**   D

22.   **A**   B   C   D

23.   A   B   **C**   D

24.   A   B   C   **D**

25.   A   **B**   C   D

26.   **A**   B   C   D

27.   A   B   **C**   D

28.   A   B   C   **D**

29.   A   **B**   C   D

30.   A   **B**   C   D

The story, as played to the children, can be accessed here:
http://learnenglishkids.britishcouncil.org/en/short-stories/the-bird-king

1. What is the title of the story? **The bird king.**

2. Where did the story take place? **In the jungle.**

3. Did all the animals in the jungle have a king? **Yes, except for the birds.**

4. Why were the birds jealous? **Because the didn't have a king.**

5. Why did the parakeet say they should make him king? **Because he has wonderful colours.**

6. Why did the mynah say he should be king? **Because he can speak, and talk to other animals.**

7. Why did the toucan think he should be king? **Because he has a fantastic beak.**

8. What competition did the macaw suggest they should have? **The bird who can fly the highest will be the bird king.**

9. Did the other birds think it was a good idea? **Yes, all the birds thought it was an excellent idea.**

10. Which bird said they should make him king now? **The eagle**.

11. Why did the eagle think he can fly the highest? **Because he is the strongest.**

12. Which bird said that the eagle might not win? **The sparrow.**

13. Why did the eagle laugh? **He thought the sparrow can't beat him.**

14. Which bird flew the highest when the race began? **The eagle.**

15. What did the eagle say when he flew higher than all the other birds? **I told you! I'm the king!**

16. Where was the sparrow hiding? **Under the eagle's wing.**

17. Did he fly higher than the eagle? **Yes.**

18. Which bird was the highest of all? **The sparrow.**

19. Did the sparrow win the competition? **Yes.**

20. Who was the new bird king? **The sparrow**

---

[3] Answers appear in bold next to questions.

Appendix G: Pictures for Interactive Story Telling

<u>Picture set 1</u>

Picture set 2

Watch Out!

http://Pixton.com/ic:px758rhc

Created using www.Pixton.com

iSLCollective.com

186
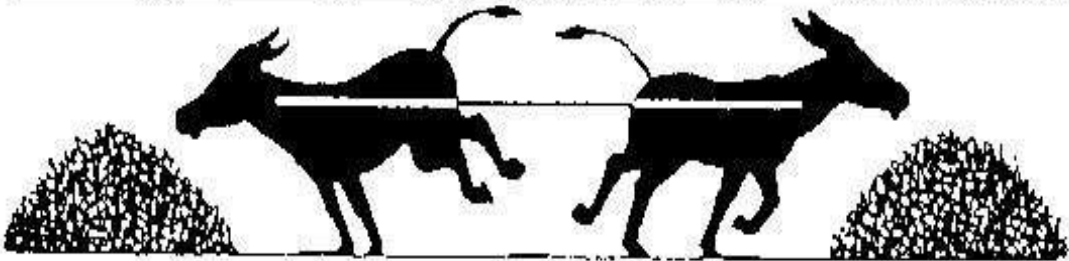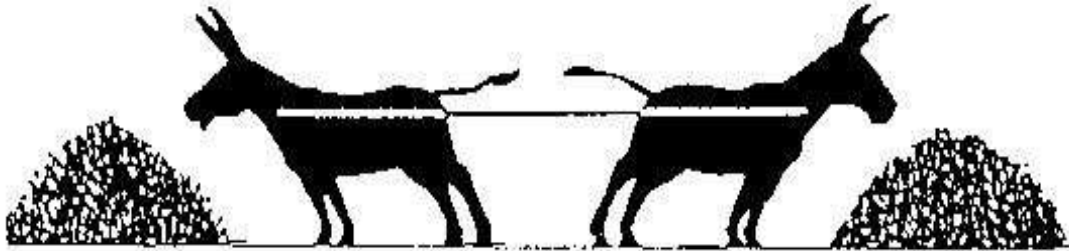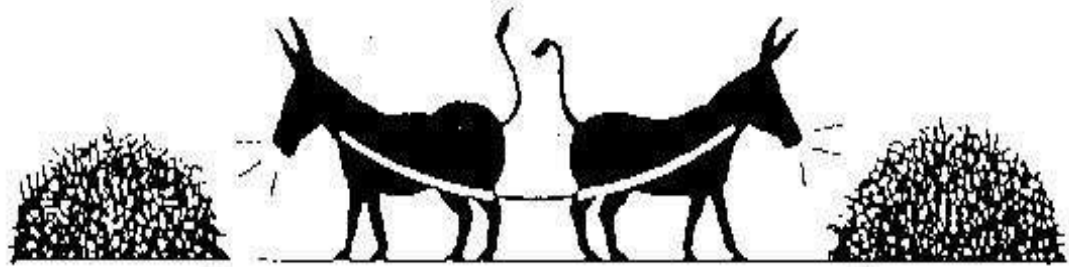
Picture set 4

Accident in the kitchen

Created using www.Pixton.com

iSLCollective.com

187
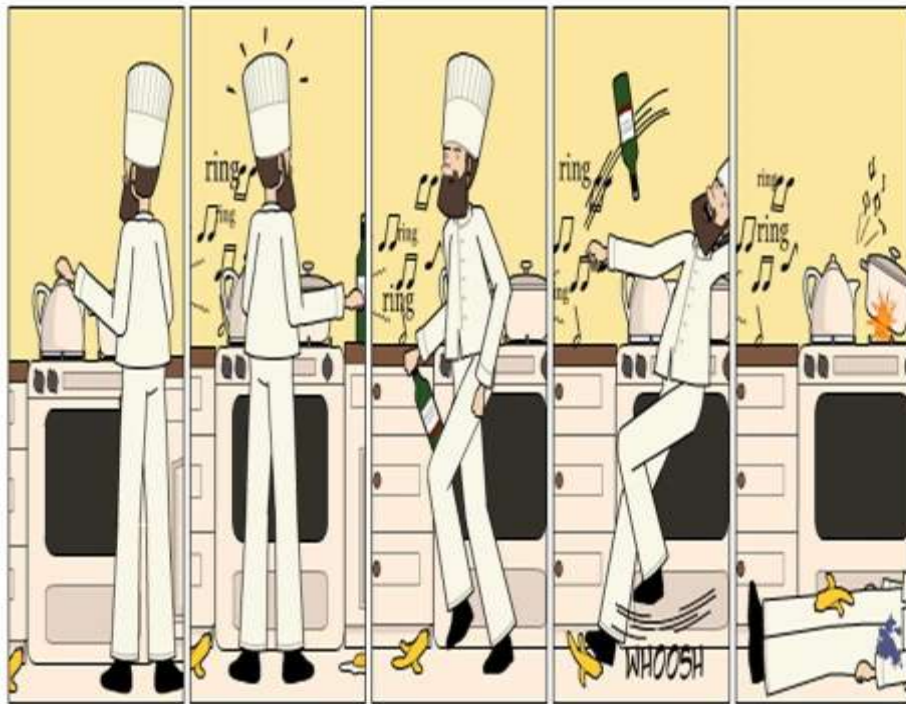
(used in the pre-pilot, but excluded from the pilot study)
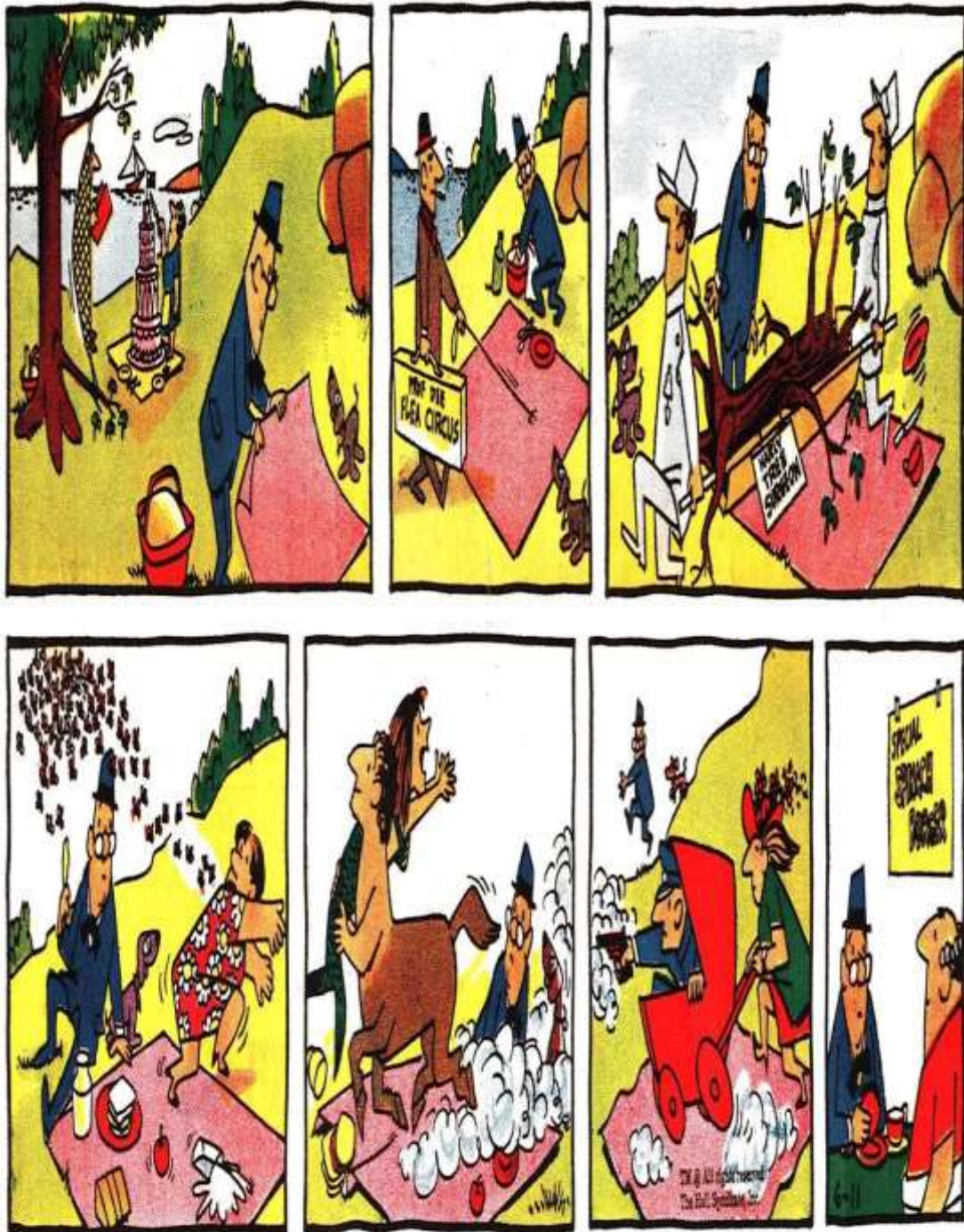
Appendix H: Items for Picture Description Task

(Note: participants were shown the original photographs and only able to see one picture at a time. The display below is a compressed view.)

7	
8	
9	

191

10	
11	
12	

13	
14	
15	
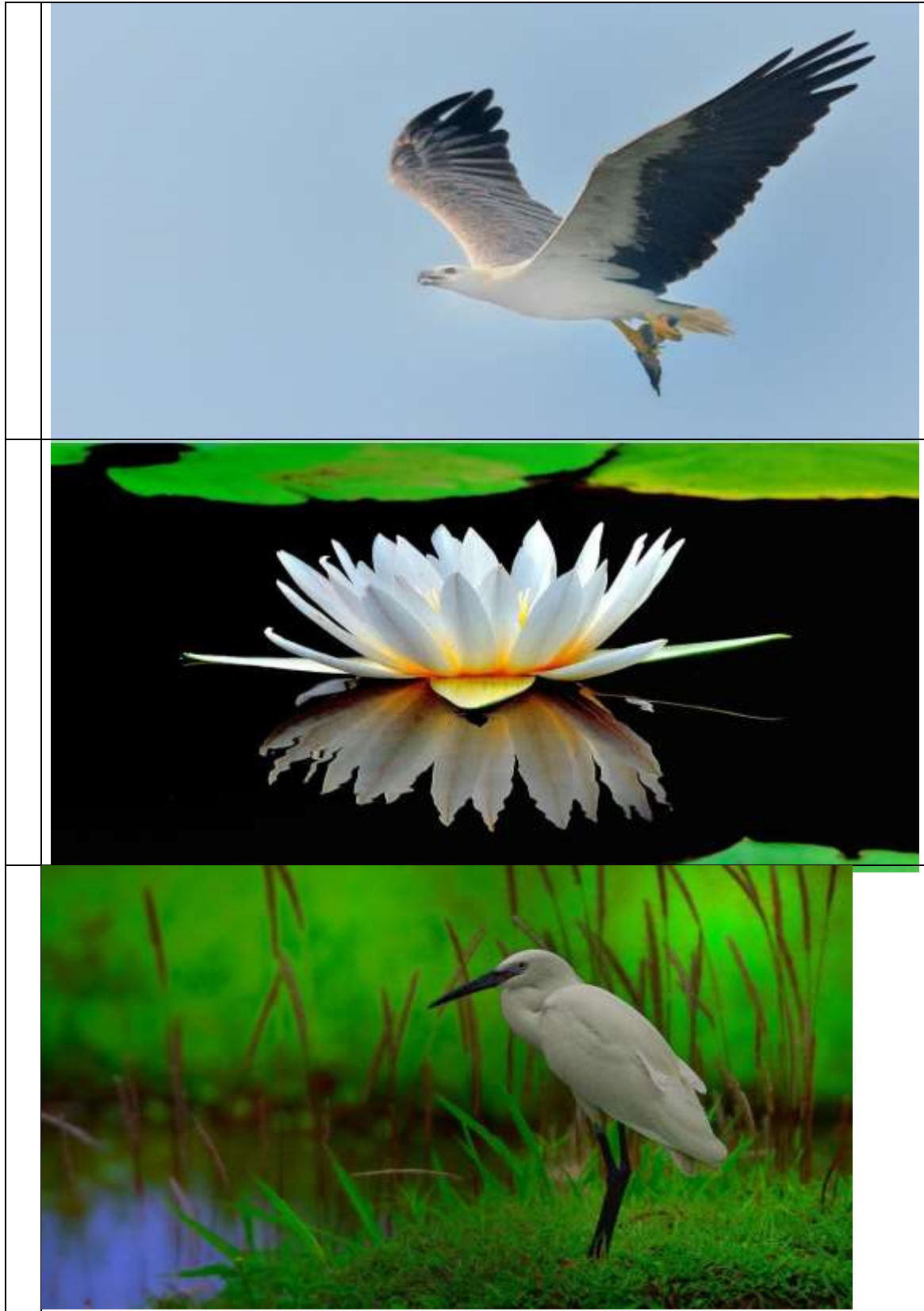
Name: Age: Gender:

a) 人性	(b) 人身	(c) 人情	(d) 仁義
a) 奇異	(b) 其次	(c) 奇妙	**(d) 其餘**
a) 快樂	(b) 快活	(c) 上落	(d) 快速
a) 投注	**(b) 投票**	(c) 投標	(d) 投降
a) 建設	**(b) 建築**	(c) 建議	(d) 建立
a) 容忍	(b) 容易	(c) 容許	(d) 容納
a) 恐懼	(b) 恐嚇	(c) 恐怕	**(d) 恐怖**
a) 乘涼	(b) 乘客	**(c) 乘搭**	(d) 乘勢
a) 耕田	(b) 耕耘	(c) 耕作	**(d) 耕種**
(a) 貨幣	(b) 貨櫃	(c) 貨品	(d) 貨倉
(a) 馴化	(b) 順利	**(c) 馴服**	(d) 純正
(a) 元素	(b) 元首	**(c) 元宵**	(d) 元帥
(a) 瑰麗	**(b) 豔麗**	(c) 絢麗	(d) 秀麗
(a) 山野	(b) 山寨	(c) 山林	**(d) 山巒**
(a) 對抗	(b) 對面	(c) 對象	**(d) 對比**
(a) 歌詠	**(b) 歌頌**	(c) 哥兒	(d) 高重
(a) 維繫	**(b) 維持**	(c) 維修	(d) 唯有
(a) 緊張	(b) 緊迫	**(c) 緊急**	(d) 緊湊
(a) 棲身	(b) 妻子	**(c) 棲息**	(d) 淒涼
(a) 滔滔不絕	(b) 源源不絕	(c) 絡繹不絕	(d) 綿延不絕

---

[4] Correct answers are bold.

1. Boy (+FilDW; 9y, 2m)

04:45-51 This girl is (pause) doing some research (pause) work (pause) under a tree (pause) yesterday **11 words 16 syllables 6s 3DFM 1S 1GE VNAA: 9**

04:56-59 It is a monkey climbing on the tree **8 words 10 syllables 3s 1S 1GE VNAA: 4**

05:06-11 It is a bi:rd which is (pause) looking down and it is on a tree **14 words 15 syllables 5s 2DFM 2S 1GE VNAA: 7**

05:14-26 It (pause) the bird looks like a (pause) looks like (pause) it has some uh brown feathers brown and white feathers **7 words 8 syllables 12s 7DFM 1S VNAA: 5**

05:31-42 It is a plant o and it is also (*referring to an earlier picture*) growing on water (pause) There's a dragonfly: (pause) holding onto a (pause) head (pause) holding onto a leaf **18 words 24 syllables 11s 5DFM 3S VNAA: 10**

05:47-50 It is water and: it is the reflection **8 words 11 syllables 3s 1DFM 2S VNAA: 4**

05:57-06:11 This lady is trying to take a photo using the camera (pause) and she is hanging some clothes: a:nd (pause) a::nd (pause) scarves on the (pause) camera **22 words 31 syllables 14s 6DFM 2S 1GE VNAA: 12**

06:15-21 It is a i:sland (pause) a:nd it is surrounded by water (pause) It has lots of mountains **15 words 19 syllables 6s 2DFM 3S 1GE VNAA: 8**

06:33-43 (*Asked to use past tense*) There are two: (pause) uh ladies: they are (pause) on:: (pause) they're (pause) they're having a picnic and they're playing (pause) some sort of chess **15 words 19 syllables 10s 11DFM 3S VNAA: 12**

07:02-07 (*Asked to use future tense*) This girl will play (pause) the piano: (pause) when she gets older **10 words 13 syllables words 5s 3DFM 1S VNAA: 6**

07:15-23 There is a cyclist and a (pause) a:nd somebody (pause) wa:lking (pause) a:long the road **10 words 15 syllables 8s 7DFM 1S VNAA: 5**

07:25-28 They're (pause) walking up a mountain **5 words 7 syllables 3s 1DFM 1S VNAA: 4**

07:32-37 This is a fie:ld (pause) a::nd there are mountains **8 words 9 syllables 5s 2DFM 2S VNAA: 4**

Total number of (1) words: 151

(2) syllables: 197

(3) dysfluency markers: 50

(4) grammatical errors: 5

(5) sentences: 23

(6) VNAA: 90

Fluency score 1: 100.67 WPM (151 words/1.5)

Fluency score 2: 132 SPM (197 syllables/1.5)

Fluency score 3: 66.89 (100-(50DFM/151)*100)

Grammatical accuracy score: 96.69 (100-(4GE/151)*100)

Complexity score 1: 6.57

Complexity score 2: 3.74

2. Boy (+FilDW, 8y; 11m)

05:12- 05:32 There's a girl (pause) <u>sitting</u> (pause) <u>sitting</u> uuh sitting beside a <u>tree:</u> (pause) <u>Uuh</u> she's holding a pen and a notebook (pause) maybe doing some homework (pause) She wears glasses (pause) and she's wearing school uniform so maybe she's in school <u>a::nd</u> (pause) she has long hair. **36 words 46 syllables 20s 8DFM 5S 0GE VNAA: 24**

05:45-06:09 So there was (NA) monkey <u>climbing</u> climbing (NA) tree yesterday looking at me and the tail's really long (pause) and (pause) <u>uuh</u> it's climbing up in the tree almost camouflaged but I see it quite clearly (pause) and (pause) it has <u>uh</u> (pause) four legs <u>o:r</u> (pause) maybe this is hands and these are legs (pause) <u>a:nd</u> (pause) and they are suitable for climbing trees. **48 words 63 syllables 24s 9DFM 6S 4GE VNAA: 29**

06:19-07:02 It's a kind of <u>bi:rd</u> (pause) and <u>the</u> the legs are (pause) quite yellow (pause) and <u>i:t's</u> it's not standing <u>like</u> like usual birds stand (pause) and the head is facing downwards (pause) <u>a::nd</u> behind it there's a (pause) kind of a stub tree (pause) The beak has the colours of (pause) black and yellow (pause) and the eyes is quite strange there is orange (pause) and black (pause) The body has a bit of <u>white</u> (pause) white things poking out or it's just a feather (pause) <u>and</u> (pause) and it's quite (pause) sharp maybe **72 words 83 syllables 43s 13 DFM 9S 5GE VNAA: 48**

07:16-07:19 It's (NA) kind of flower <u>float</u> uuh lives in the water (pause) it's very… **10 words 13 syllables 3s 2DFM 1S 2GE VNAA: 5**

Total number of (1) words: 166

(2) syllables: 205

(3) dysfluency markers: 32

(4) grammatical errors: 11

(5) sentences: 21

(6) VNAA: 106

Fluency score 1: 110.67 WPM (166 words/1.5)

Fluency score 2: 136.67 SPM (205 syllables/1.5)

Fluency score 3: 80.73 (100-(51 DFM/126)*100)

Grammatical accuracy score: 93.37 (100-(6GE/126)*100)

Complexity score 1*: 7.9

Complexity score 2^: 3.85

3. Boy (+FilDW; 9y; 6m)

00:30-00:45 This crab had orange under body black on the top (pause) of its shell (pause) a orange and black ch (pause) clippers (pause) a black legs **21 words 26 syllables 15s 3DFM 1S 2GE VNAA: 13**

00:51-01:36 There is a woman and a child. They have blond hair. The little girl is wearing (NA) red striped and white (pause) shirt and the mother is wearing a (pause) dark blue t-shirt and the girl is wearing a white dress (pause) and the mom is wearing (pause) blu:e (pause) trousers and the girl are wearing white l:ong socks and she wore blue and pink shoes and the mother wore (pause) slippers. They are looking (pause) at a sign (pause) talking about (pause) a animal which is a goose. **80 words 96 syllables 45s 9DFM 10S 5GE VNAA: 51**

01:41-02:00 Uh this bi:rd (pause) is biting: (pause) on some sma:ll (pause) fish (pause) a:nd its beak is (pause) a bit orange:: and its underbody (pause) is plain ri white and its (pause) leg is orange:: **26 words 32 syllables 19s 13DFM 4S 1GE VNAA: 20**

02:15-02:26 This killer w::hale has (NA)white underbody (pause) a black upper body (pause) wh::ite in the middle of… **15 words 21 syllables 11s 2DFM 1S 1GE VNAA: 11**

Total number of (1) words: 142

(2) syllables: 175

(3) dysfluency markers: 27

(4) grammatical errors: 9

(5) sentences: 16

(6) VNAA: 95

Fluency score 1: 94.67 WPM (142words/1.5)

Fluency score 2: 116.67 SPM (175 syllables/1.5)

Fluency score 3: 81.12 (100-(51 DFM/126)*100)

Grammatical accuracy score: 93.70 (100-(9GE/143)*100)

Complexity score 1*: 8.94

Complexity score 2^: 5.94

4. Girl (+FilDW; 9y; 5m)

00:48-01:24 This is a (pause) cra::b (pause) who has (pause) who (pause) the (pause) he its body is orange and it's got (pause) eight legs (pause) and (pause) it has two (pause) two: (pause) ey::es (pause) and it's their eyes is very sma:ll (pause) a:nd (pause) then (pause) it's got two sharp (pause) cla:ws (pause) and pinches (pause) and it's standing on a rock. **35 words 39 syllables 36s 25DFM 7S 2GE VNAA: 25**

01:32-02:25 A mother and a:: (pause) and her daughter (pause) is standing (pause) on some grass (pause) and (pause) they are looking at some information (pause) about some(pause) goo:se (pause) and the (pause) and the mom is wearing (pause) some (pause) a slip (pause) a flip-flops (pause) and (pause) I mean sh she:: (pause) she is wearing (pause) blue: (pause) blue trousers and some (pause) and a:: (pause) dark blue t-shirt (pause) and her daughter (pause) is wearing (pause) a dress (pause) with some w:hite long socks (pause) and she is wearing (pause) a:: (pause) she is (pause) uhm (pause) her clothes are white and red… **59 words 74 syllables 53s 36DFM 5S 2GE VNAA: 36**

Total number of (1) words: 94

(2) syllables: 113

(3) dysfluency markers: 61

(4) grammatical errors: 4

(5) sentences: 12

(6) VNAA: 61

Fluency score 1: 62.66 WPM (94words/1.5)

Fluency score 2: 75.33 SPM (113 syllables/1.5)

Fluency score 3: 35.11 (100-(61 DFM/94)*100)

Grammatical accuracy score: 95.65 (100-(4GE/92)*100)

Complexity score 1*: 7.83

Complexity score 2^: 4.83

5. Girl (+FilDW; 9y; 4m)

01:40-02:05 The girl is reading (pause) is writing in her notebook (pause) uuh (pause) the girl have glasses and also she's wearing a school uniform (pause) uhm The background is (pause) She's sitting on a (pause) sitting like beside a tree (pause) and (pause) the tree is (pause) in front of the (pause) grass in the bushes. **36 words 45 syllables 25s 12DFM 5S 1GE VNAA: 20**

02:17-02:42: The next one is a monkey climbing in the branches (pause) and it got a blue (pause) face and greyer fur (pause) It got a very long tail uhm (pause) The background is in the (pause) jungle (pause) uuh which is a leaves is at the monkey's back (pause) so:: (pause) the monkey is climbing the branches. **47 words 57 syllables 25s 6DFM 5S 4GE VNAA: 26**

02:49-03:11 The bird is (pause) The bird have a yellow and black beak and she got a orange and black eyes (pause) She also have brown and white fur (pause) And she got a long yellow uh (pause) legs and (pause) the background is (pause) in the: (pause) on the tree **37 words 41 syllables 22s 8DFM 5S 4GE VNAA: 21**

03:41-03:46 Because it's got orange (pause) and uh (pause) brown feathers so I think it's a female **13 words 17 syllables 5s 3DFM 1S 0GE VNAA: 8**

03:49-04:07 The next one is a:: (pause) flower (pause) on:d the water and a dragonfly is on top of the flower (pause) The dragonfly is orange (pause) a:nd the flower is yellow and pink (pause) so the flower have an (pause) reflection in the water. **37 words 51 syllables 18s 6DFM 5S 2GE VNAA:20**

04:12-04:17 The next one is a woman holding a photo cover <u>uuh</u>… **10 words 14 syllables 5s 1DFM 1S 0GE VNAA: 7**

Total number of (1) words: 180

        (2) syllables: 225

        (3) dysfluency markers: 36

        (4) grammatical errors: 11

        (5) sentences: 22

        (6) VNAA: 102

Fluency score 1: 120 WPM (180 words/1.5)

Fluency score 2: 150 SPM (225 syllables/1.5)

Fluency score 3: 80 (100-(36 DFM/180)*100)

Grammatical accuracy score: 93.89 (100-(11GE/180)*100)

Complexity score 1*: 8.18

Complexity score 2^: 4.54

6. Boy (+FilDW 9y; 7m)

01:14-01:34 I see a girl <u>by</u> (pause) sitting (pause) next to the tree (pause) looking at something <u>hol</u> and holding a (pause) red pen (pause) <u>wi:th</u> (pause) <u>glasses</u> (pause) with black glasses (pause) on it and (pause) tying a <u>blu:e</u> (pause) knot. **26 words 32 syllables 20s 13DFM 0GE 2S VNAA: 14**

01:47-02:12 I see a monkey (pause) climbing on a branch and <u>loo</u> looks like he's a bit tired and wants to sleep (pause) <u>a:nd</u> (pause) it has <u>grey feathe</u> feather (pause) <u>a:nd</u> ah no grey fur <u>a:nd</u> (pause) beside it is some green leaves (pause) and looks like <u>he::</u> he is in the under story layer. **42 words 50 syllables 25s 10DFM 1GE 5S VNAA: 21**

02:19-02:38 I see a <u>bi::rd</u> (pause) with yellow legs (pause) <u>a:nd</u> <u>bro:::wn</u> fur <u>with</u> (pause) white triangle (pause) patterns (pause) <u>a:nd</u> (pause) looks like its looking down for some food (pause) like worms and (pause) it's standing on the branch **31 words 36 syllables 19s 9DFM 1GE 3S VNAA: 19**

02:47-03:04 I see a <u>dragonfly:</u> (pause) on <u>the:</u> (pause) plant and (pause) the plant <u>i:s</u> <u>o:n</u> <u>the:</u> river 'cause I see the (pause) brilliant shadows (pause) and the dragonfly is in red and looks like it has typhoon because it's downwards **35 words 45 syllables 17s 9DFM 3GE 5S VNAA: 17**

03:11-03:20 I see a woman (pause) looking at the picture and taking a picture of something and <u>on</u> on <u>the:</u> like photographer… **18 words 27 syllables 9s 2DFM 0GE 2S VNAA: 8**

Total number of (1) words: 152

(2) syllables: 183

(3) dysfluency markers: 43

(4) grammatical errors: 5

(5) sentences: 17

(6) VNAA: 79

Fluency score 1: 101.33 WPM (152 words/1.5)

Fluency score 2: 122 SPM (183 syllables/1.5)

Fluency score 3: 71.71 (100-(43 DFM/152)*100)

Grammatical accuracy score: 96.71 (100-(5GE/152)*100)

Complexity score 1*: 8.94

Complexity score 2^: 4.65

7. Girl (9y; 7m)

02:03-02:23 There is a student. She has glasses. She's a girl. She's sitting (<u>pause</u>) beside a tree (pause) studying (<u>pause</u>) from her book (pause) and she wears glasses. She's in a uniform (pause) and <u>in the background</u> (<u>pause</u>) she is possibly in (pause) somewhere with a lot of plants. **38 words 50 syllables 20s 5DFM 1GE 7S VNAA: 20**

03:06-03:59 There's <u>a::</u> (<u>pause</u>) unusual (<u>pause</u>) blue and purple monkey (pause) on the tree (<u>pause</u>) branches. Its tail is very long. It's holding onto the tree branch (pause) and (pause) he's <u>po</u> <u>pos</u> possibly looking at food (pause) and (pause) his eyes are white (pause) He has an orange mouth (pause) and the rest of his body is all covered in a thick fur (pause) of blue purple and (pause) a bit of (pause) brown (pause) I think (pause) <u>a:nd it's</u> (pause) and its feet and hands <u>are</u> (pause) are a darker shade of those colours mixed together (pause) a bit of blue (pause) <u>The leaves</u> there're leaves (pause) big leaves all around him <u>a:nd</u> (pause) those leaves

are green (pause) and it seems like he's in a rain forest. **98 words 119 syllables 53s 17DFM 0GE 11S VNAA: 65**

04:20-04:37 There is <u>a:</u> (pause) <u>bi:rd</u>. <u>It is</u> (pause) <u>ahm</u> (pause) <u>kin</u> on its feathers (pause) it is mostly <u>bro:wn</u> (pause) and white (pause) its body (pause) and its feet are both yellow (pause) <u>a:nd</u> its beak is also yellow. **28 words 33 syllables 17s 12DFM 0GE 4S VNAA: 16**

Total number of (1) words: 164

(2) syllables: 202

(3) dysfluency markers: 34

(4) grammatical errors: 1

(5) sentences: 22

(6) VNAA: 101

Fluency score 1: 109.33 WPM (164 words/1.5)

Fluency score 2: 134.67 SPM (202 syllables/1.5)

Fluency score 3: 79.27 (100-(34 DFM/164)*100)

Grammatical accuracy score: 99.39 (100-(1GE/164)*100)

Complexity score 1*: 7.45

Complexity score 2^: 4.59

8. Boy (+FilDW, 9y, 0m)

00:29-01:00 This is a crab (pause) on a (pause) stone (pause) His claws are (pause) all (pause) brownish and black. <u>Didn't his</u> (pause) <u>here is quite</u> (pause) here is yellow (pause) and orange. Here is the orange. And the head <u>is</u> (pause) is (pause) a bit black (pause) and yellow (pause) and the (pause) eyes are black and <u>the</u> (pause) <u>the here</u> this part is (pause) orange (pause) and the background is white. **47 words 54 syllables 31s 16DFM 0GE 8S VNAA: 29**

01:05-01:29 There is <u>th::ree</u> (pause) <u>a girl two</u> (pause) a girl (pause) a boy and a mom (pause) looking at a (pause) <u>s:ign</u> that says (pause) barnacle goose (pause) and <u>there are one</u> (pause) there are (pause) <u>seven gooses</u> (pause) <u>flying on the</u> (pause) <u>on the</u> (pause) <u>flying</u> (pause) a picture of (pause) seven gooses flying **25 words 32 syllables 24s 18DFM 1GE 2S VNAA: 14**

01:38-01:45 behind them there is a (pause) grassy forest. There's grass and then (pause) trees behind them. **14 words 18 syllables 7s 2DFM 0GE 2S VNAA: 10**

01:57-02:13 There are (pause) there's a bird (pause) stepping there's two birds stepping on a stone (pause) and the background is (pause) black (pause) and the birds' chest is (pause) white. The wings are (pause) yellow. The beak is orange and they're eating fishes. **30 words 37 words 16s 8DFM 4GE 6S VNAA: 23**

02:19-02:34 This is a (pause) killer whale (pause) killer whale on a (pause) on the sea. The in the (pause) the spots here is (pause) white (pause) and then the (pause) fins and the (pause) top body is (pause) black…**22 words 24 syllables 15s 11DFM 2GE 3S VNAA: 12**

Total number of (1) words: 138

> **(2) syllables: 165**
>
> **(3) dysfluency markers: 55**
>
> **(4) grammatical errors: 7**
>
> **(5) sentences: 21**
>
> **(6) VNAA: 87**

Fluency score 1: 92WPM (138words/1.5)

Fluency score 2: 110 SPM (165 syllables/1.5)

Fluency score 3: 60.14 (100-(51 DFM/126)*100)

Grammatical accuracy score: 94.93 (100-(7GE/138)*100)

Complexity score 1*: 6.57

Complexity score 2^: 4.14

9. Boy (+FilDW, 9y; 5m)

00:46-01:18 It's a: (pause) crab sitting on a r:ock (pause) a::nd (pause) it (pause) on its back there's (pause) a awful lot of eggs. And h it got like (pause) eight (pause) legs. A:nd its body: is orange with lots of black marks. Its eyes and the top of its shell is (pause) black and it's (pause) s:itting (pause) I mean it's standing on (pause) uuhm (pause) grey rock. **51 words 56 syllables 34s 21 DFM 6S 2GE VNAA: 27**

01:23-01:53 There's there's a (pause) there's uuhm mm there's a:: mom and ch chi:ld (pause) standing on:: some grasslands feeding a (pause) uuhm (pause) reading: (pause) reading and looking at a picture (pause) that describes barnacle goose and its si:ze (pause) cuteness (pause) **23 words 32 syllables 30s 20 DFM 1S 0GE VNAA: 14**

01:58-02:03 And it actually looks like a big cell phone and there's lots of trees (pause) behind it. **16 words 19 syllables 5s 0DFM 2S 0GE VNAA: 9**

02:17-02:38 There's (pause) few big fat ducks (pause) standing on rocks (pause) a:nd its (pause) tummy: is (pause) all white a:nd it's (pause) clipping som:e some fish with some (pause) with a beak and it got brown wings (pause) and (NA) white head but its neck is black **36 words 39 syllables 21s 10 DFM 4 GE 5S VNAA: 24**

Total number of (1) words: 126

(2) syllables: 146

(3) dysfluency markers: 51

(4) grammatical errors: 6

(5) sentences: 14

(6) VNAA: 105

Fluency score 1: 84 WPM (126 words/1.5)

Fluency score 2: 97.33 SPM (146 syllables/1.5)

Fluency score 3: 59.52 (100-(51 DFM/126)*100)

Grammatical accuracy score: 95.24 (100-(6GE/126)*100)

Complexity score 1*: 9

Complexity score 2^: 7.5

10. Boy (+FilDW; 9y, 9m) (had a cold)

00:39-01:16 I see a (pause) cra:b (pause) with (pause) which its which it has an orange body with (pause) a little (pause) with a little bit of black (pause) surrounding it (pause) e uh (pause) there (pause) its eye there (pause) uhm it was climbing it is climbing it is on a rock grey rock with little white bits on the rock and the (pause) cr:ab uh the two (pause) pinchers (pause) they're a little (pause) eh uh th the the edges are (pause) not too sharp at the pincer **41 words 49 syllables 37s 32DFM 2GE 3S VNAA: 22**

01:21-01:41 I can see: a (pause) two uh one woman and a (pause) girl who was (pause) which is looking (pause) at a big poster (pause) saying (pause) barnacle goose (pause) which which has a which looks like (pause) one of those cards where it s::ays there's weaknesses and strengths **32 words 39 syllables 20s 12DFM 1GE 2S VNAA: 22**

01:45-02:12 I can see a bird with a white belly with (pause) orange (pause) with orange legs and it has (pause) yello:w (pause) a:nd (pause) brown wings with (pause) a few (pause) fish in its mouth. It has an orange (pause) beach (pause) uh a black and white head and (pause) orange and black eyes. It it's on a (pause) bark with a black background. **48 words 53 syllables 27s 16DFM 2GE 5S VNAA: 28**

02:17 I can see an orchast uuh a black and white (pause) oro cat in the bl:ue sea… **13 words 13 syllables 6s 4DFM 0GE 1S VNAA: 7**

Total number of (1) words: 134

                (2) syllables: 149

                (3) dysfluency markers: 64

                (4) grammatical errors: 5

                (5) sentences: 11

                (6) VNAA: 79

Fluency score 1: 89.33 WPM (134 words/1.5)

Fluency score 2: 99.33 SPM (149 syllables/1.5)

Fluency score 3: 52.23(100-(64 DFM/134)*100)

Grammatical accuracy score: 96.27 (100-(5GE/134)*100)

Complexity score 1*: 12.18

Complexity score 2^: 7.18

11. Girl (+FilDW; 9y, 4m)

00:41-01:00 There's a: crab (pause) orange crab (pause) and it's stan:ding on: the stone. Its legs and hands are very sharp (pause) and (pause) the ey:es (pause) and the head is (pause) there's a little bit black colour words **31 words 35 syllables 19s 7DFM 2GE 4S VNAA: 22**

01:04-01:33 There's (pause) there's a mother and a child (pause) reading (pause) the (pause) article and (pause) the article is about goose. They're (pause) standing on (pause) in the nature a:nd: (pause) beside the mother and the child (pause) there's some (pause) tree:s a:nd (pause) leaves is: f it's wild and they're looking at (pause) the screen. **37 words 49 syllables 29s 17DFM 3GE 6S VNAA: 25**

01:40-02:00 There are two birds and they:: (pause) c:aught a prey and the prey is (pause) a fish: (pause) the birds (pause) wings (pause) are brown colour (pause) and they have a (pause) big tummy. **25 words 27 syllables 20s 8DFM 3GE 5S VNAA: 18**

02:06-02:26 The whale (pause) is hunting for its prey (pause) and some (pause) some waves are splashing towards the whale. It's swimming (pause) in the o:cea:n an:d the colour is (pause) and the whale's colour is (pause) bl:ack and a little bit white. The ocean's colour is (pause) bl:ue. **35 words 43 syllables 20s 10DFM 0GE 5S VNAA: 25**

02:32-02:34 I see a ship. **4 words 4 syllables 2s 0DFM 0GE 1S VNAA: 2**

Total number of (1) words: 132

(2) syllables: 158

(3) dysfluency markers: 42

(4) grammatical errors: 8

(5) sentences: 21

(6) VNAA: 90

Fluency score 1: 88 WPM (132 words/1.5)

Fluency score 2: 105.33 SPM (158 syllables/1.5)

Fluency score 3: 68.18 (100-(42 DFM/132)*100)

Grammatical accuracy score: 93.94 (100-(8GE/132)*100)

Complexity score 1*: 11

Complexity score 2^: 4.29

12. Girl (-FilDW; 9y, 9m)

02:28-02:55 I saw: a secondary: (pause) maybe a s::econdary pupil (pause) maybe studying under a tree: a really big tree (pause) hmm she's she's like (pause) I I think she's like fourteen years old. She she she ha she wears a glasses. She: is: s:tudying really hardly (pause) maybe get readying for a test. **37 words 56 syllables 28s 17DFM 4GE 7S VNAA: 26**

03:10-03:37 I saw a monkey cli:mbing maybe some branches (pause) around some leaves. That seems like a monkey (pause) but (pause) his tails are really long (pause) is it a bl:ue: monkey (pause) I guess and its lips is like (pause) really: uhm (pause) white (pause) whitish yellow I guess (pause) and (pause) h it's really furry. **43 words 56 syllables 27s 9DFM 3GE 6S VNAA: 31**

03:47-04:20 This is a bi:rd (pause) when I first saw it (pause) I saw him camouflaged like (pause) I can't see it's even a bird. He: ha: this bird have (pause) brow:n in it brownish feathers. His (pause) legs are really f thin (pause) but I don't know why: he only: this bird only have two legs (pause) and his beak (pause) are

206

really lo:ng. Maybe: (pause) it's really long for: eating something and his heart is really orangy. **64 words 77 syllables 33s 13DFM 3GE 7S VNAA: 45**

04:25-04:27 Ya (pause) but there's something weird like... **6 words 7 syllables 2s 0DFM 0GE**

Total number of (1) words: 150

                (2) syllables: 196

                (3) dysfluency markers: 39

                (4) grammatical errors: 10

                (5) sentences: 20

                (6) VNAA: 103

Fluency score 1: 100 WPM (150 words/1.5)

Fluency score 2: 130.67 SPM (196 syllables/1.5)

Fluency score 3: 74 (100-(39 DFM/150)*100)

Grammatical accuracy score: 93.33 (100-(10GE/150)*100)

Complexity score 1*: 7.2

Complexity score 2^: 5.15

13. (+FilDW; 8y, 9m)

01:24-01:35 There's a gi:rl writing in her notebook (pause) leaning against a tree (pause) and there's some bushes and buildings in the background. She's also (pause) wears glasses and wearing a school uniform. **29 words 40 syllables 11s 2DFM 1GE 3S VNAA: 20**

01:38-01:40 Uuh not really (pause) she looks like she's secondary. **7 words 11 syllables 2s 1DFM 0GE 1S VNAA: 5**

01:43-01:50 There's a chimpanzee climbing a tree clinging onto a tree branch with lots of leaves in the background. **18 words 23 syllables 7s 0DFM 0GE 1S VNAA: 12**

01:53-01:57 Chimpanzee? Uhm it's grey and has a very long tail. **9 words 12 syllables 4s 1DFM 0GE 1S VNAA: 7**

02:01-02:19 There:'s a: bird (pause) on a tree looking down on the ground. It ha the bird has (pause) white spots on its (pause) feathe:rs and it's a big eye (pause) and long (pause) feet (pause) and (pause) the background is dark so it might be night. **37 words 40 syllables 18s 7DFM 0GE 4S VNAA: 22**

02:25-02:37 There's a:: flower on the lake (pause) and it's: (pause) reflecting its reflection on the surface and there's a (pause) and a dragonfly landed on the flower. The flower is pink and the dragonfly is red. **30 words 43 syllables 12s 5DFM 0GE 5S VNAA: 17**

02:42-02:59 The:re is a lady:: (pause) taking a photo of a ch (pause) taking a photo of something (pause) and there's (pause) a c jacket in the middle of the camera (pause) but the lens is facing forwards so she she doesn't see the (pause) ja:cket. **31 words 43 syllables 17s 9DFM 0GE 3S VNAA: 18**

03:14-03:24 It looks like a beach with a lot of palm trees (pause) and (pause) half of the picture is the sea: and there's in the background there is some mountains. **27 words 30 syllables 10s 3DFM 0GE 3S VNAA: 15**

03:39-03:48 There are two woman playing chess on a blanket in the middle of a grass field (pause) and one woman is: scratching her head sitting down and scratching her head. **26 words 33 syllables 9s 2DFM 0GE 2S VNAA: 17**

Total number of (1) words: 214

(2) syllables: 275

(3) dysfluency markers: 30

(4) grammatical errors: 1

(5) sentences: 23

(6) VNAA: 123

Fluency score 1: 142.67 WPM (214 words/1.5)

Fluency score 2: 183.33 SPM (275 syllables/1.5)

Fluency score 3: 85.98 (100-(30 DFM/214)*100)

Grammatical accuracy score: 99.53 (100-(1GE/214)*100)

Complexity score 1*: 9.3

Complexity score 2^: 5.35

14. (+FilDW; 8y, 3m)

01:16-01:22 A girl wearing a white shirt (pause) writing on a piece of paper on a clipboard leaning against a tree. **19 words 25 syllables 6s 0DFM 0GE 1S VNAA: 11**

01:40-01:54 A monkey climbing on a (pause) tree branch (pause) a blue and (pause) the eyes are (pause) white and bl:ack while the entire body is (pause) is greyish white. **22 words 27 syllables 14s 7DFM 1GE 2S VNAA: 12**

02:00-02:16 A (pause) bi:rd with with lots of white dots (pause) on s (pause) on (pause) a and on a pile of leaves nearby a tree looking (pause) looking down the tree. **19 words 21 syllables 16s 10DFM 1GE 1S VNAA: 11**

02:34-02:50 A:: (pause) yellow and green (pause) plant with (pause) pink (pause) leaves (pause) beside it (pause) fl (pause) floating on the seef. **14 words 17 syllables 16s 8DFM 0GE 1S VNAA: 8**

03:15-03:42 A girl (pause) looking at the cam:er:a through (pause) some clo:th through some clo:th through some jacket and shirts (pause) with with a white shirt (pause) taking a picture of a (pause) a: girl or (pause) a boy: wearing a bl:ue shirts and (pause) brownish orangy jeans. **32 words 42 syllables 27s 13DFM 1GE 1S VNAA: 18**

03:48-03:59 Lots of tree::s (pause) in front of a (pause) the uhm (pause) mountains. The (pause) the sky was… **11 words 12 syllables 11s 8DFM 1GE 1S VNAA: 4**

Total number of (1) words: 117

(2) syllables: 144

(3) dysfluency markers: 46

(4) grammatical errors: 4

(5) sentences: 7

(6) VNAA: 64

Fluency score 1: 78 WPM (117 words/1.5)

Fluency score 2: 96 SPM (144 syllables/1.5)

Fluency score 3: 60.68 (100-(46 DFM/117)*100)

Grammatical accuracy score: 93.16 (100-(8GE/117)*100)

Complexity score 1*: 16.14

Complexity score 2^: 9.14

15. Boy (+FilDW; 9y, 4m)

00:52-01:03 uhm a girl with glasses and a white (pause) uniform (pause) writing (pause) maybe a bit of notes down on a notebook (pause) and there is another book underneath. **24 words 34 syllables 11s 3DFM 0GE 2S VNAA: 15**

01:19-01:35 A big-eyed monkey (pause) climbing uh it's blue (pause) climbing up some branches (pause) on the very: kind of (pause) a lot of (pause) tree with a lot of lea:ves (pause) and it has a very long tail. **27 words 32 syllables 16s 6DFM 1GE 5S VNAA: 16**

01:53-02:05 Hmm a bi:rd standing on an hmmm a very thick branc:h and a bit of lea:ves (pause) big (pause) yea a bit of leaves. **19 words 20 syllables 12s 7DFM 0GE 3S VNAA: 9**

02:10-02:19 Bro:wn and then it ha and the head turns a bit black and then it has a (pause) blueish yellow beak (pause) on the bottom it's yellow on the top it's blue. **26 words 30 syllables 9s 3DFM 0GE 4S VNAA: 14**

02:20-02:22 Maybe it's to camouflage. **4 words 6 syllables 2s 0DFM 0GE 1S VNAA: 3**

02:32-02:47 uhm a dragonfly on a (pause) on a::: f:lower (pause) with a reflection (pause) in: a:: very: (pause) clear and unpolluted (pause) kind of (pause) po:nd or maybe yea a pond **24 words 33 syllables 15s 9DFM 0GE 1S VNAA: 10**

02:54-03:17 uhm (pause) a gi:rl (pause) taking a photo (pause) and on the top of the came:ra is a (pause) er (pause) is blue shirts and a:: (pause) and a:: beige cardigan (pause) taking a photo (pause) and in the background there are two people. One is wearing a blue shirt and uh also beige kind of trousers. **42 words 53 syllables 23s 13DFM 1GE 6S VNAA: 26**

02:24 because because everything is in the…**5 words 8 syllables 2s 1DFM 0GE**

Total number of (1) words: 171

> **(2) syllables: 216**

> **(3) dysfluency markers: 42**

> **(4) grammatical errors: 2**

> **(5) sentences: 19**

> **(6) VNAA: 93**

Fluency score 1: 114 WPM (171 words/1.5)

Fluency score 2: 144 SPM (216 syllables/1.5)

Fluency score 3: 75.44 (100-(42 DFM/171)*100)

Grammatical accuracy score: 98.83 (100-(2GE/171)*100)

Complexity score 1*: 8.73

Complexity score 2^: 4.89

16. Boy (+FilDW; 8y, 9m)

01:41-01:55 This is a (pause) <u>gi:rl</u> doing homework beside a tree. <u>He</u> (pause) she is holding a pen (pause) a red pen. She is wearing glasses and (pause) has (pause) black hair. **25 words 31 syllables 14s 6DFM 0GE 3S VNAA: 17**

02:01-02:25 This is (pause) <u>s</u> like a monkey and it is climbing a tree (pause) beside it have a lot of leaves (pause) it <u>is</u> (pause) seems to be (pause) climbing (pause) on the (pause) wood and it is in the <u>fo:rest</u> and it have a long tail. It have red purple blue (pause) feathers. **44 words 56 syllables 24s 9DFM 3GE 7S VNAA: 23**

02:26-02:30 Not feathers it is <u>the:</u> (pause) hair. **6 words 7 syllables 4s 2DFM 0GE 1S VNAA: 4**

02:32-02:35 and the head have long hair and it is (pause) white. **10 words 10 syllables 3s 1DFM 1GE 2S VNAA: 6**

02:41-03:10 So this is a bird (pause) standing on (pause) the <u>tree:</u> it (pause) it have (pause) <u>a:</u> blue orange beak (pause) and (pause) black orange <u>eye:s</u> (pause) its feather is (pause) uh <u>bro:wn</u> white (pause) and seem (pause) it's like a bit orange and black (pause) and <u>have a bra</u> have some (pause) <u>uh gr</u> plants at the bottom. **41 words 47 syllables 29s 15DFM 5GE 4S VNAA: 24**

03:14-03:30 This is (pause) <u>a: li:ly::</u> (pause) and <u>a::</u> dragonfly is on top of it (pause) it is <u>pink a:nd</u> pink <u>a:nd</u> green (pause) it have (NA) reflection <u>at the</u> (pause) at <u>the:</u>… **22 words 27 syllables 16s 10DFM 2GE 3S VNAA: 10**

Total number of (1) words: 148

              (2) syllables: 178

              (3) dysfluency markers: 43

              (4) grammatical errors: 10

              (5) sentences: 20

              (6) VNAA: 111

Fluency score 1: 98.67 WPM (148 words/1.5)

Fluency score 2: 118.67 SPM (178 syllables/1.5)

Fluency score 3: 70.95 (100-(43 DFM/148)*100)

Grammatical accuracy score: 92.57 (100-(11GE/148)*100)

Complexity score 1*: 7.1

Complexity score 2^: 5.55

17. Girl (+FilDW; 8y, 11m)

01:40-01:55 There's a girl study:ing (pause) books or reading (pause) holding a pen (pause) with (pause) sitting near a tree (pause) with: (pause) blurred f:lowers behind (pause) in the background. **21 words 30 syllables 15s 7DFM 0GE 1S VNAA: 14**

02:05-02:27 There's a cu adorable little monkey: (pause) holding (pause) a (pause) thin branch (pause) with (pause) a lot of leaves in the background (pause) and (pause) it has very special black (pause) fur: (pause) with a blue face (pause) and (pause) orange chin. **31 words 39 syllables 22s 10DFM 1GE 2S VNAA: 19**

02:33-02:55 There is a: sort of eagle-like bird (pause) with: a yellow beak a:nd black tip (pause) and (pause) it has a unique feather pattern (pause) and it's standing on a branch and the back black (pause) background is black. **32 words 40 syllables 22s 7DFM 0GE 4S VNAA: 18**

03:16-03:40 There's a flower: with pink (pause) ish purplish (pause) petals with three big leaves (pause) holding it (pause) it's floating on the water a: (pause) a pond and there's a dragonfly on top of the leaves. **30 words 38 syllables 24s 5DFM 0GE 3S VNAA: 19**

03:49-03:56 There is a gi:rl (pause) a woman (pause) taking a photo with a camera. **10 words 15 syllables 6s 3DFM 0GE 1S VNAA: 6**

Total number of (1) words: 124

(2) syllables: 161

(3) dysfluency markers: 32

(4) grammatical errors: 1

(5) sentences: 10

(6) VNAA: 76

Fluency score 1: 82.67 WPM (124 words/1.5)

Fluency score 2: 107.33 SPM (161 syllables/1.5)

Fluency score 3:74.19 (100-(32 DFM/124)*100)

Grammatical accuracy score: 99.19 (100-(1GE/124)*100)

Complexity score 1*: 12.4

Complexity score 2^: 7.6

18. Boy (+FilDW; 8y, 2m)

01:36-02:01 I (pause) s::ee a girl studying (pause) under the tree (pause) uhm (pause) wearing a white uniform (pause) uh (pause) the tree is (pause) bro:wn (pause) uhh (pause) and hold (pause) and she's holding a red pen. **22 words 29 syllables 25s 12DFM 1GE 3S VNAA: 14**

02:07-02:30 I see a (pause) uhm monkey uh climbing on the branches of the tree and (pause) has (pause) which has a lot of green leaves and (pause) the monkey is: (pause) a bit (pause) bl::u:e (pause) and (pause) his (pause) mouth (pause) is (pause) kind of yellow. **32 words 37 syllables 23s 17DFM 1GE 3S VNAA: 17**

02:34-02:35 Yea it's so weird. **4 words 4 syllables 1s 0DFM 0GE 1S VNAA: 2**

02:40-02:42 It's uh around the eye is white. **6 words 7 syllables 2s 2DFM 1GE 1S VNAA: 4**

02:45-02:46 It's blue. **2 words 2 syllables 1s 0DFM 0GE 1S VNAA: 2**

02:58-03:28 I: see a (pause) brown (pause) and (pause) yellow (pause) bi:rd (pause) it's standing in the p (pause) uhm khaki uhm bro:wn branch of the tree uhm with a bit of (pause) uhm like green leaves searching for food (pause) and it has a yellow (pause) beak and orange e:ye (pause) and also has a bit (pause) of (pause) white feathers. **44 words 52 syllables 30s 16DFM 3GE 3S VNAA: 25**

03:35-03:43 I see a (pause) uhm white uh a pink flo:wer with green leaves floating in… **10 words 12 syllables 8s 6DFM 0GE 1S VNAA: 6**

Total number of (1) words: 120

> **(2) syllables: 143**
>
> **(3) dysfluency markers: 53**
>
> **(4) grammatical errors: 6**
>
> **(5) sentences: 13**
>
> **(6) VNAA: 70**

Fluency score 1: 80 WPM (120 words/1.5)

Fluency score 2: 95.33 SPM (143 syllables/1.5)

Fluency score 3: 55.83 (100-(53 DFM/120)*100)

Grammatical accuracy score: 95 (100-(6GE/120)*100)

Complexity score 1*: 9.23

Complexity score 2^: 5.38

19. Girl (+FilDW;8y, 10m) (had a cold)

01:15-01:26 A (pause) a girl: (pause) wearing school uniform is working (pause) under (pause) un (pause) next to the tree: (pause) next to the brown tree. **12 words 16 syllables 11s 11DFM 1GE 1S VNAA: 8**

01:50-02:02 There's a: there's a blue monkey (pause) climbing (pause) climbing up a (pause) a tree: (pause) and a tree next to the (pause) green leaves. **13 words 15 syllables 12s 8DFM 1GE 1S VNAA: 8**

02:19-02:29 There is a (pause) eagle with brown feathers standing on a grass nest next to the: (pause) brown tree in a: (pause) black background. **21 words 25 syllables 10s 5DFM 3GE 1S VNAA: 12**

02:41-02:43 and trying to pick some food. **6 words 7 syllables 2s 0DFM 0GE 1S VNAA: 4**

02:53-03:07 A: fl:y try to (pause) to st ascend a foreign fly is trying to stand on a green and purple (pause) flo:wer (pause) and looking at its reflection (pause) in a bl:ue lake. **22 words 29 syllables 14s 7DFM 0GE 1S VNAA: 12**

03:23-03:41 An adul wearing purple tees T:-shirts is taking a pho:to: (pause) with a f came:ra: we got a blue blue (pause) blue sky around it and a uhm (pause) (it is) in a park. **24 words 33 syllables 18s 11DFM 3GE 2S VNAA: 13**

03:48-03:53 because (pause) spring has the have the most pers people coming out. **8 words 11 syllables 5s 3DFM 1GE 1S VNAA: 5**

03:58-04:11 There are two tree:s (pause) there are two tall tree:s next to the short tree:s (pause) with a mountain behind and a blue lake in front. **20 words 22 syllables 13s 4DFM 0GE 1S VNAA: 10**

04:25-04:29 because it (NAV) got like an orange s:ky and some blue sky. **11 words 13 syllables 4s 1DFM 1GE 1S VNAA: 5**

04:47-04:48 There are two:… **3 words 3 syllables 1s 1DFM 0GE**

Total number of (1) words: 140

(2) syllables: 174

(3) dysfluency markers: 51

(4) grammatical errors: 10

(5) sentences: 10

(6) VNAA: 77

Fluency score 1: 93.33 WPM (140 words/1.5)

Fluency score 2: 116 SPM (174 syllables/1.5)

Fluency score 3: 63.57 (100-(51 DFM/140)*100)

Grammatical accuracy score: 92.86 (100-(10GE/140)*100)

Complexity score 1*: 13.7

Complexity score 2^: 7.7

20. Girl (+FilDW; 8y 1m)

01:43-01:56 <u>uhm</u> it is (pause) a <u>stu:dent</u> sitting (pause) <u>sitting on a</u> (pause) sitting (pause) <u>bel</u> (pause) sitting under the <u>tree:</u> doing its homework and writing (pause) <u>thing:s</u>. **13 words 18 syllables 13s 14DFM 2GE 1S VNAA: 8**

02:38-02:57 It is (pause) a <u>monkey:</u> (pause) climbing on some (pause) branches (pause) <u>hm</u> and <u>it is:</u> it have a long tail (pause) <u>it is s</u> it is near to the <u>came:ra</u> (pause) <u>and</u> and in the background there are lots of leaves. **29 words 35 syllables 19s 9DFM 2GE 4S VNAA: 15**

03:00-03:16 <u>The face of the</u> (pause) <u>monkey is</u> (pause) the monkey <u>got</u> (pause) <u>got</u> got black eyes and the eyes they are white and (pause) the face is mostly <u>blue:</u> <u>then:</u> the mouth is yellow. **22 words 25 syllables 16s 8DFM 0GE 4S VNAA: 14**

03:22-03:49 The * <u>is:</u> (pause) a bird standing on a branch (pause) and then the bird is <u>mostly:</u> (pause) <u>bro:wn</u> <u>with</u> and the <u>body:</u> (pause) <u>have some</u> have some white <u>feather:s</u> (pause) the nack is yellow <u>an:d</u> (pause) and it have a very long beak (pause) <u>the</u> it is standing on a tree (pause) <u>and</u> (pause) <u>there</u> (pause) and it is very near to the camera. **49words 58 syllables 27s 18DFM 4GE 7S VNAA: 26**

04:00-04:15 There is a flower on the water so there's a reflection (pause) and the insect <u>is</u> (pause) is standing on <u>the</u> (pause) the flower. The insect is orange in colour (pause) <u>an:d</u> it have <u>fou:r</u> <u>wi:ngs</u>. **31 words 41 syllables 15s 7DFM 2GE 4S VNAA: 18**

Total number of (1) words: 144

(2) syllables: 177

(3) dysfluency markers: 56

(4) grammatical errors: 10

(5) sentences: 16

(6) VNAA: 81

Fluency score 1: 96 WPM (144 words/1.5)

Fluency score 2: 118 SPM (177 syllables/1.5)

Fluency score 3: 61.81 (100-(56DFM/144)*100)

Grammatical accuracy score: 93.01 (100-(10GE/143)*100)

Complexity score 1*: 9

Complexity score 2^: 5.06

21. Boy (+FilDW; 8y, 11m)

01:19-01:41 <u>The:re</u> is <u>a:</u> (pause) student that's wearing eye glass (pause) <u>a:nd</u> have long hair that <u>ha</u> wears a <u>whi:te</u> <u>ca</u> <u>uh</u> shirt and (pause) have a green <u>tie:</u> that he is holding a pencil (pause) and <u>he:</u> is next to a tree with a background (pause) colour of green yellow blue and *. **45 words 51 syllables 22s 12DFM 6GE 3S VNAA: 26**

02:13-02:25 There is a <u>monkey:</u> that's crawling to a <u>tree</u> (pause) tree branch (pause) that have a long tail (pause) <u>a:nd he is</u> and it is grey. The background colour is (pause) green. **24 words 28 syllables 12s 5DFM 1GE 2S VNAA: 16**

02:30-02:49 There's a <u>bi:rd</u> that have <u>black</u> I mean brown feathers with white dots and a tree in the background (pause) and also <u>bl:ack</u> (pause) colours in the beak and yellow (pause) colours <u>in:</u> the <u>f uh</u> foot (pause) and the background colour is black. **37 words 44 syllables 19s 8DFM 3GE 2S VNAA: 21**

02:56-03:10 There's a <u>f:lower:</u> thats inside is pink and outside is green that have a dragonfly (pause) in the top that is red (pause) and also a reflection of the flower in the water (pause) and <u>the:</u> background colour is blue. **37 words 47 syllables 14s 3DFM 2GE 2S VNAA: 22**

03:14-03:27 It's a <u>hu:man</u> taking a <u>photo:</u> (pause) <u>augh</u> <u>that his</u> <u>her clothe is</u> (pause) <u>he have</u> she is wearing a pink pants and a <u>whi:te</u> shirt. **16 words 20 syllables 13s 8DFM 1GE 2S VNAA: 10**

Total number of (1) words: 159

              (2) syllables: 194

              (3) dysfluency markers: 36

              (4) grammatical errors: 14

              (5) sentences: 16

              (6) VNAA: 95

Fluency score 1: 106 WPM (159 words/1.5)

Fluency score 2: 129.33 SPM (194 syllables/1.5)

Fluency score 3: 77.36 (100-(36DFM/159)*100)

Grammatical accuracy score: 91.19 (100-(14GE/159)*100)

Complexity score 1*: 9.94

Complexity score 2^: 5.94

22. Girl (+FilDW; 8y, 11m)

01:59-02:20 She's a girl (<u>pause</u>) with bangs and glasses (pause) she has a few clips (<u>pause</u>) in her hair (pause) and she has tied (<u>pause</u>) a half ponytail (pause) and the hairband is (<u>pause</u>) blue (pause) and I think she's drying something (pause) and she's wearing a uniform. **38 words 47 syllables 21s 4DFM 0GE 6S VNAA: 22**

02:40-02:57 It's a monkey (pause) and its colour is (<u>pause</u>) <u>grey:</u> (pause) <u>blue:</u> black white (pause) and (<u>pause</u>) its eyes are (<u>pause</u>) <u>pretty:</u> (<u>pause</u>) ovalish. **17 words 22 syllables 17s 7DFM 0GE 3S VNAA: 12**

03:00-03:04 Climbing <u>on a</u> (<u>pause</u>) <u>f</u> on a (<u>pause</u>) few thin branches. **6 words 8 syllables 4s 4DFM 0GE 1S VNAA: 4**

03:11-03:35 It's a <u>bi:rd</u> (<u>pause</u>) with (<u>pause</u>) eyes which are (<u>pause</u>) orange and black and a beak (<u>pause</u>) which is (<u>pause</u>) grey and (<u>pause</u>) yellow (pause) it has a special pattern on its body (pause) the legs are quite long (pause) and they are yellow (pause) it has wings. **38 words 44 syllables 24s 7DFM 0GE 5S VNAA: 22**

03:56-04:15 This is a (<u>pause</u>) <u>f:lo:wer</u> with a dragonfly. Its <u>f</u> reflection reflects (pause) on <u>the::</u> lake (pause) the lake is (pause) blue <u>with a few</u> with <u>a:::</u> (<u>pause</u>) motion of the waves (pause) or (<u>pause</u>) water. **28 words 36 syllables 21s 8DFM 0GE 3S VNAA: 12**

04:24-04:27 That's a girl with long (pause)…**5 words 5 syllables 3s 1DFM 0GE**

Total number of (1) words: 134

> **(2) syllables: 162**
>
> **(3) dysfluency markers: 31**
>
> **(4) grammatical errors: 0**
>
> **(5) sentences: 13**
>
> **(6) VNAA: 72**

Fluency score 1: 89.33 WPM (134 words/1.5)

Fluency score 2: 108 SPM (162 syllables/1.5)

Fluency score 3: 76.87 (100-(31DFM/134)*100)

Grammatical accuracy score: 100 (100-(0GE/134)*100)

Complexity score 1*: 9.92

Complexity score 2^: 5.54

23. Boy (+FilDW; 8y, 7m)

02:42-02:55 There (pause) is (pause) a (pause) gi:rl (pause) wearing (pause) glasses (pause) sitting (pause) beside a tree (pause) and looking in (pause) at her notebook (pause) writing something. **17 words 25 syllables 13s 8DFM 0GE 1S VNAA: 10**

03:07-03:09 A bit older than me. **5 words 6 syllables 2s 0DFM 0GE 1S VNAA: 2**

03:16-03:17 This is a monkey? **4 words 5 syllables 1s 0DFM 0GE 1S VNAA: 2**

03:23-04:05 This monkey: (pause) has (pause) s a lot of (pause) is grey (pause) e with (pause) black (pause) with black legs (pause) and hands climbing a tree (pause) it has (pause) a big (pause) black eye (pause) and a s small yellow mouth with small ears (pause) it also have a very long tail (pause) I think that (pause) he:: (pause) u it lives in a forest (pause) because (pause) there has a lot of leaves and trees. **51 words 57 syllables 42s 17DFM 3GE 4S VNAA: 31**

04:20-04:21 Oh I don't know what is it. **7 words 7 syllables 1s 0DFM 1GE 1S VNAA: 3**

04:28-04:29 I think it's a bird. **5 words 5 syllables 1s 0DFM 0GE 1S VNAA: 3**

04:46-05:16 This bird has (pause) some (pause) bro:wn feathers (pause) with ay (pause) with a pair of (pause) yellow leg (pause) it has (pause) a (pause) black eye (pause) with (pause) orange (pause) around (pause) that (pause) the eye (pause) the: yell:ow beak is (pause) very long (pause) and (pause) and its neck (pause) there has some (pause). **31 words 36 syllables 30s 21DFM 2GE 3S VNAA: 20**

Total number of (1) words: 120

> **(2) syllables: 141**
>
> **(3) dysfluency markers: 46**
>
> **(4) grammatical errors: 6**
>
> **(5) sentences: 12**
>
> **(6) VNAA: 71**

Fluency score 1: 80 WPM (120 words/1.5)

Fluency score 2: 94 SPM (141 syllables/1.5)

Fluency score 3: 61.66 (100-(46DFM/120)*100)

Grammatical accuracy score: 95 (100-(6GE/120)*100)

Complexity score 1*: 9.67

Complexity score 2^:

24. Girl (+FilDW; 8y, 9m)

01:19-01:31 <u>Uh uh</u> a secondary <u>gi:rl</u> with glasses (pause) the uniform is white and green. She's writing. She's sitting next (pause) to a tree. **19 words 27 syllables 12s 4DFM 0GE 4S VNAA: 12**

01:44-02:06 <u>A:: m:onkey:</u> (pause) climbing on a (pause) <u>tree:: bra:nch</u> (pause) with (pause) a big <u>mo::ld</u> and there's some leaves around and it is (pause) kind <u>o:f</u> white and a bit (pause) <u>uhm</u> black. **26 words 29 syllables 20s 12DFM 0GE 3S VNAA: 13**

02:13-02:27 A <u>b:i:rd</u> (pause) standing <u>on:</u> (pause) a tree <u>bra:nch</u> (pause) looking <u>do:wnwards</u> and (pause) it <u>is:</u> (pause) <u>bro:wn</u>. **13 words 16 syllables 14s 10DFM 0GE 2S VNAA: 8**

02:34-02:49 <u>Uhm there's:</u> more than one colour (pause) there <u>is:</u> a bit white <u>s:pots</u> (pause) it's like <u>arro:ws</u> and the neck <u>is:</u> (pause) <u>o:range</u>. **19 words 22 syllables 15s 8DFM 1GE 4S VNAA: 12**

02:53-02:55 And the head <u>is:</u> (pause) black. **5 words 5 syllables 2s 2DFM 0GE 1S VNAA: 3**

03:03-03:13 A flower in a <u>po:n:d</u> (pause) with a dragonfly on <u>an:d</u> a reflection of it. <u>The:</u> pond is (pause) blue. **18 words 23 syllables 10s 4DFM 0GE 2S VNAA: 4**

03:17-03:20 Pink. Inside is pink and outside is green. **8 words 10 syllables 3s 0DFM 0GE 2S VNAA: 6**

03:30-03:44 A <u>wo:man</u> holding a camera <u>a:nd</u> (pause) on top of the camera (pause) there's clothes (pause) the jacket is (pause) <u>bitter:</u> **17 words 23 syllables 14s 6DFM 0GE 2S VNAA: 11**

Total number of (1) words: 125

        (2) syllables: 155

        (3) dysfluency markers: 46

        (4) grammatical errors: 1

        (5) sentences: 20

        (6) VNAA: 69

Fluency score 1: 83.33 WPM (125 words/1.5)

Fluency score 2: 103.33 SPM (155 syllables/1.5)

Fluency score 3: 63.20 (100-(46DFM/125)*100)

Grammatical accuracy score: 99.20 (100-(1GE/125)*100)

Complexity score 1*: 6.05

Complexity score 2^: 3.45

25. Girl (+FilDW; 8y, 4m)

01:24-01:37 There is a girl that wear (pause) glasses sitting beside a tree and (pause) studying (pause) studying (pause) some (pause) studying (pause) some books. **15 words 20 syllables 13s 9DFM 1GE 1S VNAA: 9**

01:46-01:58 There is a guerrilla (pause) climbing in a very: (pause) thin tree (pause) There is a baby guerrilla climbing in a very small tree. **11 words 16 syllables 12s 2DFM 0GE 1S VNAA: 8**

02:01-02:05 I think it is (pause) purple and grey. **7 words 8 syllables 4s 1DFM 0GE 1S VNAA: 4**

02:11-02:29 There is a bird that is (pause) that is (pause) bro:wn (pause) it has some white spots and close to its head it is it has some yellow fur on it and it has a very long beak and two feets. **34 words 36 syllables 18s 5DFM 1GE 4S VNAA: 20**

02:35-02:43 There is a dra:gonfly (pause) eating some (pause) water lily: that lives in the water. **13 words 19 syllables 8s 3DFM 0GE 1S VNAA: 8**

02:46-02:57 The colour is (pause) the lily out outlook of the water lily is (pause) green but the inside of the water lily is (pause) p:ink and purple. **19 words 26 syllables 11s 7DFM 0GE 2S VNAA: 11**

03:04-03:28 There is a woman (pause) taking (pause) pictu:res of (pause) something in (pause) in the woods (pause) there is a woman taking pictures of something (pause) and it has (pause) some (pause) kind it has some kinds of cloth on her came:ra. **29 words 40 syllables 24s 11DFM 2GE 3S VNAA: 15**

Total number of (1) words: 128

             (2) syllables: 164

             (3) dysfluency markers: 40

             (4) grammatical errors: 5

             (5) sentences: 13

             (6) VNAA: 75

Fluency score 1: 85.33 WPM (128 words/1.5)

Fluency score 2: 109.33 SPM (164 syllables/1.5)

Fluency score 3: 68.75 (100-(40DFM/128)*100)

Grammatical accuracy score: 96.09 (100-(5GE/128)*100)

Complexity score 1*: 9.84

Complexity score 2^: 5.77

26. Girl (+FilDW; 8y, 4m)

01:38-01:56 The gi::rl is:: (pause) recording (pause) what s:he sees (pause) and (pause) she is wearing (pause) (NA) white and (pause) green uniform (pause) tshe she wear a eye glasses. **20 words 26 syllables 18s 9DFM 3GE 3S VNAA: 12**

02:01-02:07 She is: on the (pause) gra:ss (pause) and leaning on the tree. **10 words 11 syllables 6s 4DFM 0GE 1S VNAA: 4**

02:10-02:17 The monkey is: (pause) the monkey has black feathers and (pause). **6 words 8 syllables 7s 3DFM 0GE 1S VNAA: 4**

02:30-02:44 It has black hair and (NA) grey: tail (pause) the monkey is climbing on a tree (pause) looking far away (pause) it is in a forest. **23 words 28 words 14s 1DFM 2GE 3S VNAA: 14**

02:49-03:03 The bi:rd (pause) is: (pause) the bird's feather is (pause) bro:wn with white spots (pause) it has (NA) white and blue beak with orange and black eyes. **19 words 21 syllables 14s 6DFM 3GE 2S VNAA: 13**

03:17-03:30 The fly: have (pause) red (pause) red wings a:nd (pause) and (NAV) stand:ing on a f:lo:wer looking at its reflection. **16 words 21 syllables 13s 8DFM 2GE 1S VNAA: 8**

03:38-03:56 The gi:rl is:: (pause) is wearing white and pink shirts (pause) uhm it has black hair. She is taking a pho:to: on (pause) with lots of people. **20 words 24 syllables 18s 7DFM 2GE 3S VNAA: 14**

Total number of (1) words: 114

        (2) syllables: 139

        (3) dysfluency markers: 38

        (4) grammatical errors: 12

        (5) sentences: 14

        (6) VNAA: 69

Fluency score 1: 76 WPM (114 words/1.5)

Fluency score 2: 92.67 SPM (139 syllables/1.5)

Fluency score 3: 72.66 (100-(38DFM/139)*100)

Grammatical accuracy score: 89.47 (100-(12GE/114)*100)

Complexity score 1*: 8.14

Complexity score 2^: 4.92

27. Boy (+FilDW; 9y, 0m)

01:30-01:45 There is a person sitting down taking notes (pause) by the tree <u>an::d the</u> (pause) <u>a:nd</u> (it is) a bit (pause) blur <u>an:d</u> (there are) <u>som:e</u> some <u>flo:wers</u> (pause) I guess (pause) around (pause) the tree. **24 words 29 syllables 15s 8DFM 5GE 3S VNAA: 14**

01:49-01:53 It's a woman wearing glasses and has a ponytail. **9 words 14 syllables 4s 0DFM 0GE 1S VNAA: 6**

02:04-02:23 There's a <u>mo:nkey: on::</u> the branches climbing the branches and the monkey <u>is</u> (pause) has a long (pause) <u>uhm</u> grey tail and (pause) sort of grey black grey <u>fur:</u> (pause) <u>an:d</u> (pause) leaves around it. **28 words 34 syllables 19s 10DFM 0GE 2S VNAA: 18**

02:25-02:27 The face (pause) (NV) quite cheeky. **4 words 5 syllables 2s 0DFM 1GE 1S VNAA: 3**

02:36-02:52 <u>There:'s</u> (pause) light blue <u>uhm</u> (pause) kind of (pause) <u>uhm</u> (pause) <u>bro:wn</u> (pause) black brown peach (pause) <u>a::nd</u> white (pause) around his eyes. **14 words 15 syllables 16s 11DFM 0GE 1S VNAA: 10**

02:58-03:32 There is a <u>a::</u> (pause) <u>bi:rd</u> (pause) (NCj) a lot of colours (pause) like grey yellow <u>uhmm</u> (pause) <u>a:nd</u> brown and white (pause) kneeling down try to pick up food I think (pause) <u>a:nd some</u> (pause) <u>hm</u> behind it is a tree and (pause) <u>uhm</u> some grass (pause) under it and <u>then::</u> this one (pause) there is a red dragonfly <u>pu uhm</u> purple (pause) leaf (pause) in the middle… **48 words 57 syllables 34s 15DFM 2GE 3S VNAA: 26**

Total number of (1) words: 127

                    (2) syllables: 154

                    (3) dysfluency markers: 44

                    (4) grammatical errors: 8

                    (5) sentences: 11

                    (6) VNAA: 77

Fluency score 1: 84.66 WPM (127 words/1.5)

Fluency score 2: 102.67 SPM (154 syllables/1.5)

Fluency score 3: 65.35 (100-(44DFM/154)*100)

Grammatical accuracy score: 93.7 (100-(8GE/127)*100)

Complexity score 1*: 11.54

Complexity score 2^: 7

28. Boy (+FilDW; 9y, 4m)

01:43-02:04 I can see a girl (pause) which is wearing glasses (pause) <u>uh</u> <u>she is tie:</u> she is tie (pause) a (pause) <u>ponytail:</u> <u>it</u> she (pause) wore a white shirt she is writing something down (pause) behind a tree. **26 words 33 syllables 21s 7DFM 3GE 4S VNAA: 12**

02:10-02:12 She is older than me. **5 words 6 syllables 2s 0DFM 0GE 1S VNAA: 2**

02:15-02:32 I can see a grey monkey climbing (<u>pause</u>) up some branches (pause) because I can (<u>pause</u>) see some leaves at the background (pause) I think <u>it's</u> (<u>pause</u>) <u>mhm</u> it's about afternoon. **24 words 31 syllables 17s 5DFM 0GE 2S VNAA: 16**

02:54-03:25 I can see a bird (pause) standing (<u>pause</u>) on a tree (pause) and (<u>pause</u>) the bird has some (<u>pause</u>) brown (<u>pause</u>) and white (<u>pause</u>) and (<u>pause</u>) orange (<u>pause</u>) ish (<u>pause</u>) colour (<u>pause</u>) for the feathers (pause) and (<u>pause</u>) it has a (<u>pause</u>) black eye with (<u>pause</u>) a (<u>pause</u>) yellow circle around it (pause) and it has a (<u>pause</u>) black and yellow coloured beak. <u>I think it's</u> (<u>pause</u>) I think it's night because the background is quite dark. **60 words 71 syllables 31s 16DFM 0GE 5S VNAA: 30**

03:32-03:48 I can see <u>a:</u> (<u>pause</u>) <u>p:ink</u> flower with some green and yellow leaves (pause) and there is a dragonfly above it. It is in the ocean because I can see the reflection (<u>pause</u>) of the <u>flo:wer</u>. **33 words 42 syllables 16s 5DFM 0GE 3S VNAA: 16**

03:51-03:54 I can see a <u>gi:rl</u> take…**6 words 6 syllables 3s 1DFM 0GE**

Total number of (1) words: 154

    (2) syllables: 189

    (3) dysfluency markers: 34

    (4) grammatical errors: 3

    (5) sentences: 15

    (6) VNAA: 76

Fluency score 1: 102.67 WPM (154 words/1.5)

Fluency score 2: 126 SPM (189 syllables/1.5)

Fluency score 3: 77.92 (100-(34DFM/154)*100)

Grammatical accuracy score: 98.05 (100-(3GE/154)*100)

Complexity score 1*: 9.87

Complexity score 2^: 5.07

29. Girl (+FilDW; 9y, 7m)

01:25-01:34 I can see (pause) a student (pause) by a tree (pause) revising <u>on her</u> (pause) <u>uh</u> (pause) on her studies. **12 words 16 syllables 9s 5DFM 0GE 1S VNAA: 6**

01:47-01:55 I can see a monkey (pause) on a tree. Its <u>body:</u> is (pause) grey (pause) ish. **12 words 15 syllables 8s 4DFM 0GE 2S VNAA: 7**

01:59-02:01 And the <u>f:ace</u> is (pause) blue. **5 words 5 syllables 2s 1DFM 0GE 1S VNAA: 3**

02:06-02:08 <u>He</u> it has a really big mouth. **6 words 7 syllables 2s 1DFM 0GE 1S VNAA: 4**

02:18-02:25 I can see a bird (pause) looking down (pause) on the floor (pause) at night to find food. **15 words 16 syllables 7s 0DFM 0GE 1S VNAA: 9**

02:29-02:41 It has a <u>bro:wn</u> (pause) <u>body:</u> (pause) a long (pause) beak (pause) and its neck it's (pause) orange (pause) <u>bro:wn</u>. **14 words 15 syllables 12s 7DFM 0GE 2S VNAA: 9**

02:48-03:03 I can see a (pause) <u>uhm</u> lily flower on the water (pause) with a red dragonfly on top <u>of it</u> of the petals. The petals are uh pink in colour. **24 words 32 syllables 15s 4DFM 0GE 2S VNAA: 13**

03:16-03:38 I can see a (pause) <u>wome:n</u> (pause) looking in a <u>came:ra:</u> (pause) <u>under a jacket</u> under layers of jacket (pause) <u>uh</u> the <u>backgrou:nd</u> is (pause) <u>or</u> orange and green (pause) and I think that she's taking a picture of someone or something **31 words 44 syllables 22s 8DFM 1GE 3S VNAA: 16**

03:44-03:48 because I can see <u>the</u> (pause) <u>uh</u> the woman is wearing short sleeves. **10 words 14 syllables 5s 3DFM 1GE 1S VNAA: 7**

03:54-04:03 I can see (pause) a lots of trees (pause) and mountains (pause) <u>uh</u> it's sunset because the…**13 words 17 syllables 9s 2DFM 1GE 1S VNAA: 7**

Total number of (1) words: 157

             (2) syllables: 181

(3) dysfluency markers: 35

(4) grammatical errors: 2

(5) sentences: 15

(6) VNAA: 81

Fluency score 1: 104.67 WPM (157 words/1.5)

Fluency score 2: 120.67 SPM (181 syllables/1.5)

Fluency score 3: 77.71 (100-(35DFM/157)*100)

Grammatical accuracy score: 98.73 (100-(2GE/157)*100)

Complexity score 1*: 10.2

Complexity score 2^: 5.4

30. Girl (+FilDW; 9y, 6m)

00:37-01:01 I (pause) saw (pause) a: crab (pause) uhm sitting on a rock and the crab (pause) has (pause) uhm (pause) uh eight cla:ws and (pause) it is (pause) black and o:range and (pause) uh it is standing on a (pause) on a grey rock. **28 words 31 syllables 24s 17DFM 1GE 4S VNAA: 15**

01:06-01:37 I saw (pause) uhm a woman (pause) bringing a child which is a girl (pause) uhm and they are looking (pause) uhm at at a at a:: (pause) poster (pause) they are (pause) the poster's about a goose and they're (pause) uhm walking on the grass and (pause) there are so many trees around and there's a blue sky above them. **43 words 51 syllables 31s 16DFM 2GE 5S VNAA: 23**

01:41-02:00 I saw two: bi:rds eating. They uhm (pause) they: (pause) they have (pause) uh (pause) yellow and brown feathers (pause) and they have a (pause) white tummy and two: orange (pause) uh feet (pause) and they are eating f:ish. **26 words 32 syllables 19s 15DFM 3GE 4S VNAA: 17**

02:06-02:22 I saw a wha:le (pause) uhm in the water. It splash the water (pause) and (pause) the whale is (pause) uhm (pause) black to (pause) dark blue: and (pause) the water is:…**23 words 25 syllables 16s 11DFM 2GE 3S VNAA: 11**

Total number of (1) words: 120

(2) syllables: 139

(3) dysfluency markers: 60

(4) grammatical errors: 8

(5) sentences: 16

(6) VNAA: 66

Fluency score 1: 80 WPM (120 words/1.5)

Fluency score 2: 92.67 SPM (139 syllables/1.5)

Fluency score 3: 50 (100-(60DFM/120)*100)

Grammatical accuracy score: 93.33 (100-(8GE/120)*100)

Complexity score 1*: 7.25

Complexity score 2^: 4.13

31. Girl (+FilDW; 8y, 1m)

01:13-01:25 I see a (pause) gi:rl (pause) writing on a piece of paper (pause) buh (pause) in front of a tree: (pause) and she's wearing a uniform. **20 words 24 syllables 12s 5DFM 0GE 2S VNAA: 9**

01:29-01:30 A school uniform. **3 words 5 syllables 1s 0DFM 1S VNAA: 2**

01:36-01:38 Because she looks very big. **5 words 7 syllables 2s 0DFM 0GE 1S VNAA: 3**

01:43-01:56 It is a m:onkey (pause) cli:mbing on a (pause) climbing (pause) that (pause) its tail is straight (pause) and (pause) it's grey in colour. **14 words 17 syllables 13s 6DFM 0GE 3S VNAA: 9**

01:59-02:06 Its (pause) eyes (pause) are s:urrounded by (pause) white (pause) it has black eyes. **10 words 12 syllables 7s 5DFM 0GE 2S VNAA: 7**

02:11-02:19 It's a bird with a yellow beak and feet on (pause) a tree (pause) a:nd (pause) it has white spots. **17 words 18 syllables 8s 3DFM 0GE 2S VNAA: 9**

02:26-02:35 It is a f:lo:wer on the water. There's a dragonfly (pause) on the flower and (pause) it has a (pause) reflection. **18 words 24 syllables 9s 4DFM 0GE 3S VNAA: 9**

02:38-02:44 It (pause) is: the flower is pink (pause) and the dragonfly is orange. **9 words 14 syllables 6s 3DFM 0GE 2S VNAA: 6**

02:50-03:01 I see (pause) a girl looking (pause) in (pause) a (pause) came:ra: (pause) an:d there are some (pause) clothing on top of the came:ra. **19 words 25 syllables 11s 8DFM 0GE 2S VNAA: 9**

03:14-03:19 Because she's wearing (pause) like very thin clothes and (pause) it's very short. **11 words 14 syllables 5s 2DFM 0GE 2S VNAA: 8**

03:23-03:34 It is (pause) a lot of mountains and <u>tree:s</u> (pause) that are very green (pause) and (pause) very clear water. **16 words 18 syllables 11s 4DFM 2GE 1S VNAA: 10**

03:40-03:45 <u>Maybe it's a</u> I think it is (pause) when the sun is (pause) going down **10 words 11 syllables 5s 3DFM 0GE 1S VNAA: 7**

Total number of (1) words: 152

   (2) syllables: 188

   (3) dysfluency markers: 43

   (4) grammatical errors: 2

   (5) sentences: 22

   (6) VNAA: 88

Fluency score 1: 101.33WPM (152 words/1.5)

Fluency score 2: 125.33 SPM (188 syllables/1.5)

Fluency score 3: 71.71 (100-(43DFM/152)*100)

Grammatical accuracy score: 98.69 (100-(2GE/152)*100)

Complexity score 1*: 6.91

Complexity score 2^: 4

32. Boy (+FilDW; 8y, 9m)

01:14-01:23 This (pause) girl is (pause) doing her homework (pause) beside (pause) a (pause) giant (pause) brown tree. **11 words 15 syllables 9s 5DFM 0GE 1S VNAA: 7**

01:35-01:36 She is older than me. **5 words 6 syllables 1s 0DFM 0GE 1S VNAA: 3**

01:40-01:41 I think it is spring. **5 words 5 syllables 1s 0DFM 0GE 1S VNAA: 3**

01:45-01:48 Because the (pause) trees are blooming (pause) yellow and green. **8 words 11 syllables 3s 1DFM 0GE 1S VNAA: 5**

01:54-02:07 This monkey (pause) is climbing (pause) a (pause) red orange tree (pause) <u>b</u> beside some (pause) green leaves. Its tail is very long and white and its body is brown. **24 words 30 syllables 13s 5DFM 0GE 3S VNAA:17**

02:11-02:17 <u>The face</u> (pause) the (pause) mouth is (pause) a bit <u>orang:e</u> and its eyes are big. **11 words 12 syllables 6s 5DFM 0GE 2S VNAA: 6**

02:26-02:42 This bird (<u>pause</u>) is (<u>pause</u>) stepping on (<u>pause</u>) a tree trunk (pause) and (<u>pause</u>) its eyes (<u>pause)</u> are (<u>pause</u>) orange and big. Its beak is blue and yellow (pause) and its body is brown and white. **28 words 32 syllables 16s 6DFM 0GE 4S VNAA: 17**

02:50-03:03 There's a dragonfly (pause) on top of a little flower (pause) on the pond. The flower is pink (<u>pause</u>) and green (pause) and the dragonfly is (<u>pause</u>) bright orange and red. **26 words 34 syllables 13s 2DFM 0GE 3S VNAA: 16**

03:14-03:19 This woman is older than me. She is taking photos (pause) with her jacket. **13 words 18 syllables 5s 0DFM 0GE 2S VNAA: 7**

03:25-03:31 <u>She:</u> (<u>pause</u>) she is using (<u>pause</u>) a <u>came:ra</u> and taking photos of her jacket. **12 words 18 syllables 6s 4DFM 0GE 1S VNAA: 6**

03:37-03:42 Summer (pause) because she is wearing short clothes (pause) and everything is green. **11 words 15 syllables 5s 0DFM 0GE 2S VNAA: 7**

03:47-03:59 There's (<u>pause</u>) a lot of palm trees (pause) on the beach and some very tall mountains. The sea is (<u>pause</u>) bright green and blue (pause) and the sky is orange. **26 words 28 syllables 12s 2DFM 0GE 3S VNAA: 17**

Total number of (1) words: 188

> **(2) syllables: 224**

> **(3) dysfluency markers: 30**

> **(4) grammatical errors: 0**

> **(5) sentences: 24**

> **(6) VNAA: 112**

Fluency score 1: 125.33 WPM (188 words/1.5)

Fluency score 2: 149.33 SPM (224 syllables/1.5)

Fluency score 3: 84.04 (100-(30DFM/188)*100)

Grammatical accuracy score: 100 (100-(0GE/188)*100)

Complexity score 1*: 7.83

Complexity score 2^: 4.67

33. Boy (+FilDW; 9y, 1m)

02:58-03:18 This girl is <u>sitting (pause)</u> <u>lying down on a tree trunk</u>, sitting to: (pause) <u>wri:te (pause)</u> <u>a:nd (pause)</u> <u>she is (pause)</u> <u>doing (1)</u> she <u>i:s</u> trying to read something (pause) like it's her homework. **17 words 21 syllables 20s 14DFM 0GE 2S VNAA: 9**

03:23-03:43 This is a picture of a monkey. It is climbing on <u>s (pause)</u> a <u>very:: s::</u> (pause) <u>a very:: s:</u> (pause) small (pause) stick. (pause) It have a very long tail. It is white (pause) and its body is (pause) black, and its face is blue. **34 words 40 syllables 20s 11DFM 1GE 6S VNAA: 20**

03:49-04:14 This is a (pause) picture of a bird standing on a tree. (pause) It have a very sharp beak. Half of it is blue. Half of it is (pause) yellow (pause) it have orange <u>eye:s</u> with black dots in the middle. The <u>feathe:rs</u> are brown (pause) and (NPr) some (pause) droplets of white (pause) <u>wing</u> (pause) white feathers. **48 words 56 syllables 25s 8DFM 3GE 7S VNAA: 28**

04:18-04:43 This is a flower <u>on:</u> (pause) in the water. Half of it struck out of the water (pause) it has shadows and there's a <u>dra:gonfly:</u> on its (pause) leaf. It have (pause) <u>pink</u> (pause) pink petals (pause) and green leaves (pause) the <u>dragonfly:</u> is (pause) orange. **25s 37 words 47 syllables 10DFM 2GE 6S VNAA: 21**

Total number of (1) words: 136

                (2) syllables: 164

                (3) dysfluency markers: 43

                (4) grammatical errors: 6

                (5) sentences: 21

                (6) VNAA: 78

Fluency score 1: 90.67 WPM (136 words/1.5)

Fluency score 2: 109.33 SPM (164 syllables/1.5)

Fluency score 3: 68.38 (100-(43 DFM/136)*100)

Grammatical accuracy score: 95.59 (100-(6GE/136)*100)

Complexity score 1*: 6.48

Complexity score 2^: 3.71

34. Girl (+FilDW; 9y, 6m)

02:00-02:26 This is a (pause) gi:rl (pause) maybe going to school at the morning (pause) sitting beside a tree doing (pause) maybe practicing or doing homework (pause) and (pause) she she is wearing a (pause) short sleeve skirt with (pause) a (pause) green tie: (pause) a:nd with black (pause) or brown hai:r (pause) with a blue hair tie **44 words 54 26s 13DFM 1GE 2S VNAA: 25**

02:32-02:51 This is a monkey: on a (pause) I think these ar:e (pause) tree bra::nches (pause) with (pause) in the morning (pause) I think it's finding food (pause) looking everywhere (pause) with green leaves (pause) for the background (pause) a:nd (pause) it's (pause) still morning. **31 words 40 syllables 19s 12DFM 0GE 3S VNAA: 19**

02:57-03:24 This is (pause) a (pause) bi:rd standing on a log (pause) with (pause) resting resting. This bird has (pause) white and (pause) brown feathe:rs (pause) with a yellow beak (pause) yellow and black beak (pause) orange and black eyes (pause) and bro:wn (pause) and a bl:ack black thing black (pause) f:eathers on (pause) top of its head. **36 words 42 syllables 27s 18DFM 0GE 2S VNAA: 20**

03:37-03:55 Oh this is a f:lo:wer (pause) uhm I think that (pause) uhm it's bra broke a:nd fell into the water: (pause) very beautifully (pause) with a uhm orange dragonfly on it. The flower is (pause) p:ink (pause) a:nd (pause) the leaves are green… **32 words 40 syllables 18s 12DFM 1GE 3S VNAA: 18**

Total number of (1) words: 142

> **(2) syllables: 176**

> **(3) dysfluency markers: 55**

> **(4) grammatical errors: 2**

> **(5) sentences: 10**

> **(6) VNAA: 82**

Fluency score 1: 94.67 WPM (142words/1.5)

Fluency score 2: 117.33 SPM (176 syllables/1.5)

Fluency score 3: 61.27 (100-(55 DFM/142)*100)

Grammatical accuracy score: 98.59 (100-(2GE/142)*100)

Complexity score 1*: 14.2

Complexity score 2^: 8.2

1. Boy (-FilDW; 9y; 10m)

00:58-01:06 A s:tu:dent (pause) holding a notebook (pause) writing with a red pen (pause) next to a tree. **14 words 18 syllables 8s 3DFM 0GE 1S VNAA: 8**

01:24-01:32 A monkey:-like animals holding a (pause) holding a tree-like stick (pause) in the forest. **10 words 16 syllables 8s 3DFM 1GE 1S VNAA: 6**

01:59-02:07 A (pause) a: (pause) what is this called again? **5 words 6 syllables 8s 4DFM 0GE 1S VNAA: 3**

02:18-02:39 A bird with: (pause) (NA) yellow beak (pause) and legs and some (pause) parts of the fur: and (NP) has a: (pause) orange: (pause) orange outside and (pause) a black inside eye (pause) a a slightly dark head (pause) a:nd on on top of his beak it has a sh (pause) dark (pause) blue colour. **37 words 43 syllables 21s 16DFM 3GE 3S VNAA: 22**

02:48-02:56 The next one is (pause) a flowers s::itting on the water (pause) with a dragonfly on it. **15 words 20 syllables 8s 2DFM 1GE 1S VNAA: 7**

03:12-03:23 A woman (pause) looking inside the camera which is covered by some of clothes (pause) wi:th a treepod (pause) trying to take pictures. **20 words 29 syllables 11s 2DFM 1GE 2S VNAA: 12**

03:27-03:30 No uh she is wearing short sleeves **6 words 7 syllables 3s 1DFM 0GE 1S VNAA: 4**

03:37-03:45 The next one uh is a picture of a f::orest (pause) next to the r:iver with (pause) with (NA) tall mountain behind it. **18 words 23 syllables 8s 5DFM 1 GE 1S VNAA: 9**

03:52-03:57 I think it's:: (pause) the seasons **5 words 6 syllables 5s 2DFM 0GE 1S VNAA: 3**

04:03-04:13 Because it has a slightly: (pause) it has a slightly orange: (pause) s:ky with some (pause) some kind of shape is already turning dark. **15 words 21 syllables 10s 7DFM 1GE 1S VNAA: 11**

Total number of (1) words: 145

        (2) syllables: 189

        (3) dysfluency markers: 45

        (4) grammatical errors: 7

        (5) sentences: 13

        (6) VNAA: 86

Fluency score 1: 96.67 WPM (145 words/1.5)

Fluency score 2: 126 SPM (189 syllables/1.5)

Fluency score 3: 68.96 (100-(45DFM/145)*100)

Grammatical accuracy score: 95.17 (100-(7GE/145)*100)

Complexity score 1*: 11.15

Complexity score 2^: 6.61

2. Girl (-FilDW; 9y, 7m)

01:04-01:59 This (pause) crab (pause) <u>is</u> (pause) has a (pause) orange buddy (pause) and (pause) it has turned (pause) a (pause) bit (pause) <u>no</u> (pause) <u>for the:</u> (pause) part (pause) <u>that</u> (pause) on its head (pause) it (pause) s (pause) black (pause) like (pause) the one that I saw in the <u>ma:gazine</u> which says it's a Halloween crab (pause) its two (pause) big (pause) claws which can crab things (pause) and the <u>cla:ws</u> (pause) (NAV) used to grab (pause) <u>predator</u> (pause) I mean <u>preys</u> (pause) are black (pause) It has <u>three::</u> (pause) four legs <u>on it</u> (pause) on one side (pause) and four legs on another. **62 words 70 syllables 55s 32DFM 3GE 6S VNAA: 36**

02:07-02:37 There's a <u>mothe:r</u> (pause) with (pause) a <u>g:irl</u> and a <u>boy:</u> (pause) her chil (pause) dren (pause) in (pause) a <u>fo:rest</u> (pause) near the nature. The mom's wearing (pause) <u>b:lue clu</u> (pause) clothes (pause) the upper part it's deep blue <u>the</u> (pause) <u>the:</u> (pause) (NCj) down part (pause) is light blue (pause) She is wearing flip-flops and tied up her hair. **41 words 49 syllables 30s 15DFM 4GE 6S VNAA: 29**

02:42-02:47 There is <u>a:</u> (pause) sea-eagle. **4 words 6 syllables 5s 2DFM 0GE 1S VNAA: 3**

Total number of (1) words: 107

        (2) syllables: 125

        (3) dysfluency markers: 49

        (4) grammatical errors: 7

        (5) sentences: 13

        (6) VNAA: 68

Fluency score 1: 71.33 WPM (107 words/1.5)

Fluency score 2: 83.33 SPM (125 syllables/1.5)

Fluency score 3: 54.20 (100-(49DFM/107)*100)

Grammatical accuracy score: 93.45 (100-(7GE/107)*100)

Complexity score 1*: 8.23

Complexity score 2^: 5.23

3. Girl (-FilDW; 9y, 9m)

01:56-02:24 <u>Uh:</u> (pause) there's a <u>gi:rl</u> (pause) sitting (pause) besi (pause) the tree trunk (pause) and she's working on (pause) something (pause) she's writing on a (pause) notebook (pause) <u>uuhm</u> she's wearing (NA) uniform <u>uuh</u> she's wearing glasses (pause) she tied up her hair <u>uuhm</u> (pause) <u>she::</u> (pause) <u>she:</u> is concentrating (pause) **30 words 42 syllables 30s 15DFE 2GE 7S VNAA: 23**

02:33-02:34 She's a teenager **3 words 4 syllables 2s 0DFE 0GE 1S VNAA: 2**

02:39-03:21 <u>uuhm</u> (pause) there's a <u>monke::</u> (pause) clinging <u>onto:</u> (pause) branches (pause) <u>uhm</u> it's (pause) different from other <u>monkey:s</u> (pause) it has (pause) <u>uuhm</u> (pause) <u>blue::</u> and (pause) reddish (pause) purple <u>fur:</u> (pause) and <u>it's</u> <u>uuh</u> (pause) <u>it's</u> (pause) <u>in::</u> a fores (pause) <u>uuhm</u> (pause) its face is (pause) <u>v:ery</u> (pause) <u>blueish</u> (pause) <u>uuhm</u> (pause) <u>hm</u> (pause) **24 words 34 syllables 42s 32DFM 0GE 5S VNAA: 20**

03:31-03:43 <u>Uuh</u> there's a <u>bi:rd</u> (pause) <u>that's</u> (pause) <u>sort of</u> (pause) <u>that's</u> (pause) that has brown and yellow fur (pause) with yellow eyes <u>uuh</u> (NA) yellow beak **14 words 15 syllables 12s 9DFM 1GE 1S VNAA: 11**

03:47-03:51 <u>Uh</u> <u>Fu</u> feathers (pause) <u>uuhm</u>… **1 word 2 syllables 4s 4DFM 0GE 1S VNAA: 1**

Total number of (1) words: 72

(2) syllables: 99

(3) dysfluency markers: 60

(4) grammatical errors: 3

(5) sentences: 15

(6) VNAA: 57

Fluency score 1: 48 WPM (72 words/1.5)

Fluency score 2: 66 SPM (99 syllables/1.5)

Fluency score 3: 16.67 (100-(60DFM/72)*100)

Grammatical accuracy score: 90.28 (100-(7GE/72)*100)

Complexity score 1*: 4.8

Complexity score 2^: 3.8

4. Boy (-FilDW; 9; 10)

01:12-01:26 uhm (pause) a gi::rl (pause) study:ing next to a tree (pause) it is (pause) in her school uniform. **13 words 17 syllables 14s 6DFM 1GE 2S VNAA: 7**

01:30-01:32 Hmm I think she's a little bit bigger. **7 words 9 syllables 2s 1DFM 0GE 1S VNAA: 5**

01:38-01:44 S:pring (pause) cause that the plants are growing and it looks pretty warm also. **13 words 15 syllables 6s 1DFM 1GE 1S VNAA: 8**

01:50-01:58 The mo:nkey: on: a tree branch (pause) and with a lo very very long tail. **13 words 16 syllables 8s 3DFM 1GE 2S VNAA: 6**

02:05-02:10 It doesn't really (pause) it's like (pause) it's like something from cartoons. **5 words 7 syllables 4DFM 5s 1GE 1S VNAA: 3**

02:15-02:23 'Cause it looks (pause) pretty: (pause) wait (pause) looks f (pause) colourful. **2 words 4 syllables 8s 8DFM 0GE 1S VNAA: 2**

02:28-02:40 Blue: (pause) and like (pause) ye:llow mouth (pause) and also the eyes (pause) are tu black and white. **13 words 14 syllables 12s 6DFM 1GE 2S VNAA: 8**

02:47-03:05 Hm again it's a bi:rd next (pause) o on a tree: (pause) uh (pause) h with another very short (pause) no:se (pause) and yellow and black (pause) and like some (pause) bra golden brown on his skin **23 words 28 syllables 18s 11DFM 0GE 2S VNAA: 13**

03:16-03:33 Looks like (pause) a f****** of (pause) a f:lower (pause) that (pause) e: it's like a dragonfly: (pause) a red dragonfly: next to a f:lower which is (pause) like (pause) yellow and green. **15 words 19 syllables 17s 15DFM 1GE 1S VNAA: 7**

Total number of (1) words: 104

(2) syllables: 129

(3) dysfluency markers: 55

(4) grammatical errors: 6

(5) sentences: 13

(6) VNAA: 59

Fluency score 1: 69.33 WPM (104 words/1.5)

Fluency score 2: 86 SPM (129 syllables/1.5)

Fluency score 3: 47.11 (100-(55DFM/104)*100)

Grammatical accuracy score: 94.23 (100-(6GE/104)*100)

Complexity score 1*: 8

Complexity score 2^: 4.54

5. Girl (-FilDW; 9y, 4m)

01:06-01:16 A student (pause) <u>leaning on</u> (pause) leaning on a tree (pause) <u>writing::</u> (pause) something. **7 words 11 syllables 10s 5DFM 0GE 2S VNAA: 4**

01:35-01:39 <u>with a:</u> (pause) with (pause) <u>a::</u> (pause) uniform. **3 words 5 syllables 4s 5DFM 0GE 1S VNAA: 1**

01:50-01:59 A orangutan (pause) on a <u>bra:nch</u> (pause) near some (pause) <u>le:aves</u>. **8 words 11 syllables 9s 4DFM 1GE 1S VNAA: 5**

02:05-02:09 <u>Maybe it</u> (pause) maybe it's <u>ready:</u> to jump to the next <u>tree:</u> **9 words 11 syllables 4s 4DFM 0GE 1S VNAA: 6**

02:14-02:23 A <u>bi:rd</u> looking <u>down:</u> (pause) and it's standing on <u>the:</u> (pause) tree's <u>lo::g</u> **11 words 13 syllables 9s 5DFM 1GE 2S VNAA: 6**

02:34-02:42 It is (pause) <u>bro:wn</u> (pause) and has (pause) a short beak. **8 words 8 syllables 8s 3DFM 0GE 2S VNAA: 5**

02:46-03:03-A <u>dra:gonfly:</u> (pause) standing on <u>a: flo:wer</u> (pause) and (pause) there's a reflection of (pause) <u>the:</u> (pause) flower and <u>the:</u> (pause) dragon on the (pause) <u>po:nd</u>. **19 words 27 syllables 17s 13DFM 0GE 2S VNAA: 9**

03:08-03:15 The flower <u>is:</u> (pause) a bit <u>pinki:sh</u> and the outside of the flower i<u>:s</u> (pause) green. **14 words 18 syllables 7s 5DFM 0GE 2S VNAA: 8**

03:20-03:30 A <u>woma:n</u> taking a picture (pause) of someone (pause) and <u>there</u> there is some (pause) <u>c:oat</u> on <u>the:</u> (pause) camera. **15 words 21 syllables 10s 7DFM 1GE 2S VNAA: 8**

03:51-04:01 Lots of trees <u>a:nd</u> (pause) there are (pause) <u>mou:ntai:ns</u> (pause) <u>a:nd</u> (pause) there is a (pause) <u>po:nd</u>. **12 words 13 syllables 10s 8DFM 0GE 3S VNAA: 8**

04:05-04:07 <u>Po:nd</u>. Maybe it's a lake. **5 words 6 syllables 2s 1 DFM 0GE 2S VNAA: 4**

Total number of (1) words: 111

        (2) syllables: 144

        (3) dysfluency markers: 60

        (4) grammatical errors: 3

        (5) sentences: 20

(6) VNAA: 64

Fluency score 1: 74 WPM (111 words/1.5)

Fluency score 2: 96 SPM (144 syllables/1.5)

Fluency score 3: 45.94 (100-(60DFM/111)*100)

Grammatical accuracy score: 97.29 (100-(3GE/111)*100)

Complexity score 1*: 5.55

Complexity score 2^: 3.2

6. Boy (-FilDW; 8y, 10m)

01:51-02:17 A: (pause) a stu:dent (pause) stu:dyi:ng (pause) taking his pencil wearing its glasses (pause) wearing (NA) white uniform (pause) and sitting (pause) beside a (pause) big (pause) brow:n tree:: (pause) with (pause) green leaves (pause) aro:und (pause) re (pause) and green leaves arou:nd (pause) green leaves around the: tree. **25 words 30 syllables 26s 22DFM 3GE 4S VNAA: 17**

02:20-02:27 No (pause) a (pause) it's a gi:rl sitting (pause) beside the tree: ee studying (pause) and **10 words 14 syllables 7s 6DFM 1GE 1S VNAA: 6**

02:29-02:35 She is older than me. She i:s like (pause) (NA) secondary stu:dent right now. **12 words 15 syllables 6s 3DFM 1GE 2S VNAA: 7**

02:40-03:01 A mo:nkey::: climbing: in three:: (pause) three:::: (pause) three tree (pause) tree::s (pause) and (pause) with a s: (pause) lo:ng tail (pause) a:nd climbing inside the (pause) jungle. **15 words 20 syllables 21s 16DFM 3GE 3S VNAA: 8**

03:03-03:14 The monkey is: (pause) grey: (pause) white (pause) blue: a:nd (pause) orange (pause) in (pause) its bo:dy in its body **11 words 14 syllables 14s 13DFM 1GE 1S VNAA: 7**

03:20-03:36 A bi:rd (pause) a: yello::w (pause) bro:wn (NCj) white (pause) bi:rd (pause) with (pause) facing do:wn looking (pause) l:ooking looking under a tree: (pause) **11 words 15 syllables 16s 14DFM 1GE 1S VNAA: 8**

Total number of (1) words: 84

(2) syllables: 108

(3) dysfluency markers: 74

(4) grammatical errors: 10

(5) sentences: 12

(6) VNAA: 46

Fluency score 1: 56 WPM (84words/1.5)

Fluency score 2: 72 SPM (108 syllables/1.5)

Fluency score 3: 11.9 (100-(74DFM/84)*100)

Grammatical accuracy score: 88.01 (100-(10GE/84)*100)

Complexity score 1*: 7

Complexity score 2^: 3.83

7. Boy (-FilDW; 9y, 0m)

01:38-01:47-I see a student (pause) sitting next to the tree (pause) doing he::r (pause) homework. **12 words 16 syllables 9s 2DFM 1GE 1S VNAA: 6**

01:54-01:56 Uhmm (pause) ten **1 word 1 syllable 2s 2DFM 0GE 1S VNAA: 1**

02:01-02:15 uhm (pause) I see a monke:y (pause) he is p (pause) climbing: up: the tree (pause) he: have (pause) a:: very big eye a:nd he: has grey feather. **22 words 25 syllables 14s 12DFM 5GE 4S VNAA: 12**

02:20-02:29 Looking: (pause) his one eye is looking at (pause) tha (pause) looking on the tree: (pause) and the background is green. **12 words 14 syllables 9s 7DFM 1GE 2S VNAA: 8**

02:36-02:48 hmm (pause) no: (pause) he has two eye:s but (pause) one is: (pause) because he look is looking in a: (pause) another way so another eye is: (pause) I don't know this eye. **21 words 27 syllables 12s 12DFM 2GE 3S VNAA: 12**

02:53-03:17 Uuh (pause) I s:ee: a: (pause) a: bird with white (pause) the yellow legs (pause) a:nd (pause) wi::th bro:wn (pause) feather (pause) he:: is loo:ki he's standing on the (pause) tree: (pause) looking do:wn. **19 words 23 syllables 24s 17DFM 3GE 2S VNAA: 11**

03:24-I see (pause) a:: (pause) dragonfly (pause) standing on a:: (pause) pink flo:wer. It has: (pause) pink (pause) petal a:nd on the water (pause) we see the refle:ction of the (pause) flo:wer and the dragonfly. **27 words 37 syllables 20s 14DFM 1GE 3S VNAA: 13**

Total number of (1) words: 114

> **(2) syllables: 143**

> **(3) dysfluency markers: 66**

> **(4) grammatical errors: 13**

> **(5) sentences: 16**

> **(6) VNAA: 63**

Fluency score 1: 76 WPM (114words/1.5)

Fluency score 2: 95.33 SPM (143 syllables/1.5)

Fluency score 3: 42.10 (100-(66DFM/114)*100)

Grammatical accuracy score: 86.96 (100-(15GE/114)*100)

Complexity score 1*: 7.13

Complexity score 2^: 3.94

8. Girl (-FilDW; 9y, 4m)

01:24-01:34 This is a (pause) s:tu:dent (pause) uhm (pause) doing (pause) uh sitting by a tree and doing homework (pause) and or studying. **13 words 18 syllables 10s 9DFM 0GE 1S VNAA: 7**

01:44-01:57 There (NAV) a monkey climbing a tree a:nd (pause) uhm (pause) it's: (pause) it have a very long tail (pause) and the body is (pause) b:lack. **18 words 22 syllables 13s 8DFM 2GE 3S VNAA: 11**
01:59-02:01 kind of: grey black. **4 words 4 syllables 2s 1DFM 0GE 1S VNAA: 2**

02:10-02:27 Uuh (pause) this bird (pause) has (pause) a grey body with s:po:ts a:nd (pause) uuh (pause) very long legs (pause) a:nd (pause) uuhm (pause) and the eyes is o:rang:e: **17 words 20 syllables 17s 14DFM 1GE 2S VNAA: 11**

02:36-02:59 uuhm (pause) It's a:: (pause) f::lower: with p:ink (pause) petals (pause) a:nd (pause) uuhm it's pretty: big (pause) a:nd (pause) this: there's a: in:sect (pause) or the (pause) and there's a insect by: uh sitting. **14 words 19 syllables 23s 22DFM 1GE 3S VNAA: 10**

03:03-03:04 I f::orgot. **2 words 3 syllables 2s 1DFM 0GE 1S VNAA: 1**

03:17-03:37 Uuh this: (pause) woman is (pause) taking pictures of something (pause) a::nd (pause) a (pause) it's: used (pause) some (pause) clothes to (pause) cover the: cam uuh (pause) the: (pause) the:::: uhm (pause) camera. **16 words 22 syllables 20s 21DFM 1GE 2S VNAA: 9**

04:41-04:44 Somewhere in: the: (pause) uuh (pause) park. **4 words 5 syllables 3s 5DFM 0GE 1S VNAA: 1**

Total number of (1) words: 88

           (2) syllables: 103

           (3) dysfluency markers: 73

           (4) grammatical errors: 5

           (5) sentences: 14

(6) VNAA: 52

Fluency score 1: 58.66 WPM (88words/1.5)

Fluency score 2: 68.66 SPM (103 syllables/1.5)

Fluency score 3: 17.05 (100-(73DFM/88)*100)

Grammatical accuracy score: 94.32 (100-(5GE/88)*100)

Complexity score 1*: 6.29

Complexity score 2^: 3.71

9. Girl (-FilDW; 9y, 7m)

00:51-00:55 A girl reading (pause) under a tree (pause) **6 words 8 syllables 4s 0DFM 0GE 1S VNAA: 4**

01:09-01:13 <u>uhmm</u> (pause) a blue hairband **3 words 4 syllables 4s 2DFM 0GE 1S VNAA: 2**

01:15-01:18 <u>uhm</u> a white dress **3 words 3 syllables 3s 1DFM 0GE 1S VNAA: 2**

01:21-01:27 <u>A:</u> (pause) <u>grey:</u> (pause) <u>mo:nkey:</u> (pause) on a tree **6 words 7 syllables 6s 6DFM 0GE 1S VNAA: 3**

01:34-01:42 A brown <u>bi:rd</u> (pause) <u>uhm</u> (pause) doing <u>somethi:ng</u> **6 words 8 syllables 8s 5DFM 0GE 1S VNAA: 3**

01:46-01:48 <u>It's:</u> standing. **2 words 3 syllables 2s 1DFM 0GE 1S VNAA: 2**

01:51-01:56 <u>A:nd</u> (pause) finding something with (pause) the beak. **6 words 8 syllables 5s 3DFM 2GE 1S VNAA: 2**

02:07-02:17 <u>A::</u> (pause) a orange (pause) <u>f</u> <u>uhm</u> dragonfly <u>on:</u> (pause) <u>a::</u> (pause) colourful plant in the water. **10 words 15 syllables 10s 9DFM 1GE 1S VNAA: 5**

02:19-02:21 This (NV) the reflection. **3 words 5 syllables 2s 0DFM 1GE 1S VNAA: 1**

02:26-02:31 <u>A::</u> (pause) woman (pause) <u>n</u> taking a picture. **5 words 8 syllables 5s 4DFM 0GE 1S VNAA: 3**

02:34-02:37 <u>Uhmm</u> (pause) in the park. **3 words 3 syllables 3s 2DFM 0GE 1S VNAA: 1**

02:42-02:50 <u>Hmm</u> (pause) <u>s:ummer:</u> (pause) because she's wearing <u>the:</u> (pause) clothe with no sleeves. **9 words 12 syllables 9s 6DFM 2GE 1S VNAA: 5**

02:57-03:04 <u>uhmm</u> (pause) a <u>mou</u> mountain:s <u>a:nd</u> (pause) a river <u>a:nd</u> some trees. **8 words 10 syllables 7s 7DFM 1GE 1S VNAA: 3**

03:19-03:23 <u>Two:</u> <u>gi:rls</u> on a picnic <u>a:nd</u> (<u>pause</u>) playing chess. **8 words 10 syllables 4s 4DFM 2GE 1S VNAA: 5**

03:29-03:33 <u>uhm</u> playing chess <u>o:n:</u> (pause) <u>a:</u> (pause) picnic blanket. **6 words 9 syllables 4s 5DFM 0GE 1S VNAA: 4**

03:41-03:46 A little girl playing (<u>pause</u>) piano (pause) **5 words 8 syllables 5s 1DFM 0GE 1S VNAA: 4**

04:01-04:07 <u>uhm</u> (<u>pause</u>) <u>from:</u> (<u>pause</u>) China **2 words 3 syllables 6s 4DFM 0GE 1S VNAA: 1**

04:14-04:17 <u>A::</u> (<u>pause</u>) person wearing… **3 words 5 syllables 3s 2DFM 0GE 1S**

Total number of (1) words: 93

> **(2) syllables: 129**
>
> **(3) dysfluency markers: 60**
>
> **(4) grammatical errors: 9**
>
> **(5) sentences: 18**
>
> **(6) VNAA: 50**

Fluency score 1: 62 WPM (93words/1.5)

Fluency score 2: 86 SPM (129 syllables/1.5)

Fluency score 3: 35.48 (100-(60DFM/93)*100)

Grammatical accuracy score: 90.32 (100-(9GE/93)*100)

Complexity score 1*: 5.

Complexity score 2^: 2.77

10. Boy (-FilDW;9y 4m)

13:16-13:24 Oh (<u>pause</u>) there's a (<u>pause</u>) <u>stude:nt</u> (pause) <u>and</u> (<u>pause</u>) maybe looking at little things and try to draw it out. **15 words 19 syllables 8s 4DFM 2GE 3S VNAA: 10**

13:27-13:40 Writing or drawing or (<u>pause</u>) <u>sitting: sitting</u> on a <u>tree:</u> <u>sitting:</u> (<u>pause</u>) <u>ya sitting beside a</u> (<u>pause</u>) <u>oopsie</u> (pause) sitting beside a <u>tree:</u> **8 words 12 syllables 13s 10DFM 0GE 1S VNAA: 4**

13:46-14:13 <u>Uhm</u> there's a <u>monke::y</u> (<u>pause</u>) <u>climb</u> (<u>pause</u>) climbing on <u>the:</u> (<u>pause</u>) <u>tree:,</u> I think (<u>pause</u>) <u>and</u> (<u>pause</u>) I don't <u>thi:nk</u> <u>this tree is in Hong</u> (<u>pause</u>) this type of tree is in Hong Kong because (<u>pause</u>) the <u>tree</u> (<u>pause</u>) trees in Hong Kong is like (<u>pause</u>) <u>mo::(</u> pause) more light (<u>pause</u>) the leaves and (<u>pause</u>) broken (<u>pause</u>) and this **34 words 40 syllables 27s 22DFM 3GE 4S VNAA: 17**

14:21-14:52 Next one. Mmm (pause) the: (pause) uhm (pause) maybe: (pause) an o::wl? Something like that. A:nd (pause) a:nd (pause) the owl (pause) may (pause) be: is going out (pause) a:nd (pause) t s he uh (pause) the the owl sleeps at (pause) in at (pause) at the morning (pause) and (pause) it goes out at night (pause) (NP) comes out and e:ats **31 words 34 syllables 31s 34DFM 2GE 6S VNAA: 16**

15:06-15:14 Uuhm (pause) there's (pause) an (pause) insects sitting on (pause) (NA) flower again (pause) and (pause) **8 words 12 syllables 8s 6DFM 2GE 1S VNAA: 6**

15:27-15:30 I'm not really good at flowers. I just know: **9 words 11 syllables 3s 1DFM 0GE 1S VNAA: 4**

Total number of (1) words: 105

      (2) syllables: 128

      (3) dysfluency markers: 77

      (4) grammatical errors: 9

      (5) sentences: 16

      (6) VNAA: 57

Fluency score 1: 70 WPM (105 words/1.5)

Fluency score 2: 85.33 SPM (128 syllables/1.5)

Fluency score 3: 26.66 (100-(77 DFM/105)*100)

Grammatical accuracy score: 91.43 (100-(9GE/105)*100)

Complexity score 1*: 6.38

Complexity score 2^: 3.56

11. Girl (-FilDW; 9y, 6m)

06:09-22 Hmm (pause) this: is:: (pause) a s:tudent (pause) sitting by the trees studying (pause) with a red pen **13 words 17 syllables 13s 7 DFM 1S VNAA:7**

06:27-34 Uuhm (pause) hmmm (pause) secondary: I think **3 words 6 syllables 7s 5 DFM 1S VNAA:2**

06:38-52 This is a (pause) monkey with a blue face (pause) climbing on a tree:: (pause) and its tail is very long and (pause) the hands and legs are black **25 words 17 syllables 14s 4DFM 3S VNAA: 13**

07:02-12 This is a <u>bi:rd</u> (pause) with (pause) (NA) <u>bro:wn</u> <u>body:</u> and (pause) its (pause) legs are all yellow <u>hav</u> and (NP) have big <u>cla:ws</u> **17 words 19 syllables 10s DFM 8 3S VNAA: 10**

07:20-33 <u>Hmmm</u> (pause) there's a (pause) <u>flo:wer and:</u> the <u>pond:</u> (pause) and it is pink (pause) and there's a <u>dragonl</u> (pause) red <u>dragonfly:</u> on it **17 words 20 syllables 13s DFM 10 3S VNAA: 8**

07:40-48 This is a (pause) adult taking <u>pictu::res</u> (pause) <u>of:</u> (pause) something **8 words 12 syllables 8s 5DFM 1S VNAA: 4**

07:54-58 <u>Uuuh</u> (pause) I think (pause) in the garden **5 words 6 syllables 4s 3DFM 1S VNAA: 3**

08:08-19 In this island there are many (pause) <u>tree:s</u> and the mountains are (pause) different <u>si::ze</u> and different shape **16 words 25 syllables 11s 4DFM 2S VNAA: 9**

08:26-46 <u>Uhm</u> (pause) there are <u>two:</u> woman playing chess **6 words 7 syllables 10s 3DFM 1S VNAA:5**

Total number of (1) words: 108

                (2) syllables: 128

                (3) dysfluency markers: 49

                (4) grammatical errors: 8

                (5) sentences: 16

                (6) VNAA: 61

Fluency score 1: 72 WPM (108 words/1.5)

Fluency score 2: 86 SPM (129 syllables/1.5)

Fluency score 3: 54.63 (100-(49 DFM/108)*100)

Grammatical accuracy score: 91.84 (100-(8GE/98)*100)

Complexity score 1*: 6.13

Complexity score 2^: 3.81

12. (-FilDW; 8y, 11m)

02:35-02:43 A <u>people:</u> <u>wea:ring</u> school <u>uniform:</u> (pause) getting a pencil writing something on the book (pause) lying on the tree. **17 words 26 syllables 8s 4DFM 3GE 1S VNAA: 11**

03:02-03:26 A monkey climbing <u>on so (pause)</u> on some <u>branch:es</u> (pause) <u>its</u> (pause) its <u>tai:l</u> is very <u>lo::ng</u>. Its <u>a:rms</u> and legs are very <u>stro:ng</u> to climb it. Its <u>eye::s</u> are very big and (NA) mouth <u>a:r:e</u> (pause) big too. (NA) Ears are small (pause) (NConj) (NA) hair are white. **36 words 42 syllables 24s 13DFM 6GE 6S VNAA: 27**

03:40-03:58 A (pause) <u>bi::rd</u> with a <u>yell:ow beak on the up</u> (pause) <u>and</u> (pause) black beak on the <u>up</u> (pause) and yellow beak on the <u>dow::n</u> (pause) <u>and</u> (pause) and black <u>for</u> the head (pause) <u>yello::w</u> <u>for</u> the <u>ey::s</u> (pause) the feathers are black and white and its legs are yellow. **35 words 39 syllables 18s 10DFM 4GE 3S VNAA: 17**

04:07-04:22 A <u>flo::wer</u> growing on the water (pause) and its reflection reflects on the <u>water:</u>. Its inside is pink (pause) (NA) outside is green or <u>yello::w</u> (pause) <u>and its ins</u> and an insect is <u>crawing</u> on it. **20 words 32 syllables 15s 4DFM 2GE 5S VNAA: 15**

04:42-04:54 A <u>la:ydy:::</u> (pause) which is not very old (pause) getting a <u>came:ra:</u> (NP) which <u>hanged</u> a lot of clothes, scarves and things (pause) <u>like</u> (pause) taking a photo of a man. **25 words 33 syllables 16s 6DFM 2GE 2S VNAA: 13**

05:01-05:11 (NP) (NA) <u>Mou:ntains</u> <u>for</u> the <u>backgro::d</u> (pause) <u>few trees</u> (0.8) (NA) few tall trees and a lot of (pause) short trees (pause) and a… **15 words 17 syllables 10s 5DFM 4GE 1S VNAA: 8**

Total number of (1) words: 148

        (2) syllables: 189

        (3) dysfluency markers: 42

        (4) grammatical errors: 21

        (5) sentences: 18

        (6) VNAA: 91

Fluency score 1: 98.66 WPM (148 words/1.5)

Fluency score 2: 126 SPM (189 syllables/1.5)

Fluency score 3: 71.62 (100-(42 DFM/148)*100)

Grammatical accuracy score: 85.81(100-(21GE/148)*100)

Complexity score 1*: 8.11

Complexity score 2^: 5.06

13. (-FilDW; 8y, 7m)

01:08-01:14 An kind of (pause) secondary: student (pause) reading hm reading: below the tree. **9 words 15 syllables 6s 5DFM 2GE 1S VNAA: 5**

01:24-01:33 Con (pause) a kind (pause) of como (pause) kind of monkey (pause) climbing climbing the bamboo:s or some (pause) trees. **10 words 13 syllables 9s 10DFM 1GE 1S VNAA: 4**

01:37-01:49 Kind of (pause) kind of (pause) wear (pause) kind of rare. **3 words 3 syllables 12s 6DFM 0GE 1S VNAA: 1**

01:52-01:53 Because (of the) colour. **2 words 4 syllables 1s 0DFM 2GE 1S VNAA: 1**

02:10-02:16 Kind of (pause) a kind of bi:rd (pause) looking looking do:wn (pause). **6 words 7 syllables 6s 5DFM 0GE 1S VNAA: 3**

02:20-02:27 Look like a (pause) a chicken (pause) it's like a chicken. **8 words 10 syllables 7s 2DFM 1GE 2S VNAA: 4**

02:41-02:51 Kind of::: (pause) kind of a f::lower (pause) an:d (pause) and (there is) one butterfly there (pause). **10 words 13 syllables 10s 5DFM 2GE 2S VNAA: 4**

03:12-03:22 Kind of (pause) pinkish purple (pause) a:nd the (pause) and (pause) yellowish green (pause) the: **. 8 words 12 syllables 10s 6DFM 0GE 1S VNAA: 4**

03:31-03:41 A a:dult (pause) an adult using the (pause) telescope (pause) kind of (pause). **6 words 10 syllables 10s 5DFM 1GE 1S VNAA: 3**

03:45-03:52 No not (pause) look (pause) what (pause) looking (through) the telescope (pause) si s finding some stuff. **8 words 11 syllables 7s 7DFM 1GE 2S VNAA: 4**

04:00-04:07 Uhn mm kind of (NA) girl adult (pause) watch watching (at)something in the telescope. **9 words 14 syllables 7s 4DFM 6GE 2S VNAA: 4**

04:14-04:17 S:ummer uh or:: (pause) or autumn. **3 words 5 syllables 3s 4DFM 0GE 1S VNAA: 2**

04:19-04:20 Because the word (pause) the…**2 words 3 syllables 2s 2DFM 0GE VNAA:**

Total number of (1) words: 83

         (2) syllables: 120

         (3) dysfluency markers: 61

         (4) grammatical errors: 16

         (5) sentences: 16

(6) VNAA: 39

Fluency score 1: 55.33 WPM (83words/1.5)

Fluency score 2: 80 SPM (120 syllables/1.5)

Fluency score 3: 26.51 (100-(61 DFM/83)*100)

Grammatical accuracy score: 80.72 (100-(16GE/93)*100)

Complexity score 1*: 5.06

Complexity score 2^:

14. Boy (-FilDW; 9y, 3m)

00:50-00:58 A girl sitti:ng (pause) sitting (pause) down (pause) sitting (pause) under a tree: and doing notes. **8 words 11 syllables 8s 8DFM 1GE 1S VNAA: 7**

01:17-01:23 It's uhm (pause) (NA) monkey with a big eye (pause) climbing (pause) climbing a tree. **9 words 11 syllables 6s 4DFM 2GE 1S VNAA: 6**

01:29-01:32 No (NP) have two eyes but I only see one. **9 words 10 syllables 3s 0DFM 2GE 1S VNAA: 5**

01:46-01:52 A (pause) grey bird (pause) standing on a tree (pause) and clim (pause) ca::mouflaging itself. **10 words 15 syllables 6s 4DFM 0GE 1S VNAA: 5**

02:00-02:02 Standing on a tree. **4 words 5 syllables 2s 0DFM 0GE 1S VNAA: 2**

02:04-02:05 Looking down. **2 words 3 syllables 1s 0DFM 0GE 1S VNAA: 2**

02:16-02:25 It's uhm (pause) (NA) pu:rple flower on a pond (pause) and (pause) there's a red dragonfly on it. **13 words 17 syllables 9s 4DFM 1GE 2S VNAA: 8**

02:33-02:47 This is a gi:rl (pause) taking a:: (pause) photo of another guy (pause) an:d (pause) there is two scarf (pause) on the came:ra. **18 words 24 syllables 14s 6DFM 2GE 2S VNAA: 11**

02:55-03:04 Because she is: (pause) she i:s wearing a (pause) short sleeved shirt. **8 words 10 syllables 9s 4DFM 0GE 1S VNAA: 5**

03:14-03:32 It is: a: (pause) this photo is about (pause) som:e (pause) plant (pause) and then another side of the: (pause) hm of the: (pause) plant. **13 words 17 syllables 18s 11DFM 2GE 2S VNAA: 7**

03:36-03:50 It's nearly:: (pause) nearly: (pause) tonight (pause) that means in: (pause) about (pause) six o' clock in the afternoon. **10 words 17 syllables 14s 8DFM 1GE 2S VNAA: 8**

Total number of (1) words: 104

(2) syllables: 140

(3) dysfluency markers: 49

(4) grammatical errors: 11

(5) sentences: 15

(6) VNAA: 69

Fluency score 1: 69.33 WPM (104 words/1.5)

Fluency score 2: 93.33 SPM (140 syllables/1.5)

Fluency score 3: 52.88 (100-(49 DFM/104)*100)

Grammatical accuracy score: 89.42 (100-(11GE/104)*100)

Complexity score 1*: 6.93

Complexity score 2^: 4.6

15. Girl (-FilDW; 8y, 6m)

00:57-01:05 <u>uhm</u> that's a (pause) <u>gi:rl</u> (pause) maybe doing some <u>m</u> <u>n:otes</u> (pause) under the (pause) tree. **10 words 14 syllables 8s 6DFM 1GE 2S VNAA: 7**

01:16-01:25 It <u>is::</u> (pause) <u>uhm</u> (pause) a monkey (pause) maybe <u>a:nd</u> it <u>is:</u> (pause) climbing (pause) on a tree. **12 words 15 syllables 9s 8DFM 1GE 2S VNAA: 6**

01:28-01:41 <u>Hm</u> (pause) <u>blue:ish</u> grey (pause) ya blue (pause) <u>s:</u> (pause) <u>its fl</u> (pause) its face is <u>blue:</u> <u>a:nd</u> its body is (pause) grey. **12 words 14 syllables 13s 12 DFM 0GE 4S VNAA: 9**

01:45-01:58 <u>Hm</u> (pause) <u>there's</u> there's a bird (pause) <u>s</u> (pause) <u>s:tanding:</u> <u>on:</u> (pause) on the <u>la:nd</u> (pause) nearby the tree (pause) there's a tree (pause) yea. **14 words 15 syllables 13s 9DFM 0GE 2S VNAA: 10**

02:02-02:04 The <u>bi:rd</u> is (pause) <u>bro:wn</u>. **4 words 4 syllables 2s 3DFM 0GE 1S VNAA: 3**

02:10-02:17 Yea (pause) but near the (pause) <u>b:eak</u> <u>I</u> <u>s:</u> (pause) I <u>s:ee:</u> (pause) a bit (pause) blue (pause) and its. **12 words 12 syllables 7s 8DFM 0GE 1S VNAA: 5**

02:18-02:20 Yea (pause) a bit of blue. **5 words 5 syllables 2s 0DFM 0GE 1S VNAA: 2**

02:26-02:31There's a <u>dragonfly:</u> on a <u>f:lower</u> (pause) <u>on:</u> (pause) the (pause) pond. **9 words 12 syllables 5s 6DFM 0GE 1S VNAA: 5**

02:34-02:36 The reflection of the flower. **5 words 7 syllables 2s 0DFM 0GE 1S VNAA: 2**

02:40-02:52 Hm (pause) a:: (pause) a gi:rl wearing (pause) a f::est (pause) uhm uh that is (pause) which is p:ink and is taking a photo. **13 words 15 syllables 12s 12DFM 1GE 2S VNAA: 7**

02:56-02:58 Uhm summer (pause) because it is hot. **5 words 7 syllables 2s 1DFM 0GE 1S VNAA: 3**

03:05-03:20 Uhm (pause) it is (pause) s (pause) a lot of trees (pause) and two (pause) trees that is (pause) very tall (pause) a::nd there's (pause) a mountain and (pause) there's: (pause) a river (pause) there's… **22 words 23 syllables 15s 12DFM 2GE 4S VNAA: 14**

Total number of (1) words: 121

(2) syllables: 143

(3) dysfluency markers: 77

(4) grammatical errors: 5

(5) sentences: 20

(6) VNAA: 73

Fluency score 1: 80.67 WPM (121 words/1.5)

Fluency score 2: 95.33 SPM (143 syllables/1.5)

Fluency score 3: 36.36 (100-(77 DFM/121)*100)

Grammatical accuracy score: 95.87 (100-(5GE/121)*100)

Complexity score 1*: 6

Complexity score 2^:

16. Girl (-FilDW; 8y, 8m)

00:56-01:00 There is a student sitting under a tree (pause) studying. **9 words 14 syllables 4s 0DFM 0GE 1S VNAA: 7**

01:03-01:04 It's a girl. **3 words 3 syllables 1s 0DFM 0GE 1S VNAA: 2**

01:07-01:11 No (pause) older than me it's in the sced (pause) secondary. **8 words 12 syllables 4s 2DFM 2GE 2S VNAA: 3**

01:15-01:19 There's a monkey in the forest climbing a tree. **9 words 12 syllables 4s 0DFM 0GE 1S VNAA: 6**

01:21-01:24 It looks like a bit blue (pause) and grey. **8 words 8 syllables 3s 1DFM 0GE 1S VNAA: 4**

01:31-01:35 There is a brown bird <u>sit</u> (pause) standing on a tube looking down. **11 words 13 syllables 4s 2DFM 0GE 1S VNAA: 8**

01:42 And a bit white. **4 words 4 syllables 1s 0DFM 0GE 1S VNAA: 2**

01:51-01:56 There is a <u>dra:gonfly</u> (pause) sitting on (pause) a flower (pause). **8 words 12 syllables 5s 2DFM 0GE 1S VNAA: 5**

02:01-02:06 The <u>flo:wer</u> <u>is:</u> (pause) <u>p:ink</u> and green and it's in the water. **11 words 13 syllables 5s 4DFM 0GE 2S VNAA: 6**

02:08-02:09 The reflection. **2 words 4 syllables 1s 0DFM 0GE 1S VNAA: 1**

02:16-02:25 This girl is (pause) taking a <u>pho:to:</u> (pause) <u>an:d</u> (pause) <u>an:d</u> she is a girl. **11 words 12 syllables 9s 5DFM 0GE 2S VNAA: 6**

02:29-02:35 No (pause) probably (pause) <u>uhm</u> (pause) (NPr) university. **3 words 9 syllables 6s 3DFM 1GE 1S VNAA: 2**

02:40-02:41 In the park. **3 words 3 syllables 1s 0DFM 0GE 1S VNAA: 1**

02:46-02:48 I think it's autumn. **4 words 5 syllables 2s 0DFM 0GE 1S VNAA: 3**

02:49-02:55 <u>Because</u> (pause) maybe it's summer (pause) because she's wearing short (pause) s. **7 words 11 syllables 6s 3DFM 0GE 1S VNAA: 6**

03:00-03:11 It is a photo: <u>of</u> of a (pause) of <u>s</u> <u>tree:s</u> (pause) near a river and behind the trees are (pause) around ten. **16 words 20 syllables 11s 7DFM 0GE 2S VNAA: 10**

03:19-03:30 It is two girls taking a picnic maybe in the autumn because (pause) they are wearing (pause) shorts and they are wearing jeans as well. **23 words 30 syllables 11s 2DFM 0GE 2S VNAA: 13**

03:35-03:37 They aren't eating they're playing chest. **6 words 10 syllables 2s 0DFM 0GE 2S VNAA: 5**

Total number of (1) words: 145

(2) syllables: 200

(3) dysfluency markers: 31

(4) grammatical errors: 3

(5) sentences: 24

(6) VNAA: 87

Fluency score 1: 96.67 WPM (145 words/1.5)

Fluency score 2: 133.33 SPM (200 syllables/1.5)

Fluency score 3: 78.62 (100-(31 DFM/145)*100)

Grammatical accuracy score: 97.93 (100-(3GE/145)*100)

Complexity score 1*: 6.04

Complexity score 2^: 3.63

17. Boy (-FilDW; 9, 4)

00:49-00:56 <u>A stude:nt</u> (pause) <u>uhm</u> (pause) a female student in front of a tree (pause) doing homework. **10 words 14 syllables 7s 4DFM 0GE 1S VNAA: 5**

01:00-01:01 Secondary. **1 word 4 syllables 1s 0DFM 0GE VNAA: 1**

01:08-01:10 A monkey climbing a tree. **5 words 7 syllables 2s 0DFM 0GE 1S VNAA: 3**

01:14-01:16 With a white eye. **4 words 4 syllables 2s 0DFM 0GE 1S VNAA: 2**

01:25-01:26 Blue. **1 word 1 syllable 1s 0DFM 0GE VNAA: 1**

01:35-01:43 <u>uhm</u> (pause) <u>bird</u> (pause) <u>a bird</u> (pause) a bird eating leaves. **4 words 5 syllables 8s 6DFM 0GE 1S VNAA: 3**

01:49-02:04 <u>uhm</u> (pause) a long beak (pause) <u>two yellow ye</u> (pause) <u>two yellow egg</u> (pause) two yellow legs (pause) <u>uhm</u> (pause) and (NA) huge body. **9 words 11 syllables 15s 9DFM 1GE 2S VNAA: 7**

02:11-02:21 <u>A::</u> <u>f:::irefly::</u> (pause) <u>on</u> (pause) <u>on::</u> (pause). **3 words 4 syllables 10s 7DFM 0GE 1S VNAA: 1**

02:23-02:25 <u>N:</u> <u>a</u> <u>f::</u> (pause) a firefly. **2 words 3 syllables 2s 4DFM 0GE 1S VNAA: 1**

02:28-02:35 <u>On::</u> <u>on the leaf</u> (pause) <u>on a</u> on a flower (pause) <u>in:</u> the water. **6 words 8 syllables 7s 5DFM 0GE 1S VNAA: 2**

02:38-02:39 Floating in the water. **4 words 6 syllables 1s 0DFM 0GE 1S VNAA: 2**

02:45-02:55 <u>A girl</u> (pause) <u>taking photos</u> (pause) a girl taking <u>photo:s</u> (pause) and there's a jacket on the <u>came:ra</u>. **11 words 16 syllables 10s 4DFM 0GE 2S VNAA: 7**

03:00-03:01 In a park. **3 words 3 syllables 1s 0DFM 0GE 1S VNAA: 1**

03:04-03:05 Summer. **1 word 2 syllables 1s 0DFM 0GE 1S VNAA: 1**

03:06-03:17 <u>Because</u> (pause) because she is not wearing a jacket (pause) <u>a:nd</u> she's wearing less. **11 words 15 syllables 11s 3DFM 1GE 2S VNAA: 6**

02:24-02:26 <u>Uh</u> a sea (pause) a forest and a <u>mountain:</u>. **7 words 9 syllables 2s 2DFM 0GE 1S VNAA: 3**

03:34-03:35 Evening. **1 word 3 syllables 1s 0DFM 0GE 1S VNAA: 1**

03:38-03:42 Cause (pause) cause the sky: (pause) is (pause) gett:ing (pause) darker. **6 words 8 syllables 4s 7DFM 0GE 1S VNAA: 4**

03:53-03:56 Two gi:rls having a picnic (pause) in the grass. **8 words 10 syllables 3s 1DFM 1GE 1S VNAA: 5**

04:00-04:01 They're not eating. **3 words 4 syllables 1s 0DFM 0GE 1S VNAA: 2**

Total number of (1) words: 99

> **(2) syllables: 137**

> **(3) dysfluency markers: 53**

> **(4) grammatical errors: 3**

> **(5) sentences: 24**

> **(6) VNAA: 56**

Fluency score 1: 66 WPM (99 words/1.5)

Fluency score 2: 91.33 SPM (137 syllables/1.5)

Fluency score 3: 46.46 (100-(53 DFM/99)*100)

Grammatical accuracy score: 96.97 (100-(3GE/99)*100)

Complexity score 1*: 4.13

Complexity score 2^: 2.33

18. Boy (-FilDW; 9, 2)

01:20-01:30 There's a (pause) tee (pause) teen (pause) age (pause) gi:rl (pause) doing her exam (pause) sitting: next to a tree. **12 words 16 syllables 10s 6DFM 0GE 1S VNAA: 8**

01:34-01:45 Yes (pause) thinking hard (pause) near:: the tree there's a forest and (pause) two buildings. **12 words 15 syllables 11s 2DFM 0GE 2S VNAA: 9**

01:53-02:10 There's a: (pause) big (pause) black mo:nkey: (pause) climbing up (pause) a: (pause) s tree: stick (pause) and (NP) (NAV) loo (pause) king: (pause) to (pause) my:: right. (NP) Also ha:ve a (pause) long tai:l. **20 words 23 syllables 17s 17DFM 4GE 2S VNAA: 15**

02:24-02:49 There's some uuh (pause) big (pause) bi:rd (pause) standing in a tree: (pause) top (pause) looking down: (pause) just like if it's (pause) seeing if there's any prey. Its feather: is brown (pause) and orange (pause) uhm (NP) also (NV) (pause) a thin: (pause) a pair of thin legs. **31 words 37 syllables 25s 14DFM 5GE 3S VNAA: 24**

02:53-03:10 There's <u>a: dra:gonly on a</u> (pause) on <u>a:::</u> (pause) <u>flowe:r</u> which (pause) lies on the pond and (pause) in the pond (pause) there's the shadow (pause) of (pause) the flower and the (pause) <u>dra:gonfly</u>. **24 words 31 syllables 17s 14DFM 1GE 2S VNAA: 12**

03:20-03:30 A <u>gi::rl</u> (pause) <u>taking: pictu:res</u> (pause) <u>a</u> (pause) and the <u>came:ra:</u> is <u>in:</u> (pause) <u>a::</u> (pause) scarf and… **12 words 16 syllables10s 11DFM 1GE 2S VNAA: 6**

Total number of (1) words: 111

                   (2) syllables: 138

                   (3) dysfluency markers: 64

                   (4) grammatical errors: 11

                   (5) sentences: 13

                   (6) VNAA: 74

Fluency score 1: 74 WPM (111 words/1.5)

Fluency score 2: 92 SPM (138 syllables/1.5)

Fluency score 3: 42.34 (100-(64 DFM/111)*100)

Grammatical accuracy score: 90.09 (100-(11GE/111)*100)

Complexity score 1*: 8.46

Complexity score 2^: 5.69

19. Boy (-FilDW; 9, 2)

01:38-01:58 This is a <u>gi:rl</u> (pause) <u>uhm</u> writing some notes in her notebook (pause) <u>a:nd</u> she's (pause) quite bigger than me with (pause) black eye glasses (pause) <u>uhm</u> (pause) <u>her pen</u> (pause) she's using a red (pause) <u>uh</u> pen to write (pause) in her notebook and I think (pause) she's in secondary. **38 words 47 syllables 20s 14DFM 1GE 4S VNAA: 20**

02:03-02:32 <u>There's uhm</u> (pause) I think it's a (pause) <u>monkey:</u> (pause) climbing in (pause) a tree branch. His colour is quite greyish <u>and</u> (pause) <u>his leg</u> and his foot is (pause) <u>uhm</u> little bit (pause) dark (pause) purple (pause) or black (pause) <u>and his</u> and there are some leaves around the tree (pause) and his tail is very long even though it * his body. **44 words 51 syllables 29s 15DFM 2GE 5S VNAA: 27**

02:39-03:10 This is recorded in a tree and <u>there's a bid</u> there's a bird looking (pause) at the <u>bra:nch</u>. There are <u>s uh</u> many leaves around. There are (pause) small baby leaves around the (pause) bird's legs. <u>His</u> (pause) her legs are (pause) <u>uhm</u>

yellow and his beak is (pause) quite lo:ng (pause) a:nd (pause) his w:ings are brown (pause) with (pause) dot with (pause) white dots. **46 words 56 syllables 31s 22DFM 1GE 7S VNAA: 32**

03:16 This is: (pause) a f:lower: in the water: (pause) and there's a dragonfly (pause) on uhm sticking on it (pause) a:nd…**15 words 20 syllables 10s 8DFM 0GE 2S VNAA: 7**

Total number of (1) words: 143

> **(2) syllables: 174**
>
> **(3) dysfluency markers: 59**
>
> **(4) grammatical errors: 4**
>
> **(5) sentences: 18**
>
> **(6) VNAA: 86**

Fluency score 1: 95.33 WPM (143 words/1.5)

Fluency score 2: 116 SPM (174 syllables/1.5)

Fluency score 3: 58.74 (100-(59 DFM/143)*100)

Grammatical accuracy score: 97.20 (100-(4GE/143)*100)

Complexity score 1*: 7.89

Complexity score 2^: 5

20. Girl (-FilDW; 9, 3)

01:29-01:53 O:n (pause) o:n the (pause) gra (pause) on the grou:nd (pause) there is a (pause) prima primary: (school) (pause) gi:rl (pause) sitting next (pause) to the tree. She is holding a book and reading (pause) it. She is wearing (pause) her: uniform. **26 words 39 syllables 24s 18DFM 2GE 3S VNAA: 14**

02:06-02:40 In a fo:rest (pause) there is:: (pause) a mon (pause) a monkey: o:n a bra:nch (pause) s: (pause) he saw some (pause) grass (pause) some leaves (pause) behi:nd (pause) it (pause) it has fairy:::: (pause) fur (pause) s (pause). **20 words 24 syllables 34s 25DFM 0GE 3S VNAA: 10**

02:44-02:45 It is grey. **3 words 3 syllables 0DFM 0GE 1S VNAA: 2**

02:58-03:15 I see: a (pause) bro:wn and whi::te (pause) bi:rd (pause) standing on a tree: (pause) its leg is (pause) yellow: a::nd (pause) his loo (pause) king: (pause) do:wn at the ground. **22 words 25 syllables 17s 15DFM 2GE 3S VNAA: 12**

03:34-03:48 <u>On: d</u> (pause) a <u>po:nd</u> (pause) there is (pause) a pink (pause) and yellow <u>flo:wer</u> (pause) on top (pause) of (pause) the water. The water is…**18 words 22 syllables 14s 11DFM 0GE 1S VNAA: 8**

Total number of (1) words: 89

        (2) syllables: 100

        (3) dysfluency markers: 69

        (4) grammatical errors: 4

        (5) sentences: 11

        (6) VNAA: 46

Fluency score 1: 59.33 WPM (89 words/1.5)

Fluency score 2: 66.67 SPM (100 syllables/1.5)

Fluency score 3: 22.47 (100-(69 DFM/89)*100)

Grammatical accuracy score: 95.51 (100-(4GE/89)*100)

Complexity score 1*: 7.82

Complexity score 2^: 4.18

21. Girl (-FilDW; 8, 4)

01:07-01:16 <u>uhm</u> (pause) a student <u>wearing:</u> glasses <u>a:nd</u> (pause) having a pen (pause) and writing. **10 words 15 syllables 9s 5DFM 0GE 1S VNAA: 6**

01:26-01:29 <u>Uuhmm</u> (pause) a <u>monkey::</u> **2 words 3 syllables 3s 3DFM 0GE 1S VNAA: 1**

01:30-01:44 with (pause) (NA) <u>blue:</u> face (pause) <u>cli:mbing:</u> (pause) <u>on:</u> (pause) a tree (pause) and it has four legs. **12 words 13 syllables 14s 6DFM 1GE 2S VNAA: 7**

01:51-02:03 <u>A::</u> (pause) <u>bi::rd</u> (pause) <u>wi:th</u> (pause) two yellow legs (pause) <u>a::nd</u> (pause) <u>a::</u> <u>blue:</u> and yellow beak. **12 words 14 syllables 12s 10DFM 0GE 1S VNAA: 7**

02:11-02:33 <u>uuuhhhh</u> (pause) a <u>flo:wer</u> (pause) and it is on the water with nectar. **10 words 13 syllables 22s 4DFM 0GE 2S VNAA: 4**

02:44-02:57 <u>uuhm</u> (pause) (NA) <u>lady::</u> <u>wi:th:</u> (pause) long <u>ha:ir:</u> (pause) <u>a:nd</u> (pause) <u>ho:lding:</u> (pause) a <u>camera:</u> with clothes on the camera. **14 words 20 syllables 13s 10DFM 2GE 1S VNAA: 7**

03:02-03:05 <u>A few</u> (pause) a view of an <u>i:sla:nd</u>. **5 words 6 syllables 3s 3DFM 0GE 1S VNAA: 2**

03:07-03:09 with a lot of trees. **5 words 5 syllables 2s 0DFM 0GE 1S VNAA: 2**

03:13-03:15 and the blue sky. **4 words 4 syllables 2s 0DFM 0GE 1S VNAA: 2**

03:22-03:32 <u>uuhm</u> (pause) <u>two:</u> <u>pe:ople:</u> (pause) sitting and playing (pause)… **5 words 7 syllables 6DFM 0GE 1S VNAA: 4**

Total number of (1) words: 79

(2) syllables: 100

(3) dysfluency markers: 47

(4) grammatical errors: 3

(5) sentences: 12

(6) VNAA: 42

Fluency score 1: 52.66 WPM (79 words/1.5)

Fluency score 2: 66.67 SPM (100 syllables/1.5)

Fluency score 3: 40.51 (100-(47 DFM/79)*100)

Grammatical accuracy score: 96.20 (100-(3GE/79)*100)

Complexity score 1*: 6.58

Complexity score 2^: 3.5

22. Boy (-FilDW; 8, 3)

01:08-01:27 <u>This is a</u> (pause) <u>this is a</u> (pause) <u>a::</u> (pause) this is <u>a</u> (pause) <u>chi:ld</u> (pause) a teenager (pause) <u>is reading</u> (pause) <u>is studying::</u> <u>for the:</u> (pause) he's studying. **6 words 10 syllables 19s 14DFM 1GE 2S VNAA: 4**

01:30-01:31 Under the tree. **3 words 4 syllables 1s 0DFM 0GE 1S VNAA: 1**

01:34-01:41 <u>It's the</u> (pause) it's a <u>monkey:</u> (pause) is <u>climbing:</u> the (pause) tree (pause) branches. **8 words 11 syllables 7s 7DFM 1GE 1S VNAA: 6**

01:44-01:49 It's (pause) a (pause) <u>grey: mong:k</u> <u>grey:</u> colour feeders monkey. **6 words 9 syllables 5s 4DFM 0GE 1S VNAA: 4**

01:57-01:59 This <u>uh</u> peacock is. **3 words 4 syllables 2s 1DFM 0GE 1S VNAA: 2**

02:01-02:06 <u>Uh</u> this is <u>a::</u> (pause) **3 words 3 syllables 5s 3DFM 0GE 1S VNAA: 1**

02:10-02:13 It has a lot of colour field (pause) s. **7 words 8 syllables 3s 1DFM 0GE 1S VNAA: 4**

02:16-02:19 Hm (pause) brown and white. **3 words 3 syllables 3s 2DFM 0GE 1S VNAA: 2**

02:23-02:25 And it's loo:king at the grass. **6 words 7 syllables 2s 1DFM 0GE 1S VNAA: 3**

02:35-02:44 And there's a insect is (pause) is (pause) getting the: (pause) is (pause). **5 words 6 syllables 9s 8DFM 2GE 1S VNAA: 4**

02:46-02:49 The insect is (pause) standing at the flower. **7 words 10 syllables 3s 1DFM 1GE 1S VNAA: 4**

03:23-03:35 The:re's uhm (pause) there's a adult is taking a photo (pause) with uhm (pause) with a clo:th (pause) at the top (pause) to cover (pause) the came:ra. **17 words 23 syllables 12s 9DFM 2GE 1S VNAA: 10**

03:38-03:43 She: is: (pause) at (pause) a park. **5 words 5 syllables 5s 4DFM 0GE 1S VNAA: 2**

04:03-04:05 Hmm (pause) it's summer. **2 words 3 syllables 2s 2DFM 0GE 1S VNAA: 2**

04:08-04:14 Because (pause) he he:: she:: wear a (pause) so little clothes. **6 words 8 syllables 6s 6DFM 1GE 1S VNAA: 3**

04:17-04:25 Is a fo:res (pause) (NP) is a fo:res and some (pause) and some mou:ntain (pause) at is in the back. **10 words 12 syllables 8s 8DFM 1GE 2S VNAA: 5**

Total number of (1) words: 97

          (2) syllables: 125

          (3) dysfluency markers: 70

          (4) grammatical errors: 9

          (5) sentences: 18

          (6) VNAA: 57

Fluency score 1: 64.66 WPM (97 words/1.5)

Fluency score 2: 83.33 SPM (125 syllables/1.5)

Fluency score 3: 27.84 (100-(70 DFM/97)*100)

Grammatical accuracy score: 90.72 (100-(9GE/97)*100)

Complexity score 1*: 5.38

Complexity score 2^: 3.16

23. Boy (-FilDW; 8, 2)

01:54-02:06 This (pause) is a (pause) gi:rl with long hair sitt:ing (pause) sitt:ing (pause) out (pause) sitting (pause) in front of the tree. **13 words 14 syllables 12s 10DFM 0GE 1S VNAA:**

02:11-02:12 Writing something. **2 words 4 syllables 1s 0DFM 0GE 1S VNAA: 6**

02:24-02:38 This (pause) is (pause) a (pause) black mon (pause) key (pause) climbing: (pause) cli (pause) climbing up the (pause) tree (pause) s (pause) it (pause) this monkey has a long tail. **15 words 18 syllables 12s 14DFM 0GE 2S VNAA: 9**

02:47-03:00 This is (pause) (NA) bro:wn bi:rd with a (pause) long: (pause) beaks stand (pause) ing (pause) on: (pause) a: (pause) tree (pause) standing on a tree. **12 words 13 syllables 13s 14DFM 2GE 1S VNAA: 7**

03:05-03:20 This is: (pause) a (pause) this is (pause) a green and purple f::lower floating in the sea with a (pause) with a (pause). **13 words 16 syllables 15s 8DFM 0GE 1S VNAA: 6**

03:56-04:14 There (pause) is a (pause) gi:rl (pause) with a: (pause) tickle toe (pause) ca:mi: (pause) ca:mi:ra: (pause) **9 words 11 syllables 18s 11DFM 0GE 1S VNAA: 6**

04:22-04:25 I can't see the background. **5 words 6 syllables 3s 0DFM 0GE 1S VNAA: 6**

04:26-04:28 I can't see:: (pause) what what. **4 words 4 syllables 3DFM 0GE 1S VNAA: 2**

04:43-04:45 In a (pause) p:ark. **3 words 3 syllables 2s 2DFM 0GE 1S VNAA: 1**

04:55-05:07 There are two: (pause) ta:ll (pause) tree:s (pause) an:d (pause) an:d (pause) many:: (pause) and many: small trees…**9 words 10 syllables 12s 13DFM 0GE 1S VNAA: 8**

Total number of (1) words: 85

(2) syllables: 99

(3) dysfluency markers: 75

(4) grammatical errors: 2

(5) sentences: 18

(6) VNAA: 51

Fluency score 1: 56.67 WPM (85words/1.5)

Fluency score 2: 66 SPM (99 syllables/1.5)

Fluency score 3: 11.76 (100-(75DFM/85)*100)

Grammatical accuracy score: 97.64 (100-(2GE/85)*100)

Complexity score 1*: 4.72

Complexity score 2^: 2.83

24. Boy (-FilDW; 8, 2)

00:59-01:10 uuh (pause) a gi::rl is wearing gl:asses (pause) he:: (pause) she: is uh writing something. **9 words 13 syllables 11s 9DFM 0GE 2S VNAA: 7**

01:14-01:15 She's in a garden. **4 words 5 syllables 1s 0DFM 0GE 1S VNAA: 2**

01:17-01:22 No sitting (pause) uuh lying under::: under:: a tree: **5 words 7 syllables 5s 6DFM 0GE 1S VNAA: 2**

01:30-01:38 (NPr) (NAV) (NA) Monkey: (pause) climbing a tree: (pause) the monkey is bla:ck and blue and white. **12 words 15 syllables 8s 4DFM 3GE 2S VNAA:** 7

01:42-01:49 A bi:rd (pause) flying in some ea:gle (pause) some (pause) finding sum:: (pause) insects. **5 words 7 syllables 7s 9DFM 0GE 1S VNAA: 3**

01:54-01:56 uuh a brown bird. **3 words 3 syllables 2s 1DFM 0GE 1S VNAA: 2**

02:02-02:13 A: lay uuuhh (pause) uuuh uuuh dra:gonfly uuuuuh flying (pause) into the flower. **6 words 10 syllables 11s 9DFM 0GE 1S VNAA: 4**

02:17-02:22 The colours ar::e (pause) purple:: and green. **6 words 8 syllables 5s 3DFM 0GE 1S VNAA: 4**

02:26-02:34 uuhh (pause) a gi:rl taking photos. **4 words 6 syllables 8s 3DFM 0GE 1S VNAA: 3**

02:44-02:45 It's spri:ng. **2 words 2 syllables 1s 0DFM 0GE 1S VNAA: 2**

02:50-02:53 She i:s (pause) in a garden. **5 words 6 syllables 3s 2DFM 0GE 1S VNAA: 2**

02:54-02:55 Taking photos. **2 words 4 syllables 1s 0DFM 0GE 1S VNAA: 2**

02:59-03:05 uuuhh (pause) in a jungle (pause) **3 words 4 syllables 6s 3DFM 0GE 1S VNAA: 1**

03:08-03:16 uh not no: (pause) there's no (pause) animals. There's a lot of tree:s and mountains (pause) (NA) sky is blue. **14 words 17 syllables 8s 7DFM 1GE 3S VNAA: 11**

03:18-03:21 A little gi:rl playing pia:no (pause) **5 words 9 syllables 3s 2DFM 0GE 1S VNAA: 4**

Total number of (1) words: 85 words

(2) syllables: 110

(3) dysfluency markers: 58

(4) grammatical errors: 4

(5) sentences: 19

(6) VNAA: 56

Fluency score 1: 56.67 WPM (85 words/1.5)

Fluency score 2: 73.33 SPM (110 syllables/1.5)

Fluency score 3: 31.76 (100-(58DFM/85)*100)

Grammatical accuracy score: 95.29 (100-(4GE/85)*100)

Complexity score 1*: 4.47

Complexity score 2^: 2.94

25. Girl (-FilDW; 8, 2)

02:04-02:29 There was (pause) a girl (pause) s:i (pause) ting (pause) s:itting (pause) beside the tree (pause) and (she is) wri (pause) ting (pause) **10 words 13 syllables 25s 10DFM 3GE 2S VNAA: 6**

02:45-02:46 Older than me:. **3 words 4 syllables 1s 1DFM 0GE 1S VNAA: 1**

02:58-03:04 In the fo:rest (pause) there was a mon:key: climbing on a tree: (pause) **11 words 14 syllables 6s 5DFM 2GE 1S VNAA: 6**

03:37-03:57 There was (pause) a bird (pause) there's a (pause) bird on the tree (pause) loo:king: (pause) dow:n (pause) for (pause) food. **10 words 11 syllables 20s 11DFM 1GE 1S VNAA: 7**

04:14-04:15 A eagle. **2 words 2 syllables 1s 0DFM 1GE 1S VNAA: 1**

04:35-04:45 There was:: (pause) a dra:gonfly (pause) touch:ing: touching a ro:se. **7 words 10 syllables 10s 6DFM 1GE 1S VNAA: 5**

04:59-05:04 The off side down of the f:lower (pause) and the (pause) f dragonfly. **10 words 13 syllables 5s 4DFM 0GE 1S VNAA: 5**

05:17-05:28 There was (pause) a girl (pause) u:sing (pause) the coat (pause) to look for a fa:ce (pause). **12 words 13 syllables 10s 7DFM 0GE 1S VNAA: 7**

05:32-05:38 She is <u>u:</u> (pause) sing her coat and put it on the <u>came:ra</u>. **11 words 14 syllables 6s 3DFM 1GE 1S VNAA: 5**

06:01-06:07 There was an allen (pause) with (pause) **5 words 6 syllables 6s 2DFM 0GE**

Total number of (1) words: 79

   (2) syllables: 89

   (3) dysfluency markers: 52

   (4) grammatical errors: 9

   (5) sentences: 10

   (6) VNAA: 43

Fluency score 1: 52.67 WPM (79 words/1.5)

Fluency score 2: 59.33 SPM (89 syllables/1.5)

Fluency score 3: 34.18 (100-(52DFM/79)*100)

Grammatical accuracy score: 88.6 (100-(9GE/79)*100)

Complexity score 1*: 7.9

Complexity score 2^: 4.3

26. Girl (-FilDW; 8, 4)

01:06-01:17 I see a girl reading (pause) a book (pause) and her (pause) hair is (pause) black (pause) (she is) wearing <u>some</u> (pause) <u>a</u> glas (pause) ses (pause) <u>uhm</u> glasses. **15 words 18 syllables 11s 10DFM 2GE 3S VNAA: 9**

01:21-01:23 No (pause) it's much more bigger. **5 words 6 syllables 2s 0DFM 2GE 1S VNAA: 4**

01:24-01:30 So <u>he</u> (pause) she is in (pause) <u>uh</u> (pause) <u>maybe:</u> <u>secondary:</u> or bigger than secondary. **10 words 18 syllables 6s 7DFM 0GE 1S VNAA: 5**

01:32-01:40 I can see a monkey with (pause) black <u>s:kin</u> in the forest (pause) holding <u>a:</u> (pause) <u>s:tick</u>. **14 words 17 syllables 8s 5DFM 0GE 1S VNAA: 8**

01:47-01:50 <u>uhm</u> (pause) yes it does (pause) black hair. **5 words 5 syllables 3s 2DFM 0GE 1S VNAA: 3**

01:53-02:10 I can see a bird (pause) <u>with::</u> (pause) <u>bro:wn</u> (pause) <u>s:</u> (pause) <u>uhm</u> brown coloured <u>hair:</u> (pause) and (pause) a little bit of <u>yellow:</u> in (pause) its (pause)

beaks (pause) or yello:w (pause) a:nd (pause) its feet are also yellow (pause) too. **28 words 33 syllables 17s 19 DFM 2GE 2S VNAA: 15**

02:22-02:32 I can s:ee (pause) a fly on (pause) a (pause) uhm (pause) purple: gree:n (pause) flower (pause) laying in the wa (pause) ter. **14 words 18 syllables 10s 10DFM 0GE 1S VNAA: 7**

02:38-02:40 Uh (pause) yes it i:s (pause) a dragonfly. **5 words 7 syllables 2s 4DFM 0GE 1S VNAA: 2**

02:43-03:04 I can (pause) see: a gi:rl (pause) holding (pause) a camera (pause) with: (pause) two hands (pause) and putting its ey:e in (pause) side the came:ra (pause) with (pause) and on the ca:mera there is: some off a cl uhm (pause) mittons (pause) and her: (pause) uhm (pause) jackets. **29 words 39 syllables 21s 20DFM 2GE 2S VNAA: 16**

03:07-03:11 No (pause) she (pause) she is looking inside the camera. **7 words 11 syllables. 4s 2DFM 0GE 1S VNAA: 4**

03:14-03:15 Uuhm (pause) spring. **1 word 1 syllable 1s 2DFM 0GE 1S VNAA: 1**

03:17-03:20 No (pause) yes (pause) spring. **2 words 2 syllables 3s 2DFM 0GE 1S VNAA: 1**

03:22-03:24 Because of in the spring a lot of people…**9 words 11 syllables 2s 0DFM 1GE**

Total number of (1) words: 144

       (2) syllables: 185

       (3) dysfluency markers: 83

       (4) grammatical errors: 9

       (5) sentences: 16

       (6) VNAA: 75

Fluency score 1: 96 WPM (144 words/1.5)

Fluency score 2: 123.33 SPM (185 syllables/1.5)

Fluency score 3: 42.36 (100-(83DFM/144)*100)

Grammatical accuracy score: 93.75 (100-(9GE/144)*100)

Complexity score 1*: 8.43

Complexity score 2^: 4.69

27. Girl (-FilDW; 8, 2)

01:48-02:06 There's a girl (pause) sitting behind a tree (pause) studying for (pause) his (pause) her homework. She: is (pause) wearing a (pause) pair of glasses (pause) and (pause) her (pause) hair is: (pause) l:ong and straight. **25 words 32 syllables 18s 11DFM 0GE 3S VNAA: 15**

02:09-02:13 This girl is: (pause) probably in s:econdary. **6 words 11 syllables 4s 3DFM 0GE 1S VNAA: 4**

02:16-02:36 There is a:: (pause) monkey: (pause) type (pause) grabbing the: (pause) tree: roots. It has a lot of: fur on (pause) its body (pause) it is big (pause) and it has a long tail. **27 words 30 syllables 20s 11DFM 1GE 4S VNAA: 17**

02:40-03:03 It is a bird standing on a tree. It ha:s (pause) bro::wn (pause) w:hite (pause) a:nd bl:ack f::: (pause) colour of (pause) its f:eather. The colour of (pause) the bird's legs (pause) is (pause) yellow (pause) **26 words 31 words 23s 15DFM 4GE 3S VNAA: 15**

03:10-03:35 This is a (pause) f::lower. The colour of the flower are (pause) yellow green (pause) and (pause) pink. There is (pause) an insects (pause) standing on the flower. The insects it's (pause) red (pause) and the (pause) eye colour of the insects is black. **36 words 46 syllables 20s 9DFM 5GE 5S VNAA: 22**

Total number of (1) words: 110

(2) syllables: 150

(3) dysfluency markers: 49

(4) grammatical errors: 10

(5) sentences: 16

(6) VNAA: 73

Fluency score 1: 73.33 WPM (110 words/1.5)

Fluency score 2: 100 SPM (150 syllables/1.5)

Fluency score 3: 55.45 (100-(49DFM/110)*100)

Grammatical accuracy score: 90.90 (100-(10GE/110)*100)

Complexity score 1*: 6.88

Complexity score 2^: 4.56

28. Girl (-FilDW; 8, 2)

01:59-02:14 I see a secondary: (pause) gi:rl (pause) a s (pause) the secondary: stu:dent (pause) do (pause) doing (pause) her pro:ject (pause) sitting (pause) beside a tree. **15 words 25 syllables 15s 15DFM 1GE 2S VNAA: 10**

02:20-02:21 I think it's spring. **4 words 4 syllables 1s 0DFM 0GE 1S VNAA: 3**

02:22-02:25 Because (pause) it looks like the flowers are near. **8 words 10 syllables 3s 1DFM 0GE 1S VNAA: 5**

02:28-02:38 I s:ee a grey m:onkey: (pause) cl:inging on some vi:nes (pause) in (pause) front of (pause) plants. **13 words 15 syllables 10s 6DFM 1GE 1S VNAA: 5**

02:46-03:07 Hmm (pause) its ha:nds (pause) and feet are black. The tail is long: (pause) and (pause) it's is white and on his back (pause) it's (pause) darker. **20 words 21 syllables 21s 8DFM 2GE 4S VNAA: 12**

03:19-03:50 I s:ee a (pause) a (pause) bro:wn bird (pause) with (pause) white (pause) spots on its fea:ther: (pause) with orange (pause) ey:es (pause) yellow bea:rd (pause) yellow beak (pause) yellow feet (pause) with (pause) standing on (pause) standing (pause) on a bra:nch (pause) of a tree. **25 words 30 syllables 31s 21DFM 1GE 2S VNAA: 15**

03:59-04:08 I see: a dragonfly (pause) holding (pause) on a: flo:wer: (pause) and the…**10 words 14 syllables 9s 4DFM 1GE 1S VNAA: 4**

Total number of (1) words: 95

        (2) syllables: 109

        (3) dysfluency markers: 55

        (4) grammatical errors: 6

        (5) sentences: 12

        (6) VNAA: 54

Fluency score 1: 63.33 WPM (95 words/1.5)

Fluency score 2: 72.66 SPM (109 syllables/1.5)

Fluency score 3: 42.10 (100-(55DFM/95)*100)

Grammatical accuracy score: 93.68 (100-(6GE/95)*100)

Complexity score 1*: 7.75

Complexity score 2^: 4.5

29. Girl (-FilDW; 8, 6)

01:31-01:50 This is (pause) a secondary student (pause) uhm writing (pause) uhm (pause) notes with a (pause) pink pen and (pause) sitting (pause) next to the tree (pause) trunk. **18 words 24 syllables 19s 9DFM 1GE 2S VNAA: 10**

01:55-01:56 Summer **1 word 2 syllables 1s 0DFM 0GE 1S VNAA: 1**

01:58-02:07 Because (pause) it has (pause) uhm (pause) the girl (pause) s face (pause) the cheeks (pause) are red. **5 words 6 syllables 9s 8DFM 1GE 1S VNAA: 3**

02:09-02:10 It's hot. **2 words 2 syllables 1s 0DFM 0GE 1S VNAA: 2**

02:13-02:22 This is a monkey: (pause) uhm (pause) hugging the (pause) tree's (pause) branches. **9 words 12 syllables 9s 5DFM 0GE 1S VNAA: 5**

02:26-02:28 Grey in colour. **3 words 4 syllables 2s 0DFM 0GE 1S VNAA: 2**

02:35-02:46 This is: (pause) a bird (pause) standing (pause) on (pause) the branch (pause) and (pause) looking down below. **12 words 14 syllables 11s 6DFM 1GE 1S VNAA: 7**

02:49-02:56 It has brown feathers (pause) a pointed beak (pause) and (pause) orange e:yes. **10 words 13 syllables 7s 2DFM 0GE 1S VNAA: 7**

03:03-03:19 This is a f:lo:wer (pause) and it has a reflection. And there is a (pause) orange (pause) insect (pause) on the petal of the flower. **21 words 28 syllables 16s 4DFM 2GE 3S VNAA: 10**

03:29-03:44 This is (pause) a (pause) gi:rl (pause) u (pause) sing a camera and taking phot (pause) a photo (pause) and (pause) she use the (pause) her clots and…**16 words 21 syllables 15s 10DFM 1GE 2S VNAA: 8**

Total number of (1) words: 97

        (2) syllables: 130

        (3) dysfluency markers: 44

        (4) grammatical errors: 6

        (5) sentences: 14

        (6) VNAA: 55

Fluency score 1: 64.67 WPM (97 words/1.5)

Fluency score 2: 86.67 SPM (130 syllables/1.5)

Fluency score 3: 54.64 (100-(44DFM/97)*100)

Grammatical accuracy score: 93.81 (100-(6GE/97)*100)

Complexity score 1*: 6.85

Complexity score 2^: 3.93

30. Boy (-FilDW; 8, 7)

01:44-01:57 Uhm (pause) a student (pause) reading a s notebook and (pause) writing in uh and (pause) uh (NP) is sitting next to the: (pause) tree. **12 words 16 syllables 13s 10DFM 1GE 2S VNAA: 5**

02:04-02:06 Uhm it's secondary (pause) I think. **4 words 7 syllables 2s 0DFM 0GE 1S VNAA: 3**

02:10-02:11 No (pause) it's a girl. **4 words 4 syllables 1s 0DFM 0GE 1S VNAA: 2**

02:16-02:19 No it's just a: normal notebook. **6 words 8 syllables 3s 1DFM 0GE 1S VNAA: 3**

02:25-02:44 Uhmm there's a monkey climb:ing (pause) the: tr the: (pause) branches on the tree and (pause) it has a long tail and (pause) and there's le leaves (pause) at (pause) at the back (pause) yeah (pause) there's leaves. **19 words 22 syllables 19s 15DFM 1GE 4S VNAA: 16**

02:46-02:51 It's i:s:: (pause) I think it's a little bit gre:y. **7 words 8 syllables 5s 3DFM 0GE 1S VNAA: 5**

02:52-02:57 Kind of grey but its f (pause) its f face is blue. **8 words 8 syllables 5s 3DFM 0GE 1S VNAA: 4**

03:03-03:32 Uhmm (pause) a: (pause) bird sta standing on (pause) the: (pause) bra (pause) uhm the branch of the the: (pause) tree and the background is b:lack. The bi:rd has a yellow beak and around its (pause) e:ye (pause) is (pause) o:range and (pause) e it has (pause) patterns (pause) on (pause) its bo:dy: **32 words 39 syllables 32s 27DFM 2GE 5S VNAA: 15**

03:33-03:34 Ya patterns. **2 words 3 syllables 1s 0DFM 0GE 1S VNAA: 1**

03:37-03:38 Triangles. **1 word 3 syllables 1s 0DFM 0GE 1S VNAA: 1**

03:47-03:55 Uh (pause) kind of like a flower on: (pause) the water. And it ha (pause) the water have…**12 words 15 syllables 8s 6DFM 1GE 1S VNAA: 2**

Total number of (1) words: 107

                (2) syllables: 133

                (3) dysfluency markers: 65

                (4) grammatical errors: 5

                (5) sentences: 19

(6) VNAA: 57

Fluency score 1: 71.33 WPM (107 words/1.5)

Fluency score 2: 88.67 SPM (133 syllables/1.5)

Fluency score 3: 39.25 (100-(65DFM/107)*100)

Grammatical accuracy score: 95.33 (100-(5GE/107)*100)

Complexity score 1*: 5.42

Complexity score 2^: 3

Notes:

Transcriptions based on GAT convention, with added measures for grammar, and irrelevant markers (i.e.: intonation, stress and voice amplitude, audible aspirations and inhalations, tempo, and smile voice) omitted.

False starts, partial words, and repetitions excluded from word count

DFM=dysfluency markers

S=complete sentences

VNAA=verbs, nouns, adjectives, adverbs

Grammatical errors (GE) are marked in red. NA=no article; NP=no pronoun; NAV=No auxiliary verb; NCj=No conjunction; NV=No verb; NPr=no preposition; red words in brackets indicate omitted words that should be there.

*Average sentence length

 ^VNAA/S

<u>Participants with FilDWs</u>

M

I am a plant. Some of my lea:ves are in the shape of a pitcher. So, people call me a (pause) pitcher plant. Some people have seen monkey drinking water from my (pause) pitchers. They give me (pause) another name- monkey cups. Don't look down upon my pitchers. They are (pause) not just water containers. My pitchers are very colourful and they are (pause) filled with liquid. They also give off (pause) sweet smell. Many insects are (pause) attracted by (pause) the colours and the smell. They climb (pause) into the pitchers to get some honey, but they can never climb (pause) out because the pitchers (pause) are very slippery. What happens: (pause) to the insect? Their bodies are dissolved (pause) by the liquid (pause) in my pitchers. They be (pause) come my food. Yes, you are right. I am a (pause) plant eat (pause) ting insect. 60s 128WPM **3 Acc: 97.66**

M

I am a plant. Some of my leaves are in the shape of a pitcher, so people call me a pitcher plant. Some people have seen monkeys drinking water from my pitchers. They give me another name-monkey cups. Don't look down upon my pitchers, **they're** not just water containers. My pitchers are VERY colourful and **they're** filled with liquid. They also give (pause) off **a** sweet smell. Many insects are attracted by the colours and (**the**) smell. They **climbed** into the pitchers to get some (pause) honey, but they can never climb out, because the (pause) pitchers are (pause) very slippery. What happens to the insects? Their bodies are dissolved by the liquid in my (pause) PITCHERS. They become my food. Yes, you are right, I am a plant eating insect 54s 142WPM **6 Acc: 95.31**

M

I am a plant. Some of my le:aves are in the shape of a pitcher. So:, people call me a pitcher plant. Some people have seen monkeys drinking water from my pitchers. They give me another name- monkey cups. Don't look down upon my pitchers. They are not just water containers. My pitchers are very colourful and they're filled with liquid. They also give off sweet smell. Many insects are attracted by the colours and the smell. They climb into the pitchers to get some honey, but they can never climb out because the pitchers are very slippery. What happens to the insects? Their bodies are dissolved by (pause) the liquid in my pitchers. They become my food. Yes, you are right. I am a plant, eating insects. 57s 135WPM **1 Acc: 99.22**

M

Pitcher plants. I am a plant. Some of my leaves are in the shape of a pitcher. So:, people call me a pitcher plant. Some people have seen (pause) monkeys drinking water from my pitchers. They give me another name- monkey cups. Don't look upo don't look down upon my pitchers. They are not just water containers. My pitchers are very colourful and they are filled with liquid. They can also give off sweet smell. Many insects are attracted by the colours and the smell. They can they climb into the pitchers to get some honey, but they (can) never climb out because the pitchers are very slippery. What happen (pause) s to the insects? Their bodies are (pause) dis dissolved by the liquid in my pitchers. They become my food. Yes, you are right. I am a plant, eating insects. 1m 05s 120WPM **2 Acc: 98.46**

F

I am a plant. Some of my leaves are in (the) shape of a pitcher. So, people call me a pitcher plant. Some people have seen monkeys drinking water from my pitchers. They give me another name of monkey cups. Don't look down upond my pitchers. They are not just water containers. My pitchers are very colourful and they are filled with liquid. They also give off sweet smell. Many insects are attracted by the colours and the smell. They climb into the pitchers to get some honey, but they can never climb out because the pitchers are very slippery. What happens to the insects? Their bodies are dissolved by the liquid in my pitchers. They become my food. Yes, you are right. I am a plant, eating uh insects. 54s 142WPM **3 Acc: 97.66**

M

I am a plant. Some of my leaves are in (the) shape of a pitcher. So, people call me a pitcher plant. Some people have been seen (pause) have seen monkeys drinking water from my (pause) pitchers. They give me another name- monkey cups. Don't look down upon my pitchers. They are not just water containers. My pitchers are very colourful and they are filled with liquid. They also give off sweet smell. Many insects are attracted by the colours and smell (pause) and the smell. They climb into the pitchers to get some mo (pause) honey:, but they can never climb out because the pitchers are very slippery. What happens to the insect? Their bodies are dissolved by the liquid in my pitchers. They become my food. Yes, you are right. I am a plant, eating insects. 52s 148WPM **2 Acc: 98.44**

F

Pitcher plants. I am a plant. Some of my leaves are in the shape of a pitcher. So, people call me a pitcher plant. Some people have seen monkeys drinking water from my pitchers. They give me another (pause) name- monkey cups. Don't look down upon my pitchers. They are not just water containers. My pitchers are very colourful and they are filled with liquid. They also give off sweet smell. Many insects are attracted by the colours and the smell. They climb into the pitchers to get some honey, but they can never climb out because the pitchers are very slippery. What

happens to the insects? Their bodies are dissolved by the liquid in my pitchers. They become my food. Yes, you are right. I mean (pause) uhm I am a plant, eating insect. 48s 163WPM **1 Acc: 99.23**

M

I am a plant. Some of my leaves are in the shape of a pitcher. So, people call me a pitcher plant. Some people haven't seen have seen monkeys drinking water from my (pause) pitchers. They give me another name- monkey cups. Don't look down upon my pitchers. They are not just water containers. My pitchers are very colourful and they are filled with liquid. They also give off sweet smell. Many insects are attracted by the colours and the smell. They climb into the (pause) pitchers to get some honey, but they can never climb out because the pitchers are very slippery. What happens to the insects? Their bodies are dissolved by the liquid in my pitchers. They've they become my food. Yes, you are right. I am a plant, eating insects. 48s 160WPM **Acc: 100**

M

I am a plant. Some of my leaves are in the shape of a pitcher. So, people call me a pitcher plant. Some people have seen monkeys drinking water from my pitchers. They give me another name- monkey cups. Don't look (pause) down upon my pitchers. They are not just water containers. My pitchers are very colourful and they are filled with liquid. They also give off sweet smell. Many insects are attracted by the colours and the smell. They climb into the pitchers to get some honey, but they can never climb out because the pitchers are very slippery. What happens to the insects? Their bodies are dissolved by the liquids in my pitchers. They become my food. Yes, you are right. I am a plant, eating insects. 50s 154WPM **1 Acc: 99.22**

M

I am a plant. Some of my leaves are in the shape of a pitcher. So, people call me a pitcher plant. Some people have seen monkeys drinking water from my pitchers. They give me another name- monkey cups. Don't look down upon my pitchers. They are not just water containers. My pitchers are very colourful and they are filled with liquid. They also give off sweet smell. Many insects are attracted by the colours and the smell. They climb into the pitchers to get some honey, but they can never climb out because the pitchers are very slippery. What happen to the insects? Their bodies are dissolved by the liquid in my pitchers. They become my food. Yes, you are right. I'm a plant, eating insects. 41s 187 WPM **2 Acc: 98.44**

F

Pitcher plants. I am a plant. Some of my leaves are in the shape of a pi:tcher. So, people call me a pitcher plant. Some people have seen monkeys drinking water from my pitchers. They give me another name- monkey cups. Don't look down upon my pitchers. They are not just water containers. My pitchers are very colourful and they are filled with liquid. They also give off sweet smell. Many insects are attracted by the colours and the smell. They climbed into the pitchers to get some honey, but they can never climb out (pause) because the pitchers are very slippery. What happens to the insects? Their bodies are dissolved by the liquid in my pitchers. They become my food. Yes, you are right. I am a plant, eating insects. 52s 150WPM **1 Acc: 99.23**

F

Interesting plants. Pi:tcher plants. I am a plant. Some of my leaves are in the shape of a (pause) p pitcher. So, people call me a pi:tcher plant. Some people have seen monkey:s drinking water from my pitchers. They gi:ve me another name- monkey cups. Don't look down upon my pi:tchers. They (pause) they a:::re not just water containers. My pitchers are very colourful and they are filled with liquids. They also give off (pause) sweet smells. May Many: insects are attracted by the colours and the smell. They climb into the pi:tchers to get some honey, but they can never climb out because the pitchers are very slippery. What happens to the insects? Their body are diss (pause) dissolved by the liquid in my pi:tchers. They become my food. Yes, you are right. I am a plant, eating insects. 1min 10s 113WPM **3 Acc: 97.73**

F

Pitcher plants. I am a plant. Some of my leaves are in the shape of a pitcher. So, people call me a pitcher plant. Some people have seen monkeys drinking water from my pitchers. They give me another name- monkey cups. Don't look down upon my pitchers. They are not just water containers. My pitchers are very colourful and they are filled with liquid. They also give off sweet smells. Many insects are attracted by the colou:rs and the smell. They climb into the pitchers to (pause) get some honey, but they can never climb out because the pitchers are very slippery. What happens to the insects? Their bodies are dissolved by the liquid in my pitchers. They become my food. Yes, you are right. I am a plant, eating (pause) insects. 44s 177WPM **1 Acc: 99.23**

F

I am a plant. Some of my leaves are in (pause) the (pause) shape of a pitcher. So, people call me a pitcher plant. Some people have (pause) seen monkey:s drinking water from my pitchers. They give me another name- monkey cups. Don't look down upon my (pause) pitchers. They are (pause) not just water (pause) containers.

My pitchers are very colourful and they are filled with liquid. They also give off sweet smell. Many insects are (pause) attracted by the colours and the smell. They climb into the pitchers to get some honey, but they can never climb out because (pause) the pitchers (pause) are very slippery. What happens (pause) to the insects? Their bodie:s are dissolved by the liquid in my pitchers. They become (pause) my food. Yes, you are right. I am a plant, eating insects. 1m 02s 124WPM **Acc: 100**

M

I am a plant. Some of my leave:s are inn (pause) in the shape of a pitcher. So, people call me a (pause) pitcher plant. Some people (pause) have seen monkeys drinking (pause) water from my pitchers. They give me another name- monkey cups. Don't look down upon my pitchers. They are not just water containers. My pitcher (pause) s are very colourful and they are filled with liquid. They also give off (a) sweet smell. Many insects are attracted (pause) by the colours and the smell. They climb in the pitchers to get some honey, but they can never climb out because the pitchers are very slippery. What happens to the (pause) insects? Their bodies (pause) are di (pause) dissolved by the liquid in my pitchers. They're becoming my food. Yes, you are right. I am a plant, eating insect (pause) s. 50s 154WPM **4 Acc: 96.88**

M

I am a plant. Some of my leaves are in the shape of a pitcher. So, people call me a pitcher plant. Some people have seen monkey:s drinking water from my pitchers. They give me another name- monkey cups. Don't look down upon my pitchers. They are not just water containers. My pitchers are very colourful and they are filled with liquid. They also give off sweet smells. Many insects are attracted by the colours and the smell. They climb into the pitchers to get some honey, but they can never climb out because the (pause) pitchers are very slippery. What happens to the insects? Their bodies are dissolved by the liquid in my pitchers. They become my food. Yes, you are right. I am a plant, eating insects. 50s 154WPM **1 Acc: 99.22**

M

I am a plant. Some of my leaves (pause) are in the shape (pause) of (pause) a pitcher. So, people call me a pitcher plant. Some people have (pause) seen monkey:s drinking water from my pitchers. They give me another name- monkey cups. Don't look down upon my pitchers. They are not just water containers. My pitchers are very colourful and they are filled with liquid. They also give (pause) off sweet smell. Many insect (pause) s are attract (pause) ted by the colours and the smell. They climb into the pitchers to get some honey, but they can never climb out because the pitchers are very slippery. What happens to the insects? Their body are dissolved by the lu liquid in my pitchers. They become my food. Yes, you are right. I am a plant, eating insects. 1min 00s 128 WPM **1 Acc: 99.22**

F

I am a plant. Some of my leaves are (pause) in the shape of a pitcher. So, people call me a pitcher plant. Some people have seen monkeys drinking water from my pitchers. They give me another name- monkey cups. Don't look down upon my pitchers. They are not just water containers. My pitchers are very colourful and they are filled with liquid. They also give off sweet smell. Many insects are attracted by the colours and the smell. They climb into the pitchers to get some honey, but they can never climb out because the pitchers are very slippery. What happens to the insects? Their bodies are dissolved by the liquid in my pitchers. They become my food. Yes, you are right. I am a plant, eating insects. 1m 02s **Acc: 100**

M

I am a plant. Some of my leaves are in the shape of a pitcher. So, people call me a pitcher plant. Some people have seen monkeys drinking water from my pitchers. They give me another name- monkey cups. Don't look (pause) down upon my pitchers. They are not just water containers. My pitchers are very colourful and they are (pause) filled with liquid. They also give off sweet smell. Many insects are attracted to the colours and (the) smell. They (pause) climb into the (pause) pitchers to get some honey:, but they can never climb out (pause) because the pitchers are very slippery. What happens to the insects? Their (pause) bodies are dissolved (pause) by the liquid in my pitchers. They become (pause) my food. Yes, you are right. I'm a (pause) plant, eating insects. 54s 142 WPM **3 Acc: 97.66**

F (had a cold)

I am a plant. Some of me my leaves are in the shape of a pitcher. So, people call me a pitcher plant. Some people wa people have seen monkeys drinking water from my pitchers. They gave me another name- monkey cups. Don't look down upon my pitchers. They are not just water con (pause) containers. My pitchers are very colourful and they are filled with liquid. They also give off sweet smells. Many insect are attracted by the colours and the smell. They climb into the pitchers to get some honey, but they can never climb out because the pit pitchers are very slippery. What happened to the insects? Their body are dissolved by the liquid in my pitchers. They become my food. Yes, you are right. I am a plant, eating insects. 50s 154 WPM **5 Acc: 96.09**

F

Pitcher plants. I am a plant. Some of my leaves are in the shape of a pitcher. So, people call me (a) pitcher plant. Some people (pause) have seen monkeys drinking water from my pitchers. They give me other name- monkey cups. Don't look down upon my pitchers. They (pause) they are not just water containers. My pitchers are very colourful and (pause) they are filled with (pause) liquid. They also give off

sweet smell. Many insects are attracted by (the) colour and the smell. They climb into the pitchers to get some honey, but they can never climb out because (pause) they can never climb out because the pitchers are very slippery. What happens to (the) insects? Their body (pause) are di disfold by the liquid inside my pitchers. They become my food. Yes, you are right. I am a plant, eating insects. 58s 132 WPM **8 Acc: 93.85**

M

Pitcher plants. I am a plant. Some of my leaves are in the shape of a pitcher. So, people call me a pitcher plant. Some people have seen me (pause) monkeys drinking water from my pitchers. They give me another name- monkey cups. Don't look down upon my pitchers. They are not (pause) wa just water containers. My pitchers are very colourful and they are filled with liquid. They also give off sweet smell. Many insects are attracted by the colours and the smell. They climb into the pitchers (pause) to get some honey, but they can never climb out because the pitchers are very slippery. What happens to the insects? Their bodies are dissolved by the liquid in my pitcher. They become my food. Yes, you are right. I am a plant, eating in I'm a plant eating insects. 55s 142 WPM **2 Acc: 98.46**

F

Pitcher plants. I am a plant. Some of my leaves (pause) are in the (pause) sha:pe of a pitcher. So, people call me (pause) a pitcher plant. Some people have seen monkeys (pause) drinking water from my pitchers. They give me another name- monkey cups. Don't look down upon my pitchers. They are not just water containers. My pitchers are very colourful and they are filled with liquid. They also give off sweet smell. Many insects are attracted by the colours (pause) and the smell. They climb on into the pitchers to get some (pause) honey:, but they can never climb out because the pitchers are very slippery. What happens to the insects? Their bodies are dissolved by the liquid in my pitchers. They beca become my food. Yes, you are right. I am a plant, eating insect (pause) s. 51s 153 WPM **Acc: 100**

M

Pitcher plants. I am a plant. Some of (pause) my: leaves are in the shape (pause) of a pitcher. So:, people call me a pitcher plant. Some people (pause) have seen monkeys drinking water (pause) from my pitchers. They give me: another na:me- monke::y cups. Don't look down upon my pitchers. They are not just water containers. My pitchers are very colourful and they are filled with liquid. They also give off s:weet smell. Many insect are attracted by the colours and the smell. They climb into the (pause) pitchers to get some honey, but they can never climb out because the pitchers are very: (pause) slippery. What happens to the insect (pause) s? Their

body: are dissolved by the liquid in my pitchers. They became (pause) my food. Yes, you are right. I am a plant, eating insects. 1m 02s 126 WPM **3 Acc: 97.69**

F (sore throat)

I am a plant. Some of my leaves are in the (pause) the shape of a pitcher. So, people call me a pitcher plant. Some people have seen monkey:s drinking water from my pitchers. They give me another name- monkey cups. Don't look down upon my pitchers. They are not just water containers. My pitchers are very colourful and they are filled with liquid. They also give off (pause) sweet smell. Many insects are attracted by the colour (pause) and s (pause) the smell. They climb into the pitchers to get some honey, but they can never cli::mb out because the pitchers are very s:lippery. What happens to the insects? Their bodies (are) dissolve (pause) d by the liquid in my pitchers. They: become my food. Yes, you are right. I am a plant, eating insect. 59s WPM 130 **3 Acc: 97.66**

F

Pincher plants. I am a plant. Some of my leaves are in the shape of a pincher. So, people call me a pincher plant. Some people have seen monkey:s drinking: water from my pinchers. They give me they give me another name- monke:y cups. Don't look (pause) down upon: (pause) my pitchers. They are not just water containers. My pintchers are very colourful and they are (pause) filled (pause) with (pause) liquid. They: also give off (pause) (a) sweet smell:. Many insects are (pause) attracted by (pause) the colours and the smell:. They climb into the pintchers to get (pause) some honey, but they can never climb out because the pintchers are very slippery. What happens to the insects? Their bodies are dissolved by the (pause) liquid in my pintchers. They become my foo:d. Yes, you are right. I am a plant, eating (pause) insects. 1 min 01s WPM 128 **9 Acc: 93.08**

F

Pitcher plants. I am a plant. Some of my leaves are in (pause) the sha:pe of: a pitcher. So, pe:ople call me a pitcher plant. Some people have seen monke:ys drinking water from my pitchers. They give me another name- monkey cups. Don't look (pause) down upon my pitchers. They are not just water containers. My pitchers are very colourful and they are filled with liquid. They also give off sweet smell. Many insects (pause) are attracted by the colours and the smell. They climb into the pitchers to get some honey, but they can never climb out because the pitchers are very slippery. What happens to (the) insects? Their bodies are dissolved (pause) by the liquid in my pitchers. They become my food. Yes, you are right. I am a plant, eating insects. 59s 132 WPM **1 Acc: 99.24**

F

Pitcher plants. I am a plant. Some of (pause) my leaves are in the shape of a pi (pause) pi (pause) pitcher. So, people call me a pitcher plant. Some people have seen mon (pause) keys drinking water from my pi (pause) tchers. They give me another name- monkey cups. Don't look down upon my pit (pause) chers. They a:re not just water container. My pit (pause) chers are very col colourful and they are filled with liquid. They also gave some sweet smell. Many insect are attract by the colour and the smell. They climb into the pitcher to get some honey, but they can never climb out because the (pause) pitchers are very slippery:. What happen to the insect? Their bodies are disscol by the liquid in my pitchers. They become my food. Yes, you are right. I am a plant, eating in (pause) sects. 1min 04s 122 WPM **10 Acc: 92.31**

M

I am a plant. Some of my lea:ves are in the sha:pe of a pitcher. So, people call me a pitcher plant. Some people have seen monkey:s drinking water (pause) from my pitchers. They give me another name- monkey cups. Don't look down upon (pause) my pitchers. They are not just water containers. My f my pitchers are very colourful fu:l and they are filled with liquid. They also give me give off sweet smell. Many insects (pause) are attracted by the colour and the smell. They climb in (pause) into the pitchers to get (pause) some honey, but they can never climb out because the pitchers are very (pause) slippery. What happens to the insects? Their bodi:es ar:e (pause) dissolved by the liquid (pause) in my pitchers. They become (pause) my food. Yes, you are right. I am a plant, eating insects. 1min 06s **1 Acc: 99.22**

M

Pitcher plants. I a I am a plant. Some of my lea:ves are in the shape of a pitcher. So, people call me a pitcher plant. Some people have seen monkeys drinking water from my pitchers. They give me another name- monkey cups. Don't look down upon my pitchers. They are not just water containers. My pitchers are very colourful and they are filled with liquid. They also give off sweet smell. Many insects are attract by the colours and the smell. They climb up into the pitchers to get some honey, but they can never climb out because (pause) the pitchers are very slippery. What happens to the insects? Their bodies are dissolved by the liquid in my pitchers. They become my food. Yes, you are right. I am a plant, eating insects. 50s 2 Acc: 98.46

F

I am a plant. Some of my leaves are in the shape of a pitcher. So, people call me a (pause) pitcher plant. Some people (pause) have seen monkeys drinking water from my pitchers. They give me another name- monkey cups. Don't look down upon my pitchers. They are not just water container. My pitchers (pause) are very colourful

and they are filled with liquid. They also give off (pause) sensis sweet smells. Many insects (pause) are attracted by the colours and the smell. They climb into the pitchers to get some honey, but they (can) never climb out because the pitchers are very slippery. What happens to the insects? Their bodies are dis (pause) solved by the li (pause) quid in my pitchers. They become my food. Yes, you are right. I am a plant, eating insects. 57s 135 WPM **3 Acc: 97.66**

F

Pitcher plants. I am a plant. Some of my leaves are in the shape of a pitcher. So, people call me a pitcher plant. Some people have seen monkeys drinking water from my pitchers. They give me another name- monkey cups. Don't look (pause) down upon my pitchers. They are not just water containers. My pitchers are very colourful and they are filled with liquid. They also give off sweet smell. Mamy (pause) many insects are attract by the colours and the smell. They climb (pause) into the pitchers to get some honey, but they can never climb out because the pitchers are very slippery. What happens to this insects? Their bodies are dissolved by the liquid in my pitchers. They become my food. Yes, you are right. I am a plant, eating insects. 52s 150 WPM **2 Acc: 98.46**

F

I am a plant. Some of my leaves are in the sha:pe of a pitcher. So, people call me a pitcher plant. Some people have seen monkeys drinking water from my pitchers. They give me another name- monkey cups. Don't (pause) loo:k do:wn upon my pitchers. They are not just water containers. My pitchers are very colourful and they are filled with liquid. They also give (pause) s off sweet smell. Many insects are attracted by the colours (pause) and the smell. They climb into the pitchers to get some honey, but they can never climb out because the pitchers are very slippery. That's what happens to the insects? Their bodies are dissolved by the liquid in my pitchers. They become my food. Yes, you are right. I am a plant, eating insects. 53s 145 WPM **2 Acc: 98.43**

M

Pitcher plants. I am a plant. Some of my leaves are in the shape of a pitcher. So, people call me a pitcher (pause) plant. Some people have seen monkeys drinking water from my pitcher (pause) from my pitchers. They give me another name- monkey cups. Don't look down (pause) upon my pitchers. They are not just water containers. My pitchers are very colourful and they (pause) are filled with liquid. They also give off sweet smell. Many insects are attracted by these by the colours (pause) and the smell. They climb into the pitchers to get some honey, but they can never climb out because the pitchers are very slippery. What happens to the insects? Their (pause) bodie:s ar:e (pause) dissolved by the liquid in my pitchers. They

become my food. Yes, you are right. I am a plant, eating insects. 59s 132 WPM
Acc: 100

M

I am a plant. Some of my leaves are in the shape of a <u>pitcher</u> (1.8) pitcher. So, people call me a PITCHER plant. Some people have seen monkeys drinking water from my PITCHERS. They <u>(0.3)</u> give me another name- monkey cups. Don't look down upon my PITCHERS. They are NOT just water containers. My pitchers are very colourful and they are <u>(0.5)</u> filled with liquid. They also give of sweet <u>s</u> smell. Many insects are attracted by the colours and the <u>s</u> smell. They climb into the PITCHERS to get some HONEY, but they can never climb <u>out of (1)</u> out because the PITCHERS are very slippery. What happened to the insects? Their bodies are dizolved by the liquid in my PITchers. They becaime my food. Yes, you are right. I am a plant eating insects. 1m10s 110WPM **2 Acc: 98.44**

F

Pitcher plants. I am a plant. Some of my leaves (pause) are in the shape of a pitcher. So:, people call me a pitcher plant. Some people have seen monkeys drinking water from my pitchers. They give me another name- monkey cups. Don't look down upon my pitchers. They are not just water containers. My pitchers are very colourful and they're filled with liquid. They also give off (pause) sweet smell. Many insects are attracted by the colours and the smell. They climb into the pitchers to get some honey, but they can never climb out because the pitchers are very slippery. What happens to the insects? Their bodies are dissolved by the liquid in my pitchers. They become my food. Yes, you are right. I am a plant, eating insects. 1m 11s 110WPM **1 Acc: 99.23**

Participants without FilDWs

M

I am a <u>plaanet</u> some of my leaves are in the shape of a pitcher <u>(1.5)</u> so <u>(0.3)</u> people call me <u>(0.5)</u> a pitcher plant. <u>(4)</u> Some people have seen monkeys drinking water from my <u>(0.5)</u> PITchers. <u>(2)</u> They give me another <u>(0.5)</u> name (0.3) monkey cups. <u>(1.5)</u> Don't look <u>(0.5)</u> down upon <u>(0.5)</u> my <u>(1)</u> pitchers. <u>(1.5)</u> They are not just water containers. (0.5) My pitchers are very colourful (0.5) and they are <u>(0.3)</u> filled with liquid. (1) They also give off sweet smell. (0.5) Many insects are attracted (0.3) by the colours (0.5) and the smell. <u>(2)</u> They climb into <u>(1)</u> (the) pitchers to get some honey <u>(1.5)</u> but they can <u>(0.5)</u> never <u>(0.3)</u> climb <u>(0.3)</u> out <u>(0.3)</u> because the <u>peet</u> pitchers are very slippery. <u>(1)</u> <u>What happens to the</u> <u>(1)</u> what happens to the insects **<u>(1)</u>** their bodies are <u>(0.3)</u> dissolved <u>(0.5)</u> by the liquid <u>(0.5)</u> in my pitchers <u>(2.5)</u> they become my food. Yes, you are right, I am a <u>plant</u> <u>(1)</u> plant ea <u>(0.3)</u> ting insects. 1m20s 96WPM **2 Acc: 98.44**

F

I am a (0.5) plant. Some of my leaves are in the shape off (0.5) uh (3) hmm (4.5) pitcher. Some peepill call me (0.3) a pitcher plaant. Some people have seen monkeeys drinking wi water (0.3) from (0.3) my (1) pit (0.2) chers. They gif me another name-monkey cups. Don't (0.3) look (0.3) doown (0.5) upon my (0.3) pitchers. They are not just water con (0.3) tainers (1) my pitchers are very colourful and (0.5) they (0.3) are filled with liquid. They are also gif off sweet smell. Many insects are attract by the colour and the smell. They climb into the pitcheerr to get some honey, but they can nefer climb out because (0.5) the pitcher are fery slippery (2) What's happens (0.3) on the insects (0.8) their bodee are (0.3) dizolved by my liquid and my (0.5) pitchers they became my food. Yes, you are right, I am a plant eating (0.3) insect. 1m15s 104WPM **8 Acc: 93.75**

M

Pitcher plants. I am a plant. Some of my leaves (pause) are are in the shape of a pitcher. So, people call me a pitcher plant. Some people have seen monkeys drinking water from my (pause) pitchers. They give me another name- monkey cups. Don't look down upon my pitchers. They are not just water conai (pause) tainers. My 'pitchers' are very colourful and they are fill with liquid. They also give off sweet smell. Many insects art attracted by the colours and the smell. They climb into the (pause) pitchers to get some honey, but they can never climb out because the pitchers are very slippery. What happens to the insects? Their bodies are dissolved by the liquid in my pitchers. They become my food. Yes, you are right. I am a plant, eating insects. 51s 153WPM **2 Acc: 98.46**

F

Interesting plants. Pitcher plants. I am a plant. Some of my lea:ves (pause) are in the shape (pause) of a pitcher. So, people call me a pitcher plant. Some people have seen monkeys drinking water from my pitche:rs. They gave me (pause) another name- monkey cups. Don't look down upon my pitchers. They are not just water containers. My colour my pitchers are very colourful and they are filled with liquid. They also give off sweet smell. Many insects are attracted by the colours and the smell. They climbed into the pitchers to get some honey, but they can never climb out because the pitchers are very slippery. What happen to the insects? Their bodies are dissolved by the liquid in my pi:tchers. They become my food. Yes, you're right. I am a plant, eating insects. 58s 139WPM **6 Acc: 95.45**

F

Pitcher plants. I am a plant. Some of my leaves are in the shape of a pitcher. So, people call me a pitcher plant. Some people have seen monkeys drinking water from my pitchers. They give me another name- monkey cups. Don't look down upon my pitchers. They are not just water containers. My pitchers are very colourful and they are filled with liquid. They also give off sweet smell. Many insects are attracted by

the colours and the smell. They climb into the pitchers to get some honey:, but they can never climb out because the pitchers are very slippery. What happens to the insects? Their bodies are dissolved by the liquid in my pitchers. They've become my food. Yes, you are right. I am a plant, eating insect (pause) s. 55s 142 WPM **1 Acc: 99.23**

M

I am a plant. Some of my leaves are in the shape of a (pause) pitche:r. So, people call me a pitche:r plant. Some people have seen monkeys drinking water from my pit (pause) che:rs. They (pause) give me another name (pause) another name- monkey cups. Don't look down upon my pitche:rs. They are not just wa:ter containers. My pitche:rs are: very: colourful (pause) and they are filled with liquid. They:: they also give off sweet smell. Many insects are attracted by (pause) the colours and the smell. They climb into the pitchers (pause) to get so:me honey:, but they can never climb out because the pitche:rs are very slippery. What happens to the insects? Their bodies are dissolved by the liquid in my pitche:rs. They become (pause) may (pause) they become my food. Yes, you are right. I am a plant, eating insec (pause) ts. 1m 15s 102WPM **Acc: 100**

F

I am a plant. Some of my leaves are (pause) in the shape of a pitcher. So, people call me a pitcher plant. Some people have seen monkeys drinking water from my pitchers (pause) and (pause) they gave me: another: name- monkey cups. Don't look down upon my pitchers. They are not just water containers. My pitchers are very colourful and they are filled with liquid. They also give off sweet smell. Many insects are attracted by the colours and the smell. They climb into the pitchers to get some honey, but they can never climb out because the pitchers are very slippery. What happens to the insects? Their bodies are dissolved by the liquid in my pitchers. They become my food. Yes, you are right. I am a plant, eating insects. 1min 01s 126WPM **2 Acc: 98.44**

M

I am a plant. Some of my leaves are in the shape of a pitcher. So, people call me a pitcher plant. Some people have seen monkeys drinking water from my pitchers. They give me another name- monkey:: cups. Don't (pause) look don't look do::wn upon my pitcher. They are not just water containers. My pitcher are very colourful and they are filled with liquid. They're also give off (pause) swee:t smell. Many (pause) insect (pause) s are attracted by the colour and ss and the smell. They climb (pause) into the pitcher to get some honey:, but they can never climb out because the pitcher are very slippery. What happen (pause) s to the insects? Their bodies are dissolves (pause) by the li (pause) quid in my pitchers. They become my foo. Yes, you are right. I am a plant, eating insects. 1m 08s 113WPM **8 Acc: 93.75**

278

M

I am a plant. Some of my leaves are in the: sha:pe of a pitcher. So, people (pause) call me a pitcher plant. Some people have seen monkeys drinking water from my pitchers. They give me another name- monkey cups. Don't look down upon my pitchers. They are not (pause) just water containers. My pitchers are very colourful (pause) and they are filled with liquid. They also give me off sweet smell. Some insects (pause) are attracted by au (pause) by the colours (pause) and the smell. They climb into the pitchers to get some honey, but they can never climb out because the pitcher are very slippery. What happens to the insects? Their bodies are solved by the liquid in my pitchers. They:: (pause) become my food. Yes, you are right. I am a plant, eating in:sects. 1min 12s 107WPM **4 Acc: 96.88**

F

Pitcher plants. I am a plant. Some of my leaves are in: (pause) the sha:pe (pause) of a pitcher. So, people call me (a) pitcher plant. Some people have seen monkeys drinking water from my (pause) pitchers. They gave me another name- monkey cups. Don't look down upon my: pitchers. They are: (pause) not just water containers. My pitchers are very colourful and they are filled with liquid. They also give off swo sweet smell. Many insect (pause) s are atta uh attracted by the (pause) colours (pause) and the smell. They climb into the pitchers to get some honey:, but they can never climb out because the pitchers are very slippery. What happens to the insects? Their body are dissolved by the liquid in my pitchers. They beca (pause) they become my foo. Yes, you are right. I am a plant, eating insects. 1m 06s 116WPM **4 Acc: 96.92**

F

Pitcher plants. I am a plant. Some of my leaves are in the shape of a pitcher. So, people call me a pitcher plant. Some people have see monkeys drinking water from my pitchers. They give me another name- monkey: cups. Don't look down upon my pitchers. They are not just water containers. My pitchers are very colourful and they are filled with liquid. They also give off (a) sweet smell. Many insects are attracted by the colours and the smell. They climb into the pitchers to get some honey, but they can never climb out because the pitchers are very slippery. What happens to the insects? Their bodies are dissolved by the liquids (pause) in my pitchers. They become my food. Yes, you are right. I am a plant, eating insects. 47s 163WPM **3 Acc: 97.69**

M

I am a plant. Some of my leaves are in the shape of a pi:tcher. So, people call me a pitcher plant. Some people have seen monkeys drinking water (pause) from my pi:tchers. They give me another name- monkey: cups. Don't look down upo:n my

pitchers. They are not just water containers. My pitchers are very colourful: and they are filled with liquid. They also give (pause) off sweet smell. Many insects are attracted by the colour and the smell. They climbed into the pitchers to get some honey, but they ca but they can never climb out (pause) because the pitchers are very slip (pause) pery. What happens to the insects? Their bodie:s are dissolved by the liquid in my pitchers. They become my food. Yes, you're right. I am a plant, eating (pause) insects. 1m 05s 118WPM **3 Acc: 97.66**

M

Interesting plants. I am a plant. Some of my leaves are in the shape (pause) of a (pause) pitcher plants. (So, people call me a pitcher plant). Some people have seen monkeys drinking water from my pitchers:. They give me another name- monkey cups. Don't look down upon my pitchers. They are not just water containers. My pitchers are very colourful (pause) and they are filded with liquid. They also give off sweet smells. Many insects are attract attracted by the colours (pause) and (the) smell. They climb into the pitchers (pause) to get some honey, but they can never climb (pause) out because the pitchers are very slippery. What what happens to the insects? Their bodies are (pause) dissolved by the liquid in my pitchers. They become my foo:d. Yes, you are right. I'm a plant, eating insects. 1m 04s 113 WPM **12 Acc: 90.08**

M

I am a plant. Some of my leaves a:re in the shape of a pitcher. So, people call me a pitcher plant. Some people have s (pause) een monkeys drinking water from my pitchers. They gave me another name- monkey cups. Don't look down upon my pitchers. They are not just water containers. My what my pitchers are very colourful and they are filled with liquid. They also give off sweet smell. Many insects are attracted by the colours and the smell. They climb into the pitchers to (pause) get some honey, but they can never climb out because the pitchers are very slippery. What happens to the insects? Their bodies are (pause) disso (pause) dissolved by the liquid (pause) in my pitchers. They become my food. Yes, you are right. I'm a plant, eating insects. 59s 130 WPM **2 Acc: 98.44**

F

I am a plant. Some of my (pause) leaves are in the (pause) shape of a pitcher. So, people call me a (pause) pitcher plant. Some (pause) people have seen monkeys drinking water from my pitchers. They (pause) give me another name- monkey cups. Don't (pause) look down upon (pause) my pitchers. They're not just water containers. My pitchers are very colourful and they are filled with liquid. They also give off sweet smell. Many insects are attracted by the colours and the smell. They climb into the pitchers to get some honey, but they can never climb out because the pitchers are very slippery. What happen to the plants (pause) no, no, no, what

happen to the insects? Their bodies (pause) are dissolved by the li::quid (pause) in my pitchers. They (pause) became my food. Yes, you are right. I am a plant, eating insects. 1 min 06s 116WPM **3 Acc: 97.66**

F

I am a plant. Some of my leaves are (pause) in the shape of a pitcher. So, people call me a pitcher plant. Some people have (pause) seen monke::ys drinking water from my pitchers. They give (pause) me: another name- monkey cups. Don't look down upond my (pause) pitchers. They are not just water containers. My pitchers are very colourful and they are filled with liquid. They also give off sweet smell. Many insects are attracted by the colours and the smell. They climb into the pitchers to get some honey, but they can never climb out (pause) because the pitchers are very slippery. What happens to the insects? Their bodies are dis (pause) solved by the liquid in my pitchers. They become my food. Yes, you're right. I am a plant, eating insects. 1min 05s 118WPM **2 Acc: 98.44**

M

I am a plant. Some of my leaves are in the shape of a pitcher. So, people call me a pitcher plant. Some people have seen monkeys drinking water from my pitchers. They give me another name- monkey cups. Don't look down upon my pitchers. They are not just m water containers. My pitchers are very colourful and they are filled with liquid. They also give off sweet smell. Many insects are attracted by the colours (pause) and the smell. They climb into the pitchers to get some honey, but they can never climb out because the pitchers are very slippery. What happens to the insects? Their bodie:s are (pause) dissolved by the liquid in my pitchers. They become my food. Yes, you are right. I'm a I am a plant, eating insect (pause) s. 52s 148 WPM **Acc: 100**

F

Interesting (pause) plants. Pitcher plants. I am a plant. Some of my leaves are in (pause) the shape of (pause) pitcher shape of a pitcher. So, people call me a: pitcher (pause) plant. Some people have (pause) seen monkey: drinking water from my pitchers. They (pause) give (pause) me another name- monkey cups. Don't (pause) look (pause) down upon my pitchers. They are not (pause) just water (pause) containers. My pitchers are (pause) very colourful and they are filled with liquid. They a (pause) they also give off (pause) sweet (pause) smell. Many: insects are attracted (pause) by the colours uh and the smell. They climb into the pitchers to get some honey:, but they can (pause) never climb out because the (pause) pitchers (pause) are very slippery. What happens to the insects? Their body: (pause) s are (pause) dissolved by the (pause) liqui:d in my pitchers. They become my food. Yes, you are right. I am a (pause) plant, eating (pause) insec (pause) ts. 1min 16s 104 WPM **1 Acc: 99.24**

M

Interesting plants. Pitcher plants. I am a plant. Some of my leaves are in (pause) the shape of a pitcher. So, people call me a pitcher plant. Some people have (pause) seen monkeys drinking water from my pitchers. They give me (pause) another name- monkey cups. Don't look (pause) down upon my pitchers. They are not (pause) just water containers. My pitchers are very colourful and they are filled with liquid. They they also give off sweet smell. Many insects are attract by the colours and the smell. They climb into the pitchers to get (pause) some honey:, but they can't ne the they:: can never climb out 'cause the pitchers are very slippery. What happens to the insect? The their bodie (pause) s are disso:lved by the liquid in my pitchers. They become my foo. Yes, you are right. I am a (pause) plant, eating insects. 1m 00s 132 WPM **4 Acc: 96.97**

F

I am a plant. Some of my leaves are (pause) in the (pause) shape of a (pause) pincher. So::, people call me a (pause) painter plant. Some people: have see:n monkeys drinking water from my (pause) pintchers. They give me another name- monkey: cups. Don't look (pause) down upon my (pause) pinches. They are not just water containers. My pintchers are very colourful and they are (pause) filled with liquid. They (pause) also (pause) give (pause) off sweet sme:lls. Many insects are (pause) aquish by (pause) the colours and the smell. They cli:mb (pause) into: the: pintchers to get some honey:, but they can never climb out (pause) because the pitchers are very slippery. What happens to the ins (pause) insects? Their bodie:s are dis (pause) covered by the liquid (pause) in my (pause) pintchers. They become (pause) my food. Yes, you are right. I am a plant eater insects. 1min 11s 108WPM **11 Acc: 91.41**

F

Pitcher plants. I am a plant. Some of my leaves are (pause) in the shape of a pitcher. So, people call me a pitcher plant. Some people have seen (pause) monkey: drinking (pause) wate:r from my (pause) pitchers. They give (pause) me (pause) another name- monkey cups. They (pause) don't look (down) upon my pitchers. They are not just water containers. My pitchers are very colourful:l (pause) and they are filled with liquid. They also give off (pause) sweet smell. Many insects are attracted by (the) colours and the smell. They climb into the pitchers to get some honey, but they (can) never climb out because the pitchers are very (pause) slippery. What happens to the insects? Their body are dissolved by the liquid in my pitchers. They become my food. Yes, you are right. I am a plant, eating insects. 1min 08s 115 WPM **7 Acc: 94.62**

M

Interesting plants. Pitche:rs plants. I am a (pause) pla:nt. Some of my l::eaves are (pause) in:: the shape of a pitcher. So, people call me a (pause) pitcher (pause) plant. Some people have seen monkeys drinking water from my (pause) pitchers. They give me other name- monkey cups. Don't look down upon upon (pause) my peet meet pitchers. They are not just water contains. My pitchers are very colourful and they are filled with li (pause) quid. They also give (pause) off (sweet smell). (Many insects) are attrac by the colours (pause) and the smell. They have climb in: (pause) to the pit (pause) cher to gets some ho:ney, but they can (pause) neve:r climb out (pause) because the (pause) pitchers (pause) are very (pause) sl:ippery. What ha hands to the insects? The bodie:s are: (pause) slovid by the liquid in my pitchers. They become my food. Yes, you are right. I am (pause) I am a p:l:ant, eating insects. 1m 26s 89 WPM **14 Acc: 89.06**

M

I: am a plant. Some of my lea:ves are in the sha:pe of a pit:cher. So:, people call me a pitcher plant. Some pe:ople have seen monkey drinking water from (pause) my (pause) pitchers. They give me another name- monkey cups. Don't loo:k do:wn upon my pitchers. They are not just water con (pause) tainers. My pit (pause) chers are very colourful and they are fillet with liquid. They also give (pause) off (pause) sweet mell smell. Many insects are attracted by the colour (pause) s and the smell. They climb unto the pitchers to get some honey, but they can never climb (pause) out because the pitchers are very: slippery. What happened to the insects? Their bodies are dissolved by the liquid in my pitchers. They become my food. Yes, you are right. I am a plant, eating insects. 1min 17s 107WPM **4 Acc: 96.88**

M

Pitcher Pla::nts. I am a pla:nt. Some of my leaves are in the shape of a pitcher. So people call me a pitcher plant. Some people have seen monkeys drinking water from my pitchers. They give me another name- monkey cups. Don't look down upon my pitchers. They are not (pause) just water containers. My pitchers are very colourful and they are filled with liqu::id. They also give off sweet smell. Many insect are attract by the colours and the sm:ell. They climb into the pitchers to get (pause) some honey, but they can never climb out (pause) because the pitchers are very sli:ppery. What happens to the insects? The bodies are dissolved by the liquid in my pitchers. They become my food. Yes, you're right. I am a pla:nt, eating in:sects. 1m 15s **4 Acc: 96.92**

F

Pit (pause) pitcher plants. I am a plant. Some of my leaves are in the shape of a pit (pause) cher. So people call me a pitcher plant. Some people have seen monkeys

drinking water from my (pause) pitchers. They give me another name- monkey cu:ps. Don't look down upon my pitchers. They are not just water con (pause) tainers. My pitchers are very colourful and they are filled with li (pause) quid. They also give off s::weet smells. Many in (pause) s:ects are a (pause) tracted by the colours (pause) and the smell. They climb into the pitchers to get some honey, but (pause) they can never climb out because the pitchers are very slippery. What happen (pause) to the insect (pause) s? Their bodies are dissolvded by the li (pause) quid (pause) in my pitchers. They become my food. Yes, you are right. I am a plant, eating insec (pause) ts. 1 min 24s 93WPM **3 Acc: 97.66**

F

P:itcher p:lants. I am a plant. Some of (pause) my (pause) lis are in the shape of a (pause) panter. So people call me a panter plant. Some people: (pause) have (pause) s:: (pause) s:een (pause) monke:ys (pause) drinki:ng (pause) (water from my pitchers). They give me (other names, like) monkey cups. They don't look down upo::n (pause) my (pause) matress. They are not just wate:r (pause) carrees. My (pause) pitchers (pause) are very colourful:l (pause) and they (pause) they are fi:sit with liquen. They are also: (pause) give off sweet (pause) smell many insects a:nd (pause) are (pause) incluted by (pause) the colours (pause) and the smell (They) climbs (pause) into the pitchers (pause) to get (pause) some honey, but they can (pause) never (pause) climb (pause) out because the (pause) pitchers are very slippery. What happened (pause) t what happens to (the) insects? Their bodies are (pause) ventilated by (the) liquid in my pitchers. They became my food. Yes, you are rai. I'm a plea, eating insects. 1 min 20s 91WPM **26 Acc: 78.71**

F

Pit (pause) che:r plants. I am a pan plant. Some of my leaves (pause) are in the shape of a pi:tcher. So, people call me a pi:tcher pant (pause) plant. Some people have seen monkeys drinking water (pause) from my (pause) pi:tchers. They give me another name- monke:y cups. Don't (pause) look down (pause) upon my pitches. They are not just water containers. My pi:tchers are very colourfu:ll and they are filled (pause) with (pause) liquid. They also (pause) give off sweet smell. Many insects are attracted by the colourful (pause) colours and the smell. They climb into (the) peaches to get some honey, but they can never (pause) climb (pause) out because the pitchers are fairy slippery. What happens to the insects? (Their bodies are) dissloved by the (pause) liquid in my peaches. They become my food. Yes, you are right. I am a plant, eating insects. 1min 23s **9 Acc: 92.74**

F

I am a plant. Some of my leaves are in the shape of a pitcher. So, people call me a pitcher plant. Some people have seen mo:nkeys drinking water from my pitchers. They give (pause) me another name- mon:ke:y cups. Don't look down upon my

pitchers. They are not just water containers. My pitchers are very colourful and they are filled with liquid. They also give off (pause) sweet smell. Many insects (pause) are attracted (pause) by the colours and the smell. They climb into the pitchers to get some honey, but they (pause) can never climb (pause) out because the pitchers are very slippery. What happens to the insects? Their bodi:es (pause) are dissolved by the liquid on my in my pitches pitchers. They become my foo:d. Yes, you are right. I am a plant, eating insects. 1min 00s 128 WPM **Acc: 100**

F

Pitcher plants. I am a plant. Some of my leaves are in the sha:pe of (a) pitcher. So, people call me a pitcher plant. Some (pause) pe:ople have seen monke:ys drinking water from my pitchers. They (pause) give me another name- monkey cups. Don't look down upon my pitchers. They are not just water containers. My pitchers are very colourfull: (pause) and they are filled with liquid. They also give off sweet smell. Many insects are a (pause) attracted by the colours and the smell. They climb into the pitchers to get some honey, but they can (pause) never climb out because the pitchers are very slippery. What happen to the insects? Their body are dissloved by the liquid in my pitchers. They become (pause) my (pause) foo:d. Yes, you are right. I am a plant eating insects. 1 min 02s 126 WPM **4 Acc: 96.88**

M

Enteresting plants. Pitchers pla:nts. I am a plant. Sa (pause) Some of my lea:ves (pause) are in (pause) the shape of a pitcher. So, people (pause) call me (pause) a pitcher (pause) plant. Some people (pause) have see:n monke:ys drinking (pause) water: (pause) from my pitchers. They: give me another name- monkey cups. Don't look down upon my pitchers. They are not (pause) just (pause) water containers. My (pause) pitchers are very (pause) colourful and they are (pause) filled with liquid. They also give off (pause) sweet (pause) smell. Many insects are attrac by the colou:rs and the smell. They climb into the pitchers to (pause) get some honey, but they can never climb out because (pause) the pitchers are very slippery. What happens to the insects? Their bodie:s are dissolved by the liquid in my pitchers. They beca become my food. Yes, you're right. I am a plant, eating insects. 1min 17s 3 Acc: 97.73

Notes: words in brackets and marked in red are those that appeared in passage, but not read out. Other words marked in red were read by students, but appeared differently in passage.

Appendix L: Bilingual Survey: FilDWs' Impact on Children's English

Public survey on Filipina helpers' influence on children's English
意見調查:菲律賓工人對孩子英文能力的影響

There are different opinions about the impact that Filipina helpers in Hong Kong households have on children's second language English acquisition. For each aspect of English below, *please tick the box that corresponds with your opinion*.

對於菲律賓工人對孩子學第二語言英語的影響，坊間有不同意見。在以下不同方面，請勾選符合您意見的方框。

Aspect of English英語方面	Influence of Filipina helper菲律賓工人的影響		
English *reading* fluency英文閱讀流暢度	None 沒有影響	Negative負面	Positive正面
English *reading* accuracy英文閱讀準確性	None 沒有影響	Negative負面	Positive正面
English spoken fluency英文會話流暢度	None 沒有影響	Negative負面	Positive正面
Grammatical accuracy in *spoken* English 會話文　法準確度	None 沒有影響	Negative負面	Positive正面
English vocabulary development 英文生字發展	None 沒有影響	Negative負面	Positive正面
English pronunciation 英文發音	None 沒有影響	Negative負面	Positive正面
English listening comprehension 英文聽力理解	None 沒有影響	Negative負面	Positive正面
Grammatical accuracy in English *writing* 英文寫作文法準確性	None 沒有影響	Negative負面	Positive正面
Complexity of English sentences英文句子複雜	None 沒有影響	Negative負面	Positive正面

Perceived L2 competence test[5]

For each item, tick the answer that best describes the way you feel.

YES, yes, no, **NO**

1. My oral English is very good.

2. My oral English is better than most of my classmates'.

3. I am very bad at reading English. (R[6])

4. I know many English words.

5. Reading English is very easy for me.

6. My oral English is very bad. (R)

7. My English writing is much better than most of my classmates'.

8. It is very easy for me to understand when people speak in English.

9. My classmates understand English much better than me. (R)

10. I can write English very well.

11. I can read English much better than most of my classmates.

12. It is very difficult for me to understand when people speak in English. (R)

13. My English writing is very poor. (R)

14. I know more English words than most of my classmates.

15. I can understand English much better than most of my classmates.

---

[5] Participants will answer the following questionnaire regarding their perceived L2 English competence.

[6] Reversed item.

L2 willingness to communicate (WTC) test[7]

For each item, tick the answer that best describes the way you feel.

YES, yes, no, **NO**

1. If I see English speaking people I hope they would talk to me.

2. If I see English speakers, I would find an excuse to talk to them so I can practice my English.

3. I would be willing to give somebody on the street directions in English.

4. I like asking questions in English class.

5. I don't like to speak English every day. (R)

6. I like answering questions in English class.

7. I don't like speaking English outside of school. (R)

8. I like speaking English outside of school.

9. I like speaking in English to other children.

10. I don't like asking questions in English class. (R)

11. I don't like answering questions in English class. (R)

12. I like speaking English with my teachers.

13. If somebody introduced me to native English speakers, I would like to practice my English with them.

14. I don't like speaking English outside of school. (R)

15. I like to speak English every day.

---

[7] This is modified, shortened version of the Foreign (English) Language WTC scale first used in Baghaei (2013) and subsequently, with some modifications, in Mahmoodi & Moazam (2014) as a Second (Arabic) Language WTC test.

L2 motivation test[8]

For each item, tick the answer that best describes the way you feel.

YES, yes, no, **NO**

1. I don't know why I need to learn English. (R)

2. I think learning English is a waste of my time. (R)

3. I can't understand why we need English classes at school. (R)

4. I get great satisfaction when I understand difficult English rules.

5. I feel very happy when I make progress in English.

6. I don't like English stories. (R)

7. I think learning English is important because I want to understand when people speak English.

8. I think it's not important to learn English because I won't need it if I stay in Hong Kong. (R)

9. Learning English is important because I want to speak English well.

10. I feel very satisfied when I do well in English exercises.

11. Learning English is good for my future.

12. I am very interested in English stories.

13. I understand the importance of learning English in school.

14. I learn English only because I have to. (R)

15. I think it's good to learn English because I want to know more about people from other countries.

---

[8] This is a modified, shortened version of the motivation scale used in Noels, Pelletier, Clément, & Vallerand (2003).

L2 anxiety test[9]

For each item, tick the answer that best describes the way you feel.

YES, yes, no, **NO**

1. I worry about making mistakes in English language classes.

2. It frightens me when I know the teacher will ask me a question in English.

3. I'm worried that I won't understand when somebody speaks to me in English.

4. I panic when I need to speak English in class.

5. I feel anxious on my way to English language class.

6. I feel relaxed in English language classes. (R)

7. I feel confident when I speak in English language classes. (R)

8. I am afraid that my language teacher may correct every mistake I make.

9. The more I study for an English language test, the more confused I get.

10. I'm afraid to lose face when I need to speak English in front of my classmates.

11. I feel nervous in English language class.

12. When I'm on my way to English language class, I feel very sure and relaxed. (R)

13. English has so many rules that I'd never be able to speak it well.

14. I get nervous when I don't understand every word the teacher says in English.

---

[9] This is a modified, shortened version of the Foreign Language Classroom Anxiety Scale (Horwitz, Horwitz & Cope, 1986).

15. I can feel my heart pounding when I'm going to be called upon in English class.

Linguistic intelligence test[10]

1. This is a wug. Now there is another one. There are two of them. There are two …

2. This is a gutch. Now there is another one. There are two of them. There are two…

3. Donald knows how to spow. He is spowing. He did the same thing yesterday. What did he do yesterday? Yesterday he…

4. This is a kazh. Now there is another one. There are two of them. There are…

5. Lisa knows how to rick. She is ricking. She did the same thing yesterday. What did she do yesterday? Yesterday he…

6. This is a dog with quirks on him. He is all covered with quirks. What kind of dog is he? He is a…dog.

7. This is a lun. Now there is another one. There are two of them. There are two…

8. Bill knows how to mot. He is motting. He did the same thing yesterday. What did he do yesterday? Yesterday he…

9. This is a tass. Now there is another one. There are two of them. There are two…

10. Yifan knows how to bod. She is bodding. She did the same thing yesterday. What did she do yesterday? Yesterday he…

---

[10] This is a shortened, modified version of the original Wug test (Berko, 1958).

11. This is a heaf. Now there is another one. There are two of them. There are two…

12. Liren knows how to gling. He is glinging. He did the same thing yesterday. What did he do yesterday? Yesterday he…

13. Lufei knows how to loodge. She is loodging. She does it every day. Every day she…

14. This is a wug who owns a hat. Whose hat is it? It is the…hat

15. "This is a bik who owns a cat. Whose cat is it? It is the… cat

Appendix N: Reports to Parents (pre-pilot) who Requested Feedback

Eight-year-old male, no FilDW

Cantonese receptive vocabulary

26/30 (86.7%)

This appears to be a very good score. I have not tested Cantonese receptive vocabulary in many students, but of the ones I did assess, nobody scored higher. We have to be very careful when making inferences from really small samples. Having said that, if we want to interpret this result based on the limited data available, it seems if Liren's Cantonese receptive vocabulary may be in the top quartile among his peers.

English receptive vocabulary

10/30 (33.3%)

The words presented are from a standardised test, grouped together in batches according to age. The test started with words that children of 7 are expected to know. Liren scored 5/12 there. The next batch consists of words that children of 8 years old are expected to know. There Liren scored 4/12. Only half the batch of words from the test for children of 9 was administered and Liren scored 1/6. If respondents score 10/12, it means their receptive vocabulary is equal to that of the age group they obtained that score for (i.e. if somebody got 10/12 for the batch of words for seven-year-olds, their receptive vocabulary is that of a child aged 7). Considering that Liren scored half of what is expected from 7-year olds and 40% of what is expected from 8-year olds, it appears if his English receptive vocabulary is below that of an average 7-year old.

English reading

The reading passage presented comes from a Hong Kong children's book for pupils in P2. The passage consists of 128 words and Liren took 2min 43s to read it, which translates into a reading speed of 46.5 words per minute. This falls within the range of 45-60 words per minute that 8-year olds typically read in their second language when presented with age appropriate text. There were eight words in the passage that Liren didn't know, giving him a reading comprehension score of 93.75%. If we take into account that comprehension level of age appropriate text is expected to be around 98%, Liren's reading comprehension is below that of what one would expect. He did not pronounce the s at the end of words, which is a common mistake for learners from Hong Kong and China.

English listening comprehension

A two minute children's story with pictures and subtitles was played. After the story, Liren answered 20 questions about it. He answered one correctly, three partially correct and the rest incorrect, giving him a score of 2.5/20 (12.5%). Based on this result, it appears if his English listening comprehension is well below the level expected for his age.

English writing

The writing task requires test takers to write about their usual weekend activities. The instructions include several prompts to facilitate writing. Liren wrote 18 words, grouped into 5 sentences. He did not use any low frequency words for his age (i.e. he only used simple words) made 8 mistakes and his longest sentence was 6 words. The minimum expectation for 8-year olds is the ability use correct punctuation and write two consecutive error free sentences, averaging 8 words. Liren's average sentence length in the writing test was 3.6 words and none of the sentences were error free. Based on these results, it appears if his English writing is below the level expected for his age.

English grammatical accuracy

Grammatical accuracy was assessed by calculating the percentage that grammatical errors constitute of the total speech sample. This was then deducted from the total number of words uttered. Liren's grammatical accuracy score for these tests is 74.65. This implies that he makes about one grammar mistake for every four words spoken and that most of his sentences contain at least one grammatical error. Based on the results of these tests, it therefore appears if Liren's English grammar needs substantial improvement.

English spoken fluency

Spoken fluency was assessed through a picture description, story telling and conversational task. For reference, a transcript of the conversational task is included at the end of the report. As can be seen from the transcript, he didn't speak much, several prompts were required to get an answer, and answers were short and sometimes incongruent. The speech elicited from all tasks were characterised by numerous long pauses, gap fillers and hesitations. Fluency score is arrived at by calculating what percentage dysfluency markers constitute of the total transcript. This number is then deducted from 100. Liren's fluency score is 20.14. The average fluency score of nine other 8- and 9-year-olds I've assessed is 69.08 (range 32.88-94.50). Based on these results, it appears if Liren's English spoken fluency is in the lowest quartile among his peers. It is also worth mentioning that he spoke very softly (sometimes whispering) during our interaction and that it emerged from the conversational task that he does not like English.

Suggestions for improvement

If we consider Liren's excellent score in receptive Cantonese vocabulary, it seems if he doesn't have difficulty with language per se. His difficulty appears to be with English. Fortunately, he is still young enough that intervention measures have a high probability to result in great improvement.

I would suggest that he gets into the habit of listening to easy English (where he understands at least 95%) and reading easy English (where he understands about 99%) every day. I'm including some resources that may be of use:

English listening: https://learnenglishkids.britishcouncil.org/en/listen-watch

English reading: http://www.readbrightly.com/50-best-books-7-8-year-olds/

http://www.readbrightly.com/the-50-best-books-for-5-and-6-year-olds/

The source for English listening contains children's stories with subtitles. I'd suggest that he listens to each story several times. Every time it will become easier, which is a great way for building confidence and improving.

The sources for English reading contain a list of the most popular books for 7- and 8-year olds as well those for 5- and 6-year olds. I'd suggest that you'd get some of the books that Liren shows interest in and find easy to understand. The best way to learn is to work with material we're interested in, while at the same time we can understand it with ease. If the books for 7- and 8-year olds are too hard, go for the ones aimed at younger children.

Eight-year-old female, no FilDW

Cantonese receptive vocabulary

26/30 (86.7%)

This appears to be a very good score. I have not tested Cantonese receptive vocabulary in many students, but of the ones I did assess, nobody scored higher. We have to be very careful when making inferences from really small samples. Having said that, if we want to interpret this result based on the limited data available, it seems if Lucy's Cantonese receptive vocabulary may be in the top quartile among her peers.

English receptive vocabulary

9/30 (30%)

The words presented are from a standardised test, grouped together in batches according to age. The test started with words that children of 7 are expected to know. Lucy scored 5/12 there. The next batch consists of words that children of 8 years old are expected to know. There Lucy scored 3/12. Only half the batch of words from the test for children of 9 was administered and Lucy scored 1/6. If a responded scores 10/12, it means their receptive vocabulary is equal to that of the age group they obtained that score for (i.e. somebody got 10/12 for the batch of words for seven-year-olds, their receptive vocabulary is that of a child aged 7). Considering that Lucy scored only half of what is expected from children of 7, it appears if her English receptive vocabulary is below the level of average seven-year-olds.

English Fluency

Total words spoken: 197

Total speech time: 13 min

Words per minute: 15

Grammar mistakes: 33

Dysfluency markers: 177

Prompts required: 66

Average rate of speech for interviews ranges from 160 to 210 words per minute, while conversations typically take place at 190-230 words per minute. Looking at the numbers above, we can see that Lucy's English fluency is well below average. Another way of looking at fluency is by calculating the number of dysfluency markers per 100 words and deducting that number from 100. In Lucy's case, there were 89.85 dysfluency markers per 100 words, giving a fluency score of 10.15. If we compare this to the average of 50.78 recorded by children from CMI schools (which one would expect to be lower than those attending EMI schools) without helpers (the average of those with helpers is much higher at 79.17) I tested in the past, she is again well below average. The lowest score of all students I've tested in the past was 31.48. Based on these findings, it seems if Lucy's English fluency may fall in the lowest quartile among her peers.

English reading

Lucy was unable to read the passage presented. She was only able to repeat after me when I pointed to each word individually and read them out to her. The text comes from a Hong Kong book for children in P2 and the other children I've presented it to were able to read it. Lucy's English reading ability therefore appears to be below the level one would expect for her age.

English writing

Apart from numbers and her name, Lucy was unable to write anything. Others were able to string together English sentences of up to 11 words. It appears, therefore, if Lucy's English writing falls below what is expected for her age.

Suggestions for improvement

If we consider Lucy's excellent score in receptive Cantonese vocabulary, it seems if she doesn't have a problem with languages as such. Her difficulty appears to be with English. Fortunately, she is still young enough that intervention measures have a high probability leading to great improvement.

I would suggest that Lucy gets into the habit of listening to easy English (where she understands at least 95%) and reading easy English (where she understands about 99%) every day. I'm including some resources that may be of use:

English listening: https://learnenglishkids.britishcouncil.org/en/listen-watch

English reading: http://www.readbrightly.com/the-50-best-books-for-5-and-6-year-olds/

The source for English listening contains children's stories with subtitles that Lucy can listen to. I'd suggest that she listens to each story several times. Each time, it will become easier and that is a great way for building confidence.

The source for English reading contains a list of the most popular books for 5- and 6-year olds. I'd suggest that you'd get some of the books that Lucy shows interest in. The best way to learn is to work with material we're interested in.

Appendix O: Letters Certifying Participation in Pilot Study

(i) Letter to those participating in group session only

CERTIFICATION OF PARTICIPATION

This is to certify that Mary Hopkin was involved as a research participant in a study done towards a PhD degree at The Hong Kong Polytechnic University.

She took a written, listening and vocabulary group test in English. These tests were all administered by the researcher. Mary also took a Cantonese listening test in a group setting. This test was played on a computer, requiring participants to select the correct answer from four choices.

Mary was cooperative in all tests and her participation forms an invaluable part of this important research project.

Principal Supervisor   Researcher

Sun-A Kim, Ph.D.   Francois Wolfaardt

(ii) Letter to those completing group and one-to-one sessions

CERTIFICATION OF PARTICIPATION

This is to certify that Stephen Krashen was involved as a research participant in a study done towards a PhD degree at The Hong Kong Polytechnic University. Stephen's contribution comprised two stages.

During the first stage, he took a written, listening and vocabulary group test in English. These tests were all administered by the researcher. Stephen also took a Cantonese listening test in a group setting. This test was played on a computer, requiring participants to select the correct answer from four choices.

The second stage involved one-to-one tests. These were administered in English by the researcher and involved a reading, conversational, story-telling and picture description task.

Stephen was cooperative in all tests and his participation forms an invaluable part of this important research project.

Principal Supervisor   Researcher
Sun-A Kim, Ph.D.   Francois Wolfaardt

Appendix P: Letters Certifying Participation in Main Study

(i) Letter to children of main study participating in group stage only

CERTIFICATION OF PARTICIPATION

This is to certify that Lisa Simpson was involved as a research participant in a study done towards a PhD degree at The Hong Kong Polytechnic University.

Lisa took a written, listening and vocabulary group test in English. These tests were all administered by the researcher. Lisa also took a Cantonese listening and writing test in a group setting. These tests were played on a computer, requiring participants to select the correct answer from four choices.

Lisa was cooperative in all tests and her participation forms an invaluable part of this important research project.

Principal Supervisor   Researcher
Sun-A Kim, Ph.D.   Francois Wolfaardt

CERTIFICATION OF PARTICIPATION

This is to certify that Bill Shakespeare was involved as a research participant in a study done towards a PhD degree at The Hong Kong Polytechnic University. Bill's contribution comprised two stages.

During the first stage, he took a written, listening and vocabulary group test in English. These tests were all administered by the researcher. Bill also took a Cantonese listening and writing test in a group setting. These tests were played on a computer, requiring participants to select the correct answer from four choices.

The second stage involved one-to-one tests. These were administered in English by the researcher and involved a working memory, reading, and picture description task.

Bill was cooperative in all tests and his participation forms an invaluable part of this important research project.

Principal Supervisor   Researcher
Sun-A Kim, Ph.D.   Francois Wolfaardt

Appendix Q: Test Item Evaluation

On the same scale as the overall test evaluation, rate the relevancy of each test item for the following tests (1 = not relevant; 2 = somewhat relevant; 3 = quite relevant; 4 = very relevant).

Cantonese picture vocabulary test

1.	16.
2.	17.
3.	18.
4.	19.
5.	20.
6.	21.
7.	22.
8.	23.
9.	24.
10.	25.
11.	26.
12.	27.
13.	28.
14.	29.
15.	30.

Cantonese written word recognition test

1.	11.
2.	12.
3.	13.
4.	14.
5.	15.
6.	16.
7.	17.
8.	18.
9.	19.
10.	20.

_____

Evaluator (name and position/title).

English picture VOCABULARY test

1.	16.
2.	17.
3.	18.
4.	19.
5.	20.
6.	21.
7.	22.
8.	23.
9.	24.
10.	25.
11.	26.
12.	27.
13.	28.
14.	29.
15.	30.

English picture DESCRIPTION task

1.
2.
3.
4.
5.
6.
7.
8.
9.
10.
11.
12.
13.
14.
15.

English listening comprehension test

1.	11.
2.	12.
3.	13.
4.	14.
5.	15.
6.	16.
7.	17.
8.	18.
9.	19.
10.	20.

_____

Evaluator (name and position/title).

Appendix R: Test Relevancy Evaluation

Considering the purpose of the study, as laid out in the briefing (i.e.to compare the language performance of 8- and 9-year-old Hong Kong children with FilDWs to those from homes without FilDWS, with all children attending the same primary school, coming from similar SES backgrounds and having similar WMC and home literacy), rate the relevancy of each of the following tests on the scale provided. The purpose/s of each task appears in brackets.

1. English reading task (comparing reading fluency and accuracy of 2 groups)

(i) Not relevant ___

(ii) Somewhat relevant ___

(iii) Quite relevant ___

(iv) Very relevant ___

2. English writing task (comparing writing accuracy and complexity of 2 groups)

(i) Not relevant ___

(ii) Somewhat relevant ___

(iii) Quite relevant ___

(iv) Very relevant ___

3. Cantonese picture vocabulary test (comparing Cantonese _**receptive**_ vocabulary of 2 groups)

(i) Not relevant ___

(ii) Somewhat relevant ___

(iii) Quite relevant ___

(iv) Very relevant ___

4. English picture vocabulary test (comparing English _**receptive**_ vocabulary of 2 groups)

(i) Not relevant ___

(ii) Somewhat relevant ___

(iii) Quite relevant ___

(iv) Very relevant ___

5. English listening comprehension test (comparing English listening comprehension of 2 groups)

(i) Not relevant ___

(ii) Somewhat relevant ___

(iii) Quite relevant ___

(iv) Very relevant ___

6. English picture description test (comparing English spoken complexity, fluency and accuracy of 2 groups)

(i) Not relevant ___

(ii) Somewhat relevant ___

(iii) Quite relevant ___

(iv) Very relevant ___

7. Cantonese written word recognition test (comparing Cantonese written word recognition of 2 groups)

(i) Not relevant ___

(ii) Somewhat relevant ___

(iii) Quite relevant ___

(iv) Very relevant ___

_____

Evaluator (name and position/title).