The Differential Effects of Teacher Code-switching on the Vocabulary Acquisition of Adult and Young EFL Learners: A Study in the Korean Context

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Thesis submitted to the University of Oxford for the Degree of Doctor of Philosophy in Education

Trinity Term, 2010

Abstract

In Second Language Acquisition (SLA) literature there has been a considerable theoretical debate over the issue of teachers' use of the students' first language, a phenomenon sometimes referred to as 'code-switching'. Yet to date there has been little study of the effect of teachers' use of code-switching (CS) on the second language learning itself. Therefore the aim of this research was to study the effect of teachers' CS on the learning of English word meanings by two age groups – 19- and 12-year–old EFL students in Korea.

To this end, this study implemented a quasi-experimental design but conducive to ecological validity, drawing on intact EFL classrooms of two kinds: one with monolingual English teachers (English-only condition) and the other with bilingual teachers who speak mainly English but occasionally switch to Korean to explain unknown English words (CS condition). Under these two different instructional types, the participants – 286 adult and 443 young learners – were encouraged to learn previously unknown English words, drawn from reading texts, through their teachers' explanations. The study also employed a participant questionnaire and follow-up interviews, so as to shed light on the issue of teacher CS from the learners' perspective.

The results reveal that, for both age groups, the teachers' CS by and large yielded better learning results, in terms of vocabulary gains, than English-only instruction. However, an inspection of the effect sizes further shows that young learners, compared with adult ones, might benefit from the CS environment to an even greater degree in the learning of vocabulary. The findings from the questionnaire and interviews further suggest that this differential effect of teachers' CS might be due to the young learners' overwhelming preference for teachers' CS in learning English. These differences both in results and learner perceptions are explained as resulting from proficiency levels on the one hand and levels of learning experience on the other.

Having discovered these differential effects of teachers' CS on the two age groups, the findings of the present thesis call for a reconsideration of pedagogical decisions regarding L2-only instruction, in particular for young L2 learners.

This thesis is dedicated to my father, Dr. Jae Heung Lee.

Acknowledgements

First and foremost I offer my utmost gratitude to my supervisor, Professor Ernesto Macaro, for his patience, kindness, and guidance on this research topic. He has been a constant source of support and intellectual inspiration during the course of my doctoral study, and this thesis would surely not have existed without him. I am greatly indebted to him for his wisdom and unsurpassed expertise in the issue of teacher code-switching.

I want to extend my gratitude to Dr. Victoria Murphy, Prof. Ingrid Lunt, Prof. Kathy Sylva, Dr. Robert Vanderplank, and Mr. Jonathan Beckett from whom I not only gained knowledge but also received insightful feedback on the early drafts of this thesis. Also I thank the staff members at the Department of Education and Kellogg College for their kindness and administrative support help throughout my stay in Oxford.

I am also grateful to Dr. Ho-Yeol Lee at the TOSEL organization who allowed me to use original TOSEL test copies as well as the teachers and students in Seoul and Incheon who agreed to take part in the research project which provided the data for this thesis.

Cheers go to my dear friends Jackie Wang, Zhimin Xiao, Chia-Ying Lee, Yuen Yi Lo, Machi Sato, Mitsuko Matsumoto, Evdokia Polydorou, and Kyung-Taek Lee for their friendship and emotional support. In particular, I would like to express my sincere gratitude to Jackie, who has shared joyfulness and hardship over the three years of our study in Oxford together.

I am forever indebted to my parents, who have been very supportive and encouraging during my doctoral study. They have always had great faith in me, and helped me in every possible way to make this thesis possible. I would also like to thank them for being great role models and guiding me to the right path at the early stages of my life and onwards.

Lastly but certainly not least, I wish to thank my fiancée Sesil for her continual love and understanding for the last four years of my studying abroad. It is thanks to her that I have not forgotten how to smile and care for others, and that I have been able to motivate myself to complete this long journey.

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List of Abbreviations

ACTFL	The American Council on the Teaching of Foreign Languages
ANCOVA	Analysis of Covariance
ANOVA	Analysis of Variance
BICS	Basic Interpersonal Communicative Skills
CALP	Cognitive/Academic Language Proficiency
CLT	Communicative Language Teaching
CS	Code-switching
CUREC	The Central University Research Ethics Committee
EFL	English as a Foreign Language
EL	Embedded Language
ELT	English Language Teaching
EO	English-only
ESL	English as a Second Language
EVST	The Eurocentres Vocabulary Size Test
FFI	Focus on Form Instruction
FL	Foreign Language
FLES	The Foreign Languages in Elementary School
FonF	Focus on Form
IELTS	International English Language Testing System
IT	Instructional Type
L1	First Language
L2	Second Language
MC	Multiple-choice
MDN	Median
ML	Matrix Language
MLF	Matrix Language-Frame
NNSET	Non-Native Speaker English Teacher
NSET	Native Speaker English Teacher
RCT	Randomized Control Trial
RHM	The Revised Hierarchical Model

SLA	Second Language Acquisition
SPSS	The Statistical Package for Social Sciences
TEE	Teaching English in English
TESOL	Teaching of English to Speakers of Other Languages
TOEFL	Test of English as a Foreign Language
TOEIC	Test of English for International Communication
TOSEL	Test of Skills in the English Language
VIF	Variation Inflation Factor
VKS	Vocabulary Knowledge Scale
ZPRED	the standardized predicted values of the dependent variable based on the model
ZRESID	The standardized residuals

Chapter 1 Introduction

1.1 The Effectiveness of L2-only Instruction and Teachers' L1 Use for Different Age Groups: Statement of the Problem

In the field of Second Language (L2) learning, the importance of input and interaction has gained widespread recognition in the last three decades. During that period, the L2 research community has attempted to put forward an argument that L2 learning is largely propelled by exposure to comprehensible input (Krashen, 1985) and the procedure by which this input is fine-tuned to learners' internal capacities through "interactional adjustments" (Long, 1996). This influential argument in the L2 field coincided in a timely way with the rise of Communicative Language Teaching (CLT), which embraces the importance of input and interaction as the crux of effective L2 teaching methodology. As a result, the increasing popularity of the CLT approach in the field of L2 teaching and the research line which views L2 input and interaction as central to L2 learning (interactionist research, henceforth) together have created the anti-first language (L1) ethos in the field, equating teachers' use of learners' L1 with something to be frowned upon or avoided at any cost (see section 2.3.2 for details).

While interactionist research has indisputably advanced our understanding of the process of L2 learning, the question of whether teachers' use of the L1 in L2 learning is conducive or detrimental to L2 learning has remained unanswered in the field. That is, research to date has not seriously dealt with the issue of using learners' L1 in L2 teaching, possibly due to a tacitly made suggestion from existing interactionist research that it is L2 input and interaction only that matter in L2 learning. As a consequence, L2-only instruction, which by and large negates the use of learners' L1, has been promoted as the overriding type of instruction for all age groups and learners of different L2 proficiency levels in a range of L2 institutions.

The problem is that there is little research evidence of the superiority of L2-only instruction over instruction integrating the limited use of learners' L1 (Macaro, 2009). In other words, research into the effectiveness of L2-only instruction – sometimes referred to as the intra-lingual method (G. Cook, 2010) – has not kept pace with its rapid growth in the field of L2 teaching across a wide range of educational contexts. Furthermore, as will also be argued later, this dilemma does not only concern instructional type, but also the relative status of native speaker teachers and bilingual non-native speaker teachers, who respectively represent L2-only and bilingual teaching conditions in the classroom. With little research evidence, the effectiveness of teaching by bilingual teachers, who share the learners' L1 and generally incorporate it into their ordinary teaching practices, has been greatly questioned in comparison with that of their native counterparts (see section 2.3.3.3 for details of this argument).

The lack of research into the effectiveness of L2-only instruction may result in inappropriate choices of instruction for a certain age group or a certain L2 proficiency group. For example, using L2-only instruction might only become effective after a certain threshold level of L2 proficiency has been passed or using the L1 in L2 teaching might be more effective for adult learners than young learners. Of course, until the accumulation of a fair amount of empirically-based knowledge has been accomplished, this speculation will remain simply that—speculation.

Another considerably neglected area of research related to teachers' language use is that of different age groups' attitudes towards L2-only instruction and instruction integrating the limited use of the L1. While this issue seems to be of less importance than the effects of instruction on L2 learning, the investigation thereof may be necessary if we aim to provide a more appropriate and learner-oriented type of instruction for L2 learners. The underlying hypothesis in this suggestion is that, when there is a mismatch between

learners' preference for a certain type of instruction and the actual type of instruction, it may negatively affect their L2 learning (see section 2.5.1.3 for details). In part, the pursuit of such an investigation shares the proposition of the learner-centred curriculum of L2 teaching, in which conflicts between teachers' methodology and learners' expectations are to be reconciled, if possible (Nunan, 1988).

In view of this gap in the field, an evaluation is needed to assess the effectiveness of L2-only instruction and instruction integrating learners' L1 as well as their suitability for different age groups (i.e. learners at different school phases), both in terms of effectiveness and learner perspective. While acknowledging the importance of using the target language on the part of teachers, the present thesis aims to search for and test optimal parameters for teachers' use of the L1 as part of their instruction. This idea will be further discussed in what follows.

1.2 Towards a Model of Teacher Code-switching

1.2.1 Terminology Issue

Before proceeding, a terminology issue needs to be resolved. In SLA literature, teachers' use of learners' L1 is often referred to as teacher code-switching (CS), the definition of which is "the use of more than one linguistic variety (language or dialect) by a single speaker in the course of a single conversation" (Pfaff, 1997, p. 345). Although these two terms generally refer to the same phenomenon, they have somewhat different connotations in literature. While *teachers' use of the L1* has carried somewhat negative nuances, as in "falling back on the L1" or "reverting to the L1," the term *teacher CS* has implied some researchers' efforts to search for optimal parameters for the use of the L1 (e.g. Dailey-O'Cain and Liebscher, 2009; Macaro, 2001) in communicative-oriented (rather than traditional grammar-oriented) L2 classrooms. Here, optimal parameters

further imply the limited and judicious use of learners' L1 on the part of the teacher, provided that the dominant language or "matrix language" (Myers-Scotton, 1997) in his or her overall discourse is the target language, rather than the L1. It should be noted that the present thesis adheres to the notion of teacher CS, rather than teachers' use of the L1. However, these two terms will be used interchangeably throughout the thesis because the distinction between the two has not been settled in SLA literature, and for many SLA researchers and L2 teachers they refer to the same phenomenon.

1.2.2 Preconditions for the Investigation of Teacher Code-switching

Having dealt with the terminology issue, the present section will discuss two preconditions for the investigation of teacher CS.

First, research into teacher CS presumes a context where learners are homogenous in terms of the L1, and thus the teachers' L1 use is comprehensible to everyone. In the case of English as the target language, thus, research contexts may usually be English as a Foreign Language (EFL) contexts (e.g. Korea, Japan), rather than English as a Second Language (ESL) contexts (e.g. United Kingdom, Canada) where learners are likely to come from a variety of linguistic backgrounds, and thus speak different L1s. For this reason, discussions hereafter will assume the former contexts, unless otherwise specified.

Second, teacher CS research should draw on classrooms in which the teaching curriculum utilizes the communicative approach or CLT, in which the focus is on meaning aspects of language, and an L2 teacher and learners engage in meaningful communication in the L2. In the context of Korea – the research context of the present study, it should be noted that not all Korean EFL classrooms have adopted CLT yet for both practical and political reasons, and Teaching of English to Speakers of Other

Languages (TESOL) literature has attempted to examine possible reasons underlying this difficulty in adapting CLT into EFL contexts (Li, 1998; Burnaby and Sun, 1989). However, gradually more CLT-oriented classrooms are making their appearance today in Korea following the agenda in *The Seventh National Curriculum* designed by the Ministry of Education and Human Resource Development (2001) in Korea which explicitly directs future English teaching in Korea towards the development of students' communicative competence, hence the support for adopting CLT. Still, English classrooms at the secondary level in Korea (i.e. middle and high schools) have not generally adopted the communicative approach, as their English lessons are geared towards preparation for the national examination for university admission, which is based on English grammar and reading (Lee, 2009). Thus, it might be appropriate to say that the communicative approach has only manifested itself in English education at the elementary and university levels in Korea, and these are the populations of learners chosen for this study.

1.2.3 Building an Empirically-based Model of Teacher Code-switching

In order to provide pedagogical implications for L2 teachers, it is essential to develop an empirically-based model of teacher CS, which can guide L2 teachers in terms of when and how to use CS. Currently, however, due to the research deficit in the field, there is only a limited amount of empirically-based knowledge that could contribute to such a model. Although a number of descriptive studies based on classroom observation and questionnaires have examined teacher CS, and reported the amount of teachers' L1 and L2 use and the pedagogical functions that teacher CS fulfils (see section 2.3.5 for the review), it should be noted that these studies are by and large not capable of revealing the *effects* of teacher CS. Indeed, in response to this current situation, a methodological

change for directly examining the relationship between classroom CS and learners' L2 development has been called for in the field (Ferguson, 2009; Turnbull and Arnett, 2002).

Thus, in order to build an empirically-based model of teacher CS, research must tackle the issue of the effects of teacher CS on L2 language areas/aspects (e.g. vocabulary, grammar, fluency), which will inform us in terms of how to delimit the aforementioned optimal parameters for teacher CS. Furthermore, in light of previous SLA work, the present thesis further proposes that learners' attitudes towards teacher CS and their age (or L2 proficiency) need to be additionally taken into consideration in order to build a more comprehensive as well as learner-oriented model of teacher CS (see section 2.5.1 for theoretical assumptions behind this proposition). That being said, the development of this model can be achieved by examining 1) the effectiveness of teacher CS for L2 learning outcomes of students at different ages (or L2 proficiency levels), and 2) the differences in their attitudes, if any, towards teacher CS.

However, given the limited amount of evidence from previous studies, developing such a model may be beyond the scale of a doctoral research project like the present one. Therefore, the present study, by confining itself to two age groups and one particular language area, aims to contribute a starting point to the above proposed model of teacher CS.

1.3 Aims of the Study

The objective of the present thesis is to provide evidence for the effect of teacher CS in comparison to that of English-only instruction on the English vocabulary learning of adult and young EFL learners in Korea, aiming to contribute to the development of the aforementioned model of teacher CS. Although the primary focus is on the effects of teacher CS on L2 learning itself, these learners' attitudes towards teacher CS will also be

examined; this investigation can provide evidence for the effectiveness of teacher CS from learners' perspectives, which will hopefully further our understanding of the issue of teacher CS.

The adult and young learners involved in the present study represent two different cohorts of freshmen at the undergraduate level and students in the final grade at the primary level in Korea. A brief rationale behind the selection of these two age groups was given in section 1.2.2 in reference to the current situation of English education in the Korean context (i.e. to examine teacher CS in *communicatively-oriented* classrooms). However, we will also be examining age and education phases later in the thesis from a theoretical perspective.

The decision to select vocabulary as the target aspect of language learning was mainly made on the basis of previous research into teacher CS. As will be reviewed in section 2.3.5, descriptive classroom CS studies have found that one of the major functions of teacher CS is to explain the meaning of L2 vocabulary, which demonstrates that L2 teachers across a wide range of institutional contexts use CS for this purpose, without any guidelines or models of teacher CS; thus, it seems that teachers intuitively feel that teacher CS is of value in the teaching of L2 vocabulary. Furthermore, two pioneering studies on this issue (Tian, 2009; Meng, 2005) examined vocabulary as a linguistic outcome in their experimental studies of teacher CS. However, as will be discussed in section 2.3.5.3 and 3.3.1, these studies have some limitations in terms of their research methodology. Thus, in light of the implications from previous descriptive studies and these experimental studies of teacher CS, the present study examines the effect of teacher CS on the acquisition of English vocabulary, with a different methodological approach.

1.4 The Notion of TEE in English Language Education in Korea

With regard to English language education in Korea, the issue of teachers' language use has centred around the notion of *teaching English in English* (TEE), which is conceptually similar to English-only instruction. While TEE has been strongly supported by the Ministry of Education (2000) on the grounds of the input- and interaction-related reasons mentioned in section 1.1, English teachers appear to experience some difficulty in following this recommendation, partially due to the phenomenon of group polarization; between students who can tolerate and benefit from TEE and those who cannot (Kim, 2002). Thus, it seems that there has been a mismatch between the expectations of the Ministry of Education and teachers' attitudes towards this government policy.

In an attempt to provide more specific guidelines for the advancement of TEE protocols, Choi (2000) from the Korea Institute of Curriculum and Evaluation proposed three models of English teaching in terms of teachers' language use in teaching different areas as follows:

[Model 1]

Listening, Speaking, Reading, Writing,

Cultural Aspects of English ▷ all through English-only Instruction

[Model 2]

Listening, Speaking ▷ through English-only Instruction

Reading, Writing, Cultural Aspects of English ▷ 80% Use of English

[Model 3]

Listening, Speaking	▷ through English-only Instruction
Reading, Writing, Cultural Aspects of English	▷ 60% Use of English

(Adapted from Choi, 2000)

By the time this report was published, Choi (2000) had suggested that *Model 3* was the dominant approach used by more than 90 percent of English teachers at elementary and middle schools in Korea. He further argued that *Model 2*, which promotes more than 80% use of English in overall English lessons, might be the most appropriate and desirable model in the context of English education in Korea. This model thus permits some degree of teachers' L1 use for pedagogical purposes, unlike *Model 1* proposing the exclusive use of the L2, which might not be very feasible in many of the English classrooms in Korea.

The above three models, which are more specific than the original proposal of TEE, still do not deal with two important pedagogical questions; first, which model should be adopted for learners at different ages? Second, if we take *Model 2* as an English teaching approach, in what ways can English teachers incorporate learners' L1 (i.e. Korean) into their teaching practices? Regarding the first question, Lee (2009) suggests that, in view of the cultural and educational context of Korea, a gradual increase of English use, instead of English-only instruction for all age groups, might be a more appropriate and suitable approach to English teaching.

As for English teachers' use of Korean, the Seoul Metropolitan Office of Education (2010), while supporting the practice of TEE, suggests that "teachers may switch between English and Korean during class according to the content of the lesson and the students' understanding in order to exercise flexibility" (p. 10). However, as can

be seen from this statement, it still does not provide a detailed guideline regarding the optimal use of Korean in English teaching, and thus is far from establishing a model of teacher CS. This situation calls for empirical research into the effects of teacher CS, which is the aim of the present study.

1.5 Outline of the Thesis

Following this introduction chapter, in which a research gap in the field and the aim of the study are explained, the remaining chapters are arranged as follows:

Chapter 2 reviews the relevant literature and presents the theoretical framework for areas and issues to which the present study is expected to contribute: teacher CS in L2 classrooms, L2 vocabulary acquisition, and age issues in L2 learning. In doing so, the chapter will first discuss the relationship between naturalistic and classroom CS, which will be followed by a review of theoretical arguments and empirical studies on the debate over teacher CS in L2 classrooms. The chapter then goes on to discuss theoretical models and research evidence in the field of L2 vocabulary acquisition. Lastly, the chapter reviews studies on the age factor in L2 learning, in view of the fact that the present study involves two age groups of L2 learners (i.e. adult and young learners).

Chapter 3 provides a detailed overview of the methodological framework of the present study, within which the relationships between the variables discussed in Chapter 2 are investigated. The chapter reflects the mixed methodological design of the present thesis and consists of two parts, with the first part dealing with the methodology for investigating the effect of teacher CS on learners' vocabulary acquisition and the second presenting the data-collection method employed for eliciting learners' attitudes towards teacher CS and other related aspects of English language teaching.

Chapter 4 presents the results of the *quasi-experiment* part of the study. This part,

which retains a higher status than the questionnaire part in the mixed method design of the present thesis, is mainly concerned with the question of whether teacher CS is more effective for Korean EFL learners of the two age groups in terms of their vocabulary gains, in comparison to English-only (EO) instruction.

Chapter 5 reports the findings from the participant questionnaires along with the interview data from a subset of the participants, which address the issue of Korean EFL learners' attitudes towards teacher CS and other related aspects of English language teaching including 1) different types of English teachers, 2) English teachers' language use, and 3) their vocabulary teaching practices in EFL classrooms.

In Chapter 6, the findings from Chapter 4 and 5 are summarized, and discussed in light of existing theoretical frameworks and findings of previous studies in SLA literature. Pedagogical implications for L2 teaching/learning will also be discussed in this chapter.

Chapter 7 offers conclusions, and describes the contribution of the present study to existing knowledge in certain areas of SLA and to the empirically-based model of teachers' CS. Then it will present recommendations for further studies.

Chapter 2 Review of Literature

2.1 Introduction

This chapter presents a critical literature review, covering theories and research findings on the variables within the theoretical framework of the present study. The first part of the chapter deals with bilingualism and linguistics research on naturalistic Code-switching (CS), in which the definition and characteristics of CS in naturalistic settings will be discussed in light of their implications for classroom CS research. Thereafter, the second part of this chapter will discuss theoretical frameworks behind the debate over teacher CS and L2-only instruction, along with a review of previous empirical studies on teachers' language use in L2 classrooms. The chapter then continues by discussing theoretical models and research evidence in the field of L2 vocabulary acquisition, in view of vocabulary learning contextualized in the present study. Lastly, the chapter reviews studies on the age factor in L2 learning, which will shed some light on the predictions regarding the effects of L2-only instruction and teacher CS on the L2 learning of adult and young learners.

2.2 Naturalistic and Classroom Code-switching

The first part of this chapter will draw on and discuss selected pieces of existing literature that deal with naturalistic CS. In doing so, the various types of CS will first be dealt with and will be followed by the structural approach to CS. Thereafter, implications of the naturalistic CS research for classroom CS will be discussed.

2.2.1 Typology of Code-switching

In her early study from 1980, Poplack identified different categories of CS; inter-sentential switching, intra-sentential switching, and tag-switching. The first type, inter-

sentential switching, refers to the CS occurring at clause or sentence boundaries. An example of inter-sentential switching is seen in Chung (2006) in which a Korean-English bilingual family's code choices were examined. In the example below, the father switches from Korean to English when addressing his daughter:

Father: 그만하고 어서 자거라 (translation: stop arguing with each other, and go to bed).
Daughter: He broke my other chapsticks before.
Father: I told you. Stop and go to bed. (from Chung, 2006, p. 301).

Inter-sentential switching is equivalent to 'alternation,' which Muysken (2000) identified as a *true switch* between languages in which each constituent from different languages follows the structural patterns of its own language. Following Poplack and Muysken's descriptions, inter-sentential switching reflects the least integration between the two languages.

The second type of CS, intra-sentential switching, occurs within a sentence or smaller unit of a sentence such as a phrase or clause and reflects the highest degree of integration of the two languages. Frequently, this type of switching occurs on a lexical level, for example: "당신 (translation: your) FATHER 께선 (inflected subject marker) 아주 잘하고 계십니다 (translation: your father is doing very well)" (Yoon, 1996, p. 403). Based on her study involving the bilingual Puerto Rican community in New York City, Poplack (1980) suggested that the use of intra-sentential switching is a sign of high bilingual competency, as it requires a great deal of knowledge of the underlying syntactic structures of two languages for one to formulate grammatically correct utterances.

The third type of switching is tag-switching, which refers to an *inclusion of a tag* that does not seriously violate the syntactic structure of code-switched sentences (e.g. *well, you know* in English). Tag-switching is generally free from syntactic constraints,

and consequently can take place almost anywhere within or between sentences.

Having reviewed the three different types of switching (i.e. inter-sentential switching, intra-sentential switching, and tag-switching), discussions hereafter will only make a distinction between inter-sentential switching and intra-sentential switching, with the term inter-sentential switching also covering tag switching.

2.2.2 Structural Approaches to Code-switching

One of the major themes in naturalistic CS research has been linguists' attempts to describe linguistic constraints on CS (Myers-Scotton, 1997; Joshi, 1985; Sankoff and Poplack, 1981). To be more specific, the goal of this line of research has been to search for universal grammar rules of CS, more specifically to seek *universal constraints* that predict possible locations within a sentence or clause where CS is likely to occur. In this section, the most widely cited in this regard, by Myers-Scotton, will be reviewed.

Building on previous ideas and constraint models of CS including the notion of asymmetry between languages involved in CS utterances (Joshi, 1985) as well as Poplack and her associates' constraint models, Myers-Scotton (1997) proposes a very influential constraint-model of CS called "the Matrix Language-Frame (MLF) Model." There are two basic assumptions behind the MLF model. First, it hypothesizes that CS utterances involve elements from the matrix language (ML) which "sets the morphosyntactic frame of sentences showing CS" and from the embedded languages (EL) which "also participate in CS, but with a lesser role" (p.3). Here, the ML constitutes a majority of words (or morphemes from a more technical perspective) in CS utterances and can be seen as the "main" language. Second, it presumes that system morphemes (e.g. copula, determiners) and content morphemes (e.g. nouns, adjectives) serve different functions in the constitution of CS utterances. Based on these assumptions, the MLF

model predicts that system morphemes in CS utterances will generally be drawn from the ML (the System Morpheme Principle) and the morpheme order in CS utterances will follow that of the ML (the Morpheme Order Principle).

Having given an overview of the MLF model and its components, what implications do they provide for classroom CS? First, the fundamental assumption of the MLF model that one language is more dominant than the other in overall discourse runs parallel to the modern view on L2 language teaching among SLA researchers; the L2 (or target language) should be the ML in classrooms, with the L1 being the EL. In the Korean context, the request from the Ministry of Education (2000) for English teachers to maximize their English use in their lessons may be construed as the consequence of the aforementioned view in SLA literature. Meanwhile, researchers like Simon (2001) do not appear to be convinced of the distinction between the ML and EL in classroom interaction, as she suggests that the ML and EL may vary according to a target task. While Simon's point may have some value when we look at a specific portion of classroom discourse, it should be pointed out that an L2 classroom with the L1 being the ML in terms of the *overall* proportion of the two languages (in a statistical sense) may not fall under the category of communicative-oriented classrooms.

The other implication of the MLF model for classroom CS is germane to the correspondence between functions and grammatical categorization of teacher CS. For example, in their study of beginner-level learners of French, Rolin-Ianziti and Brownlie (2002), who drew on the MLF model as their analytical framework, found that the function of translation was most frequently observed in the format of "an intrasentential switch to NL [L1] embedded in a FL [L2] matrix" (p. 413). In other words, the translation of the L2 lexical word is embedded in teachers' L2 utterances, to enhance learners' comprehension of the target lexical item (e.g. Guo, 2007; Merritt et al., 1992).

The following is an example of this kind of teacher CS from the present study:

> T1: So he is a renowned writer … what does renowned mean here?
> S: Popular?
> T1: Yes. Similar…renowned means 저명한 [translation: widely known and esteemed].

In this excerpt, T1 explains the meaning of the English target word "renowned." In doing so, she is switching from English to the learners' L1 (i.e. Korean), producing an intra-sentential switch to the Korean equivalent 저명한 embedded in an English matrix.

When it comes to the explanation of grammatical points, teacher CS is found to involve an inter-sentential switch to the L1, and thus is of a greater length compared to when it fulfils the function of translation (Rolin-Ianziti and Brownlie, 2002). Similarly, other types of CS fulfilling such communicative functions as managing the class and giving instructions for tasks in their study and other classroom CS research generally appear to occur on the sentential level. Again, following Simon's (2001) point above, it is possible that the ML and EL may temporarily change in teachers' discourse, with the L1 becoming the ML while serving these pedagogical functions.

While some patterns of correspondence between different types of teacher CS and their respective functions have been identified in light of the MLF model (e.g. Gearson, 2006; Rolin-Ianziti and Brownlie, 2002), the question of how grammatical constraints have an effect on bilingual teachers and learners' (who are not generally balanced bilinguals) CS remains largely unanswered.

2.2.3 Implications of Naturalistic Code-switching for Classroom Code-switching Research

Despite their broad range of scholarly interests in naturalistic CS, there is now consensus

among researchers of bilingualism that CS requires "skilled manipulation of overlapping sections of two (or more) grammars" (Li Wei, 2007, p. 15), and serves as an indicator of bilingual competence (Poplack, 1980). Furthermore, in view of the fact that bilinguals' languages are constantly activated (Grosjean, 2001), albeit to varying degrees of activation depending on situational factors, CS may be a natural consequence of bilingualism. In brief, naturalistic CS is a normal activity among bilinguals and a deliberate conversational strategy partly constrained by social norms but also determined by individual speakers' purposeful choices.

Then, the legitimate question to ask is, if CS is a natural by-product of having access to two language codes, why has the idea of using CS in L2 learning contexts been so contentious among some SLA researchers and L2 teaching practitioners? As can be expected, this is because L2 classrooms are places in which learners are not only supposed to use the target language but also to acquire that linguistic knowledge. Consequently, for the sake of this acquisition, it is expected that teachers should provide a maximum amount of target language input as well as opportunities to interact in the target language (and the use of learners' L1 is believed to inhibit such processes). Given this unique characteristic of this classroom context, it seems erroneous to directly link classroom CS to naturalistic CS. Still, naturalistic CS literature has two implications for classroom CS studies.

First, the naturalistic CS literature can offer some parameters to classroom CS research which are established based on bilingual communities. This is by no means to say that these parameters can be applied to classroom contexts without any adjustments; rather, they provide basic frameworks in which classroom CS can be investigated in a more principled way. One of the examples given in this chapter was the notion of the matrix language by Myers-Scotton (1997). Second, by replacing the term "L1" with

"CS" which implies bilingual competence (Li Wei, 2007), the prevalent view in the SLA field, in which using learners' first language is considered detrimental to L2 learning, can be reconsidered. That is, we may perceive L1 use by L2 teachers and learners as a conversational move for interactional and pedagogical purposes, rather than undesirable "recourse to the L1."

In the present study, we focus on one particular kind of CS in EFL classrooms – teacher CS for the purpose of teaching lexical items. In view of the naturalistic CS literature above, the matrix language in these classrooms is English (i.e. the target language), which serves to be a major medium of instruction and communication. The present thesis further adopts the above implication that teacher CS in this light is of pedagogical value as well as an indicator of bilingual competence on the part of English teachers (rather than seeing teachers' L1 use as a crutch).

2.3 First Language Use or Code-switching in Second Language Classrooms

Having discussed the existing naturalistic CS literature, the present section deals with theoretical assumptions behind the ongoing debate over the use of learners' L1 in L2 and FL classrooms. The section will then go on to examine SLA studies with a variety of methodological perspectives towards classroom CS, the findings of which contribute to the above debate, yet are far from being conclusive for pedagogical decisions regarding the use of classroom CS. The section will conclude with a discussion of the current status of SLA literature, the dearth of research on the effect of teacher CS on L2 learning, and the potential contribution of the present study to the bridging of this gap.

Before proceeding with an examination of the theoretical assumptions regarding the idea of using CS in L2 classrooms, this section will first briefly deal with the background information for and rationales behind communicative language teaching

(CLT) methodology, which offers a theoretical backdrop against which to examine this debate over the use of classroom CS. That is, the underlying assumption of the present thesis is in accord with Macaro (2009) that the search for the optimal use of teacher CS as a pedagogical device can only be meaningful within the context of "broadly communicative classrooms" (i.e. classrooms oriented towards CLT or similar teaching methods). In other words, there is little point in considering the use of optimal use of CS where the lesson goals are to promote learners' translation skills. This idea will be further explored in the following sections.

2.3.1 Communicative Language Teaching

A communicative approach, or Communicative Language Teaching (CLT), is one of the most widely adapted pedagogical paradigms across an extensive range of L2 and foreign language (FL) institutions today in one format or another (Richards and Rodgers, 2001). Within this approach, communication and interaction are often envisaged as both the means and end of language learning, with the ultimate goal being the development of the ability to use the target language appropriately in a target context.

The rise of the communicative approach was partly triggered by L2 educators' "growing dissatisfaction with the predominantly structural approaches to English language teaching in the 1960s and early 1970s" (Hedge, 2000, p. 46). That is, some of these educators found that their learners failed to appropriately use the L2 outside their classrooms, even though they were able to produce grammatically correct sentences inside their lessons (Larsen-Freeman, 2000). This observation led some to believe that communicative abilities may require more than grammatical competence (i.e. the mastery of the structures of a language). This awareness on the part of L2 educators coincided with Hymes' reaction (1972) to the Chomskyan approach and its description of

grammatical competence as knowledge of the language, which is somewhat narrow-focused and lacks socio-cultural features, from his perspective. Hymes (1972), while not disregarding the importance of grammatical competence, stressed the importance of knowing "when to speak ... what to talk about with whom, when, where, in what manner" (p. 277). Meanwhile, in Europe around the same time, the Council of Europe embarked on the development of the notional-functional syllabus under the influence of the British linguistic tradition focusing on both linguistic and social aspects of the language, in order to meet the communicative demands of real-world tasks imposed on a growing number of immigrants and alien labour (Savignon, 2002). In brief, L2 educators' dissatisfaction with previous L2 teaching approaches, the development of the notional-functional syllabus and Hymes' influential work on the re-conceptualization of language competence together contributed to the growth of the CLT approach.

As hinted above, central to the CLT approach is envisioning language "not only in terms of its structures …but also in terms of the communicative functions that it performs" (Littlewood, 1981, p. x). This view of language inherent in the CLT approach is referred to as communicative competence, which L2 researchers and teaching practitioners have acknowledged as 'the broad eventual target' since the 1970s (Mitchell and Myles, 2004). The term communicative competence, which was first popularized by Hymes (1972), was further developed from a theoretical perspective by Canale and Swain (1980), who identified three components of communicative competence as follows: grammatical competence, sociolinguistic competence, and strategic competence. While grammatical competence concerns the mastery of the structures of a language, sociolinguistic competence refers to the mastery of rules regarding "appropriateness" in terms of language use in social contexts and the mastery of rules regarding cohesion and coherence on textual and discourse levels. The last component, strategic competence, is

identified as the mastery of "verbal and non-verbal communication strategies" to facilitate communication (p. 30). Based on this framework of communicative competence, it has been generally accepted that the goal of L2 teaching in communicative-oriented classrooms is to promote the balanced learning of the grammatical structure of the language, sociolinguistic norms (in a target community context) and communication strategies.

In order to enable learners to meet communicative demands outside the classroom and to develop their communicative competence, classroom activities in CLT classrooms are often designed such that learners are given sufficient opportunities to engage in meaningful communicative processes, either with their L2 teacher or with their peers, including the negotiation of meaning and sharing of information (Littlewood, 1981). The underlying assumption here is that the L2 is best acquired through steeping oneself in communicative processes which mirror outside-classroom activities, and in particular when these processes are mainly mediated through the L2 as in the case of verbal interaction with native speakers of the L2. The above assumption has been empirically tested by a gradually accumulated body of research called "interactionist research" since the 1980s, which in turn constitutes the bedrock of the theoretical support for communicative and interactive classroom activities in CLT classrooms. The following section will examine some of the major claims and findings from this interactionist research tradition and their implications for classroom language use.

2.3.2 The Interactionist Research Tradition

At the time of the rising tide of the communicative approach, there was a growing body of research investigating the role of input and interaction in SLA (i.e. interactionist research). While the theoretical framework for interactionist research was not originally

designed to provide a direct justification for the communicative approach, at least not in its infant stage, the underlying principles behind the communicative approach and interactionist research are very much compatible in terms of their views on language learning processes and the way learners' L1 should be dealt with. In what follows, some of the major claims and findings from this body of interactionist research will first be discussed, and will be followed by its implications for the CLT approach and the debate over the use of the L1 in L2 classrooms.

In the early 1980s, based on the literature concerning motherese, caretaker language and foreigner talk, Krashen (1982, 1985) contended that it is pre-modified input (or simplification of input) which allows comprehension and acquisition of a target language to take place, and that this pre-modified input becomes comprehensible when it is slightly beyond the learners' current L2 competence (*i + 1* in his terms, *i* referring to the current level). Krashen viewed comprehensible input, rather than interaction and output, as the crucial determinant in L2 acquisition, suggesting that acquisition takes place given the conditions of sufficient quantity of comprehensible input and a low affective filter on the part of learners (i.e. the Input Hypothesis).

Krashen's theory of SLA came under severe attack in many respects, most of which centre around the vagueness of the constructs within the theory. That is, what does he mean by "*i + 1*"? Although he seems to define this kind of input as "roughly tuned" one slightly beyond the learners' current L2 competence, this construct has been deemed to be ill-defined and lacking in evidence by some (e.g. McLaughlin, 1987; Gregg, 1984). Another criticism, also concerned with "*i + 1*," would be Krashen's underestimation of the role of learners' output in SLA, which may serve as an indicator of learners' progress or trouble-spots, and give teachers something more to work on with their learners. The question here is how are teachers supposed to feed students this *i+1* input when there is

no clear indication of learners' current levels? The importance of output was further acknowledged by Swain's (1985, 1995) Output Hypothesis, according to which L2 production on the part of learners is essential to the development of SLA because it enables the learner to move from "semantic processing" to "syntactic processing" which would allow them to focus on the "form" aspects of a language as well to perform hypothesis testing of their interlanguage. Swain suggests that it is also through "pushed output" that learners can make use of their linguistic resources in meaningful situations, which is also echoed in the underlying principle of the communicative approach.

Krashen's Input Hypothesis, albeit with rather ill-defined constructs, has been one of the most influential proposals in the SLA field, pointing to the important principle that "for successful classroom acquisition learners require access to message-oriented communication that they can understand" (Ellis, 1990, pp. 106-107). At the same time, it also posed an important question for SLA researchers to deal with; is pre-modified input really effective for learners' comprehension and acquisition compared to other types of input? In Pica, Young and Doughty (1987) where low-intermediate ESL learners were given a listening task, it was found that the learners' comprehension was lower with pre-modified directions than with interactionally modified directions. Similarly, in a study in which beginning-level learners of Japanese performed three sets of listening information-gap activities, Loschky (1994) failed to observe the superiority of pre-modified input over unmodified input (with no interaction) and interactionally modified input (unmodified but with interaction) in terms of its effect on learners' comprehension of the task. In these two studies, it was interactionally modified input which resulted in better comprehension than pre-modified input, and thus Krashen's Input Hypothesis was not empirically supported. Instead, these studies and others (e.g. Ellis, Tanaka and Yamazaki, 1994; Long, 1985) demonstrated a shift of emphasis among researchers, from the effect

of pre-modified input to that of verbal interaction and its relevant features, which seemed to yield higher levels of comprehension.

Building on the work of Krashen, Long (1983, 1996), while not underestimating the importance of comprehensible input in language acquisition, put forward the Interaction Hypothesis, which proposes that interactional modifications resulting from communicative problems between interlocutors make input more comprehensible by fine-tuning the comprehensibility of input to the current level of non-native speakers. The thrust of this hypothesis is thus that, provided that "comprehensible" input promotes acquisition according to the Input Hypothesis, acquisition is likely to take place when interactional modifications are made (as they would make input more comprehensible). The Interaction Hypothesis, then, requires research findings supporting the relationship between interaction and acquisition in order to be empirically supported.

Mackey (1999) explored this relationship by employing a task-based activity with adult ESL learners, selecting question forms as the target structure of development. In this study, the learners were divided into interactors who were allowed to interact during the tasks and others who were only allowed to observe an interaction or who received a pre-modified input group without interaction. Mackey found that the interactors showed greater development than the others, and this trend was maintained in post-tests. Based on the finding that interaction yielded greater improvement than observation (without interaction), Mackey suggested that "actively participating in conversational interaction has a positive effect on the production of developmentally more advanced structures" (p. 576).

With a similar goal to Mackey's (1999), Ellis et al. (1994) reported two studies of the same design with Japanese high school aged learners of English, in which three groups of these learners were respectively exposed to different types of input, namely

unmodified input, pre-modified input and interactionally modified input during listening tasks which required participants to listen to a set of directions. The results of their study showed that the group which received the interactionally modified input achieved a higher degree of comprehension and vocabulary acquisition than the other groups. However, in a later analysis of part of the data gathered in this study, Ellis (1995) found that acquisition of interactionally modified input took significantly longer than that of premodified input, interpreting this result as suggesting that premodified input was more "efficient" in terms of the *rate* of acquisition. As he noted in his conclusions, this result has some pedagogical implications for L2 classrooms in which class sizes are large, and learners are culturally not eager to engage in interactions with their teachers; in such an environment, premodified input might yield better learning outcomes than interactionally modified input.

In summary, the interactionist research tradition has demonstrated that L2 acquisition is not a simple matter of whether one receives input or not. Input, when provided to learners, needs to be made comprehensible for acquisition to take place, either through simplification or negotiated interaction, with the research evidence generally showing the superiority of the latter.

Having reviewed some of the major claims and research findings in the interactionist research literature, what are the implications of this line of research for classroom language use, in particular learners' L1? In general, interactionist research has not taken into consideration the role of the L1 in its research design or discussions. As an example, in a recent publication, *Conversational interaction in second language acquisition,* which provides a comprehensive analysis of the Interaction Hypothesis (edited by Mackey, 2007), the L1 is simply not talked about throughout the text. This may be in part due to its huge emphasis on the role of input and interaction in the target

language, consequently implying that teachers and learners should make use of the target language exclusively in all parts of verbal interaction. In particular, teachers' exclusive use of the target language may be deemed to be a vital component of good pedagogy for the scholars in this tradition, in view of the input and interaction hypotheses. In the L2 teaching profession, some of the ideas developed through interactionist research have been embodied in L2 teaching methods such as the Natural Approach (Krashen and Terrell, 1983) and Total Physical Response (Asher, 1993) which subscribe to the propositions that exposure to L2 input is paramount in language acquisition.

As far as the communicative approach is concerned, it is obvious that the use of learners' L1 is generally not recommended, as can be summarized by Cook's words; "the only times that the L1 is mentioned is when advice is given on how to minimize its use" (2001, p. 404). This negative view of the L1 is often masked by emphasizing the importance of using the L2. For example, ACTFL (the American Council on the Teaching of Foreign Languages) guidelines (2009) states that teachers should use the target language "as exclusively as possible." While it is not terribly clear from the literature related to the communicative approach why the L1 has been given such negative connotations therein, one of the possible explanations may be theoretical associations between the communicative approach and interactionist research as previously stated. That is, some of the principles in the CLT approach (e.g. the importance of interaction through communication in learning) are explicitly linked to the major claims made in the interactionist research tradition. Thus, the negative view of the L1 in interactionist literature may have been transmitted to the communicative approach camp. Another explanation would be that the use of the L1 is strongly reminiscent of the grammar-translation method, which is deemed "currently unfashionable" (G. Cook, 2010; Macaro, 2005).

To sum up, the previous and present sections have discussed various aspects of the communicative approach and interactionist research traditions. Also mentioned was the negative view of the use of learners' L1 in broadly communicative classrooms which is widespread in the literature of these traditions. However, when considering other areas of SLA literature, there are a considerable number of arguments made for not excluding the use of learners' L1 in L2 classrooms. The aim of the following sections is to discuss the debate over the use of the L1 in L2 classrooms by drawing on Bilingualism and SLA literature.

2.3.3 Theoretical Arguments for L1 Use

This section will present further theoretical frameworks in which the debate over L1 use in L2 classrooms can be situated: arguments based on socio-cultural theory, arguments based on the bilingual lexicon, and arguments based on monolingualism and bilingualism approaches**.**

2.3.3.1 Arguments based on Socio-cultural Theory

The first theoretical framework in which the debate over the use of the L1 can be discussed is socio-cultural theory, in which the relationships between individual cognition and external social activities have been a focus for researchers (for a review, see Lantolf, 2006). In this rather broad enterprise, studies relevant to the present issue are those which examine learners' L1 use and its effects in communicative or meaning-focused activities (Storch and Wigglesworth, 2003; Swain and Lapkin, 2000; Antón and DiCamilla, 1999; Brooks and Donato, 1994). A brief review of these studies will be presented below in light of their implications for the role of the L1 in L2 learning.

Brooks and Donato (1994) studied the language use of high school learners of

Spanish in a two-way information-gap activity, and found that the learners used their L1 for the purpose of metatalk (i.e. to talk about their L2 language use) and to establish a joint focus on the task at hand as well as to formulate the goal of the task. Similar findings were observed in Storch and Wigglesworth (2003) in which intermediate ESL learners were required to complete a text reconstruction task and joint composition task in pairs. During the pair work, the learners made use of the L1 to clarify the objects of the task and to discuss how they should go about completing the task. They also found that learners used the L1 to discuss lexical choices and meanings of L2 words emerging during the task. Swain and Lapkin (2000) reported several functions to which the L1 is put in two different tasks (i.e. jigsaw and dictogloss tasks) by Grade 8 early French immersion students. While the function of task management was the most frequent one in both tasks, the function of the L1 for vocabulary searching was more noticeable in the jigsaw task, implying a possible interaction between the nature of the task and learners' L1 use. Lastly, in a study with adult beginner-level learners of Spanish, Antón and DiCamilla (1999) found that the learners' L1 served important cognitive functions in a series of collaborative writing tasks, such as the medium for externalizing one's private speech "for the purpose of directing and organizing one's mental activity" (p. 235) and scaffolding help for each other in tackling the problematic aspects of the task at hand.

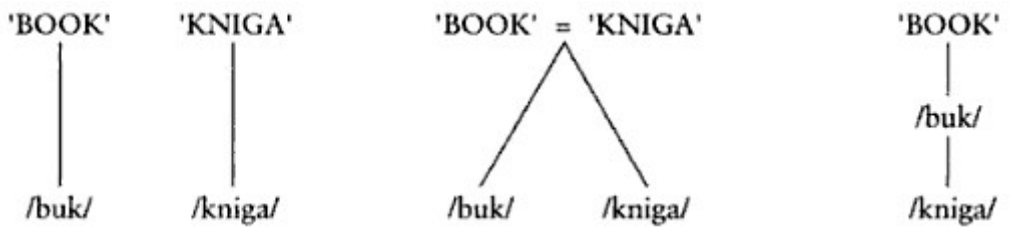
In brief, the general claim to be made in this line of research is that learners' L1 mediates both their inter- and intra-psychological processes. That is, regardless of teachers' intention to isolate learners' L1 either though teaching methodology or control over classroom language uses, learners are likely to make use of the L1 in their minds in processing the L2. However, it should be pointed out that the above studies, while suggesting that the L1 facilitates interaction between learners as well as the completion of the tasks, are far from having demonstrated the "acquisition" of any L2 elements, but

rather remain descriptive by nature. In addition, as Storch and Wiggleworth (2003) acknowledged in their study, in this line of research, there has been no indication of the superiority of using the L1 over maintaining the L2 during tasks.

2.3.3.2 Arguments based on Bilingual Lexicon

The second framework for the debate over the inclusion of the L1 concerns the psycholinguistics literature related to the bilingual mental lexicon. The main question to be dealt with in this section by drawing on this avenue of research is, "for those learners who have already acquired one language system and started to learn another language after their childhood, is it possible to process two language systems without any interlingual interference?"

In his influential book *Languages in Contact*, Weinreich (1968) put forward three different types of bilingualism: coordinate, compound and subordinate bilingualism. In Type A (Figure 2.1), the coordinate type, the equivalent words of two languages have specific meanings independently or connect themselves to different conceptual units, and thus the two languages are kept separate. Adopting his own example, in an English-Russian bilingual's mental lexicon, the English word "book" and the Russian word "kniga" have their respective, separate meanings. The second type is the compound bilingual (Type B in Figure 2.1), who has two modes of expressions (or lexical items) for an identical concept or meaning (book = kniga). The third type, the subordinate one (Type C in Figure 2.1), according to Weinreich, applies to situations wherein a subordinate bilingual learns a second language with the mediation of his or her first language. Therefore, in this case, an English speaker learning Russian may have established the concept of "book" through English, and may therefore interpret or learn the Russian word "kniga" by means of the English word "book."



Type A (Coordinate) **Type B (Compound)** **Type C (Subordinate)**

Figure 2.1 Weinreich's typology of bilingualism

In brief, the coordinate bilingualism concept supports the possibility of the total separation of the two languages (i.e. a compartmentalization view), whereas compound and subordinate bilingualism present a more holistic view of bilingualism. Having seen Weinreich's typology of bilingualism, what is its relevance for code-switching and L2 teaching methodology?

In fact, this compartmentalization view has been central to many L2 approaches in the twentieth century, which attempt "to teach meaning without recourse to the L1" (Cook, 2001, p. 407). The most popular L2 teaching approaches or programs of this type include the Foreign Languages in Elementary School (FLES) program in the United States (Curtain, 1993), the Natural Approach (Krashen and Terrell, 1983), and the communicative approach. Weinreich (1968), while not making any detailed suggestions for L2 teaching, seems to concur with the underlying principle of the above programs, as can be seen in his attitudes towards code-switching behaviours: "the ideal bilingual" does not switch languages "in an unchanged speech situation, and certainly not within a single sentence" (p. 73). Thus, from his perspective, code-switching itself in a specific situation may not be desirable, or is not the consequence of being an ideal bilingual.

The following question to ask is then, "Is compartmentalization really feasible for learners who have developed their L1 and are learning another language?" Indeed, bilingual lexical research has provided a very negative answer to this question. Recent

theoretical models of the bilingual lexicon have proposed that comprehension of L2 words at lower levels of L2 proficiency is mediated through L1 equivalents (the Revised Hierarchical Model by Kroll and Stewart, 1994); the bilingual lexicon constitutes an interactive activation architecture in which presentation of a stimulus results in the parallel activation of several lexical candidates from both languages (the Bilingual Activation Model by Dijkstra and Van Heuven, 1998); translation equivalents in two languages are likely to be associated with each other at the conceptual level, with varying degrees of overlap between semantic features depending on word type and category structure (Van Hell and de Groot, 1998). These models, although related to different scholarly interests in the bilingual mental lexicon, all unequivocally suggest that two language systems within developing bilinguals may influence each other in the use and comprehension of languages.

From a pedagogical perspective, Widdowson (2003) claims that there has been a mismatch between L2 teachers' expectations and students' learning experiences; while L2 teachers' monolingual approach, which is implied in many current L2 teaching methods, aims to yield coordinate bilingualism, learners are nonetheless going through more of a compound bilingualism, drawing on their interlanguage system. He further notes that, despite a growing body of evidence pointing to a stage of compound bilingualism on the part of students, L2 teachers and their monolingual approach have not taken the role of the L1 in L2 learning into consideration.

In summary, bilingual lexical research points clearly to the need to take the L1 system into account in understanding the process of learning another language. If this is the case, then a forceful attempt to eliminate the L1 in the process of learning the L2 might not yield the best outcomes in terms of learning the L2, or might put learners in a very unnatural state at best.

2.3.3.3 Arguments based on Monolingualism and Bilingualism Approaches

As seen in the previous section, the bilingual lexical research clearly points to the inevitable existence of the L1 in L2 learners' minds. Still, as Widdowson (2003) claims, the L2 teaching approach has been very much of a monolingual (i.e. L2-only) type, often completely ignoring the L1. It was suggested in section 2.3.2 that this monolingual approach has been by and large influenced by the propositions of the interactionist research tradition. Having said that, how did the monolingual approach become the dominant approach in the field of L2 (in particular, English) teaching? This section will turn to sociolinguistic literature to answer this question.

In the realm of professional English as a Second Language teaching, Wigglesworth (2002) notes that English-only teaching policies in English speaking-countries result from their classroom situations in which English learners, mostly immigrants, come from a variety of linguistic backgrounds, and thus English teachers cannot exploit a particular L1 in teaching. While this may seem to be a practical reason on the surface, Auerbach (1993) claims that ideological origins underline this 'taken-for-granted' English-only instruction; that is, the persistence of English-only instruction is not solely based on pedagogical grounds, but rather "originates in the political agenda of the dominant groups [English speaking countries], and serves to reinforce existing relations of power" (p. 12). In agreement with Auerbach, Phillipson (1992) further introduces five tenets of English Language Teaching (ELT) originating from the Makerere report in 1961, which according to him are manifestations of the dominant groups' attempt to retain power and control over developing countries through support for the monolingual approach to ELT and which have become central to the modern English teaching profession:

1. English is best taught monolingually.
2. The ideal teacher of English is a native speaker.
3. The earlier English is taught, the better the results.
4. The more English is taught, the better the results.
5. If other languages are used much, standards of English will drop (p.185).

These tenets based on the Makerere report coincided in a timely way with Chomsky's influential notion of "an ideal speaker-hearer" (1965) being a native speaker with perfect grammatical competence, and later were incorporated into the communicative approach. The convergence of these tenets and the notion of an ideal speaker-hearer created the unwavering hegemonic view in today's ESL teaching that a native speaker norm is the ultimate goal of English learning. Consequently, in the context of communicative classrooms, the goal then is to "emulate the communicative skills of native speakers" (Kramsch, 2003, p. 251).

While Phillipson's argument above may seem extreme, the birth and expansion of the monolingual approach have indeed entailed pedagogical consequences on many levels. On one level, educational authorities started to lay down the tacit rule of L2-only instruction without fully acknowledging what transpires in authentic classrooms (Ferguson, 2009). As an example, the exclusive use of the target language has been often perceived as an indication of good pedagogical practice by the National Curriculum for Modern Foreign Languages in England (Department of Education and Science, 1990), based on the assumption that such practice will prepare learners for their language use outside classrooms (Halliwell and Jones, 1991). On another level, L2 users and learners' language competence have been evaluated against monolingual standards (Grosjean, 1985), which view the contact of two languages (e.g. code-switching) within a particular context oddly or suspiciously. Lastly, the discrimination against non-native speaker teachers has pervaded the L2 and ESL teacher employment market (Moussu and Llurda, 2008; Braine, 1999; Cook, 1999), the underlying assumption of which lies in the notion

of the ideal speaker-hearer as a native speaker.

When taken together, it seems obvious that the five tenets mentioned above (in particular 1, 2, 5) and these consequences of the monolingual approach are strongly interrelated. First, monolingual instruction is most likely guaranteed through the employment of native speaker teachers of the target language who do not have knowledge of learners' L1. Then, if the native speaker is teaching the L2, it may well be the case that he or she will become the target model for learners, with the monolingual speaker norm being the eventual goal of the L2 learning. To gain the native speaker norm, therefore, using another language (e.g. learners' L1) in the process of the L2 learning is deemed to be inappropriate, as such use of the two languages within a particular context is apparently beyond the communicative repertoire of the native speaker norm.

While the monolingual approach has gained in popularity in terms of scholarly interests as well as the L2 teaching profession, some researchers started to question the validity and desirability of this overriding approach. That is, in view of this notion of the native speaker firmly rooted in the current L2 teaching field, is native speaker competence really an achievable goal for L2 learners (Blyth, 1995)? In the early 1970s, Selinker (1972) presumed that only 5% of adult L2 learners achieve this goal and the speech or utterances of these learners may not be "psychologically-relevant data" in terms of theory construction in the field of SLA as these data are deviant from those of the majority of learners. In similar regards, Cook (1999) claims that L2 learners can never be native speakers of their target language, as "the indisputable element in the definition of *native speaker* is that a person is a native speaker of the language learnt first" (author italic, p. 187). In view of this, the native speaker norm seems to be a very elusive and unachievable goal, yet deeply grounded in the field.

Another argument against the justification of the monolingual norm comes from

the fact that the number of bilinguals outstrips that of monolinguals in the world today (Myers-Scotton, 2006), and also that the demand for bilingualism is rapidly increasing through globalization at the moment (Genesee, 2008). In view of this situation, it is likely that a considerable number of bilinguals would increasingly use two or more languages concurrently (i.e. code-switching) in their discourse in naturalistic settings. Then, if this is the case, one might ask whether it would be more appropriate for communicative approach practitioners to set out the bilingual norm as the target goal instead of the monolingual norm, as the defining characteristic of such an approach is to prepare learners' for real communication outside classrooms (Richards, 2006).

Blyth (1995) claims that the acceptance of the multilingual norm can "empower" nonnative speaker teachers, who have fallen behind in the L2 and ELT market. The main reason behind this change would be, presumably, as the target norm in L2 learning changes from the monolingual norm to bilingual one, that it is the nonnative teacher who can provide a better target model than the native speaker who has acquired only one language – the target language. In other words, the nonnative speaker can more effectively demonstrate and teach the bilinguals' linguistic repertoire in naturalistic settings (e.g. code-switching) to their learners than native speakers, although this kind of teaching may be limited to cases where the teacher and learners share the same L1.

In summary, the monolingual approach, despite its popularity, appears to be somewhat contradictory on many levels to what is transpiring in the world today in terms of bi- and multilingualism. As mentioned above, the underlying assumptions behind L2-only instruction, monolingual norms as the target goal, and the native speaker as an ideal speaker all centre around a monolithic view of language teaching and learning, which forms the backbone of the monolingual approach. Some more recent arguments put forward by SLA researchers stand strongly against this monolingual approach as we have

seen in this section. However, it should be noted that the discussions provided in this section do not imply that the bilingual approach is theoretically superior or that it has been proven superior to the monolingual approach. What seems to be necessary is a re-evaluation of the bilingual approach and the components thereof, which have been largely underestimated to date in the field.

2.3.4 Teacher Code-switching in L2 Classrooms

Having discussed the theoretical frameworks for the inclusion of the L1 in L2 classrooms, the present section will now deal with SLA researchers' opinions about and empirical studies of teacher code-switching (CS) or L2-only instruction in broadly communicative L2 classrooms, which is the main focus of the present study. The aim of this section is to present how the issue of teacher CS has been studied through different methodological lenses in the field of SLA. The section begins by introducing theoretical positions on the issue of L1 use by teachers.

2.3.4.1 Theoretical Positions of Teachers on the Issue of Teachers' L1 Use

Previous studies (e.g. Kim, 2002; Macaro, 1997; Franklin, 1990) have addressed the issue of teachers' attitudes towards L2-only instruction and CS via the administration of participant questionnaires. Despite some differences in research contexts and findings among these studies, they have indicated that 1) the proportion of L2 teachers (bilingual teachers who share the L1 with their learners) or learners who desire L2-only instruction is generally not very high, and thus a majority of them prefer to have at least some degree of L1 use in the classroom and 2) their attitudes towards L2-only instruction reflect some degree of the polarization phenomenon. That is, some believe that the L2 is best acquired without any reference to learners' L1, whereas others appreciate the value

of the L1 in teaching/learning the L2.

Macaro (1997, 2001), based on survey results of L2 teachers at the secondary level, proposed three theoretical positions on the idea of teachers' L1 use:

1. The Virtual Position: The classroom is like the target country. Therefore we should aim at total exclusion of the L1. There is no pedagogical value in L1 use. The L1 can be excluded from the FL classroom as long as the teacher is skilled enough.
2. The Maximal Position: There is no pedagogical value in L1 use. However, perfect teaching and learning conditions do not exist and therefore teachers have to resort to the L1.
3. The Optimal Position: There is some pedagogical value in L1 use. Some aspects of learning may actually be enhanced by use of the L1. There should therefore be a constant exploration of pedagogical principles regarding whether and in what ways L1 use is justified (Macaro, 2001, p. 535).

In brief, while the total exclusion (virtual) and maximal positions do not bestow any pedagogical value to teachers' L1 use, the adherents of the optimal position argue that teachers' L1 use can be of great value in teaching the L2 as long as it is 'judiciously' and 'systematically' used, that is following principles based on research evidence. The following sections will deal with SLA authors' and researchers' opinions of these theoretical positions.

2.3.4.2 The Virtual and Maximal Positions

As discussed in section 2.3.2, the interactionist research tradition provides the strongest theoretical rationale for the maximal and virtual positions, which advocate excluding L1 use in L2 teaching, if at all possible. An overarching motto of "the more L2 input, the better the achievement" shared among researchers in these positions is often couched with the concern of the adherents of maximal L2 use that teachers' use of the L1 would limit the amount of L2 input available to L2 learners (Ellis, 1984), particularly in Foreign

Language (FL) contexts which lack outside-classroom opportunities to receive L2 input, and in which teachers' L2 input is the major source of L2 input (Spada, 2007; Liu et al., 2004). As a result, some of the researchers who adopt these positions use terms like "resort to L1" to describe the teachers' use of the L1 in L2 classrooms with negative connotations (Macdonald, 1993; Chambers, 1991; Wong-Fillmore, 1985).

In addition to the importance of input, some researchers point to the essential role that interaction plays in L2 learning in reference to its value in the communicative approach. For example, Curtain and Pesola (1994) make quite a strong claim that "*language proficiency outcomes are directly proportional to the amount of time spent by students in meaningful communication in the target language*" (author italic, p. 47). Similarly, Polio and Duff (1994) attribute lack of success among many L2 learners to a dearth of opportunities to cope with target language input in meaningful interaction.

While the input and interaction hypotheses have largely propelled the directions of arguments for the virtual and maximal positions, some theoretical issues remain unaddressed. So far as L2 input is concerned, does mere exposure to the L2 (or modified L2 input) necessarily lead to its intake (Van Lier, 2006)? Even if the L2 input became comprehensible on the part of the learners, as Gass (1997) points out, it would not be always the case that the comprehended input is processed further as intake. In this light, she notes that "input may be comprehended only for the immediate purpose of a conversational interaction" (p. 25). This point then questions the aforementioned theoretical integrity of Krashen's Input Hypothesis, which lacks an eloquent description of how input becomes internalized.

Another important issue to be discussed in relation to the virtual and maximal L2 position is the efficiency of "interaction" in the target language between the teacher and learners. As seen in section 2.3.2, interactional modifications were proved to be effective

in promoting learners' comprehension as well as vocabulary acquisition. However, following Ellis' analysis (1995) mentioned above, interactional modifications could be less time-efficient than other types of input in some cases. This is a more pertinent issue in large size classrooms, where the time allowed for interactions between the teacher and learners in the target language is severely limited. In this regard, Hewson (1982) points out that L2 teachers' brief switching to the L1 could be more time-efficient on some occasions than unsuccessful lengthy explanations in the target language. Similarly, Macaro (2005) contends that an attempt to avoid the use of CS on the part of a teacher may lead to a considerable amount of input modification, which in turn would reduce the amount of learners' contributions, as they would take up much discourse space themselves by making input modifications. Lastly, negotiation of meaning in interaction may not work very well for beginning level learners (Pica, 1996), who are not as well equipped as intermediate learners in terms of linguistic resources at their disposal for meaning negotiation. For those learners with lower L2 proficiency, the limited use of CS may be more effective for both interactional purposes and teaching of language items than the exclusive use of the target language.

Interestingly, while there seem to be few SLA researchers apart from Stephen Krashen who passionately advocate the maximal and virtual positions, pedagogical directions built into these positions have been rooted in the national curricula for foreign and second language education of a wide range of countries, with South Korea being no exception (Liu et al., 2004). The ideas of the maximal and virtual positions are also implied in hiring policies for teachers in most ESL learning programs, where native speaker teachers are more highly appreciated and prioritized than non-native speaker teachers (Braine, 1999). That is, native speakers, who do not share the L1 with their learners, are guaranteed to not use CS, and are consequently believed to provide maximal

L2 input in every portion and aspect of their lessons.

However, the arguments put forward from the virtual and maximal positions, although they appear to be intuitively appealing, have started to come under criticism related to practical and pedagogical considerations as discussed above. For example, Macaro (2009) suggests that the maximal position is by and large a-theoretical; what does it mean to use the target language "as exclusively as possible" (American Council on the Teaching of Foreign Languages, 2009)? How can we empirically examine the "maximum" use of the L2? He continues by arguing that there is no theory or accumulated body of evidence showing that a type of instruction excluding the L1 guarantees a higher amount of L2 learning than a type including limited use of the L1. Then, provided that using students' L1 can be helpful in terms of their learning, in what ways can L2 teachers incorporate the L1 into their teaching? The next section will deal with the recommendations of SLA researchers in response to this question.

2.3.4.3 The Optimal Position

While acknowledging the pivotal role of target language exposure and interaction, some SLA authors and researchers in the optimal position take a further step in the direction of searching for principled ways that L2 teachers can incorporate the L1 into their teaching. The optimal position has sought potential benefits of using the L1 in L2 teaching, and consequently to reexamine the justification of the bilingual approach. In what follows, three aspects of the L1 use proposed in this position will be discussed: L1 use as a means of teaching L2 items, code-switching for communicative uses, and L1 use for establishing a positive classroom atmosphere.

As for the idea of using the L1 for teaching L2 items (e.g. vocabulary), Widdowson (2003) presumes that learners are likely to draw on "explicit reference to the

L1" in processing L2 input (in view of the existence of the interlanguage system), and "such explicit reference would have the additional advantage of making formal features of the second language meaningful and noticeable at the same time" (p. 153). In a similar vein, Van Lier (2006) and Turnbull (2001) suggest that teachers' L1 use is likely to facilitate learners' intake process of L2 input, while acknowledging that the effects of this L1 use are yet to be demonstrated. On the other hand, it has been suggested that the teachers' switch from the L2 to the L1 can effectively shift learners' attention, and thus have a 'dramatic' effect (Canagarajah, 1999) or serve as an 'attention focusing device' (Merritt et al., 1992). While these researchers did not articulate that teacher CS may have this effect on teaching a particular *linguistic item* (e.g. vocabulary), it can be postulated that such use of CS could work as "Focus on Form" (Long, 1991), which will be dealt with later in the L2 vocabulary section of this chapter. Of course, this effect of CS may only be attainable where the matrix language of the instruction (Myers-Scotton, 1997) is the target language. If learners' L1 is overtly used on a regular teaching basis, such an effect will not take place.

Others (Cook, 2001; Macaro 1997, 2005) have suggested that classroom CS fulfils communicative purposes. For example, teachers' CS may provide a more effective means than the target language for disciplining and for giving instructions for classroom tasks. In particular, Macaro (2005) claims that the avoidance of teacher CS may reduce the range of classroom tasks available (as instructions for such activities may be difficult to deliver in the L2), which in turn prohibits the development of a learner strategy which is the outcome of experiencing different types of learning tasks. Another pedagogical function of the teacher CS is to enhance the process of communication in L2 classrooms (Macaro, 2005; Butzkamm, 2003), which is indeed contrary to the claims of the virtual and maximal positions. The argument of these researchers is that the brief use of CS

prevents communication breakdowns between the teacher and learners, and consequently facilitates more interactive communication in the L2.

Another advantage of using the L1 in L2 classrooms is of the affective and emotional domains. Auerbach (1993) contends that learners' affective filters may be reduced when their L1 is permitted in their L2 classrooms, and as a result, they will show more progress in their L2 learning. Similarly, Van Lier (2006) claims that L1 use could result in a positive learning atmosphere, which he further links with crucial internal factors in language learning such as "receptivity," "motivation," and "engagement." On the other hand, Harbord (1992) points to the potential pitfalls of using the L1 as a booster for establishing rapport between teachers and learners, which may "have a fairly negative effect on the overall tendency towards L2 use in the classroom" (p. 354).

Indeed, in accordance with Harbord's point above (1992), some of the authors who do not denigrate the role of the L1 in L2 classrooms (Wigglesworth, 2002; Turnbull, 2001) have expressed their concern about the excessive use of the L1 on the part of teachers – especially those who are provided the "license" to use the L1 – , undesirably turning communicative classrooms into non-communicative ones. Meanwhile, others have urged SLA research to search for "optimal" conditions for L1 use (Turnbull and Arnett, 2002; Macaro, 2001), and call for research into the relationship between classroom CS and learners' L2 development (Ferguson, 2009; Chaudron, 1988).

To sum up, adherents of the maximal and optimal positions have put forward different arguments regarding the value of using CS and the L1 in L2 classrooms, by subscribing to different pedagogical tenets. While the issue of classroom CS use has produced heightened awareness in various subfields of SLA and bilingualism literature through the development of these arguments, it is noteworthy that most of the arguments made in these positions are in need of empirical grounding; the arguments are largely

based on authors' opinions. However, during the last two decades, the study of classroom CS and L1 use has proliferated in SLA literature, possibly under the influence of the intense ongoing debate over CS use in L2 classrooms. This brings us to the body of empirical research focusing on classroom CS in L2 classrooms.

2.3.5 Empirical Studies on Teachers' L1 Use in L2 Classrooms

The debate over teachers' L1 use in L2 classrooms has accompanied both the rethinking of the role of the L1 in L2 teaching and the emergence of classroom CS studies which aim to capture what is transpiring in the local context of L2 classrooms in terms of classroom discourse with a focus on teacher speech. This section will provide a selective review of empirical studies on the amount of teachers' L1 and L2 use, the functions of teacher CS, and the effect of teacher CS on L2 learning.

2.3.5.1 Quantitative Studies of Teachers' L1 and L2 Use

How much are L2 teachers using the L1 and L2 respectively in L2 classrooms? This seemingly simple question is inextricably entwined with a variety of L2 classroom issues such as the quantity of L2 input that L2 teachers should provide (Ellis, 1984) and language policies of institutions in relation to teachers' language use or methodological constraints on L1 use (Nunan, 2003). Researchers' interest in these questions has naturally led to the investigation of the linguistic distribution of L1 and L2 input by L2 teachers catering to their students.

One of the most widely cited descriptive CS studies is Duff and Polio (1990) in which the classroom discourse of 13 FL teachers of a variety of languages was analyzed in terms of the ratio of their use of the L1 (English) and L2. This study, among all the descriptive L1/L2 studies, showed the widest range of teachers' L1 use, from 0 to 90

percent, with the mean of the L2 use being 67.9 percent. Similarly, Kim and Elder (2005) also reported great variability in terms of the proportion of teachers' L2 use, with the amount of L2 use of seven native speaker teachers of the four foreign languages in New Zealand secondary schools ranging from 23 to 88 percent. In contrast to these studies with a wide range of L1/L2 use by L2 teachers, Macaro (2001) and Rolin-Ianziti and Brownlie (2002) reported very low use of the L1 by French as FL teachers, with the average of the sampled teachers' L1 use in these studies being around 10 percent. Guo (2007) also found a fairly low amount of L1 use by EFL teachers in Chinese universities, the average being 20 percent. In a study by Liu et al. (2004), who examined Korean high school English teachers' classroom discourse, the ratio of L1 use by high school teachers was very high with an average of 68 percent. It appears that this high percentage of L1 use was a reflection of the nature of the recorded lessons in their study, with more than half of them being reading/grammar lessons, which presumably require a higher amount of L1 use than communicative activities.

While these studies are useful in examining the real picture of L2 classrooms in terms of L2 teachers' language use, caution should be exercised in interpreting the empirical data of classroom discourse from these studies because authors have adapted different sorts of coding systems. Consequently, different discourse analyses have been oriented toward quantifying teachers' L1 and L2 use. For example, Rolin-Ianziti and Brownlie (2002), and Wing (1987) employed a rather simple method of measuring the amount of L1 and L2 use - counting words spoken by teachers in the L1 and L2. On the other hand, Macaro (2001) and Duff and Polio (1990) recorded the language of utterances by teachers every 5 and 15 seconds respectively. Another methodological issue in interpreting the results of these studies is related to a lack of clarity in the description of the pedagogical approaches adopted in the sampled classrooms. For

example, Duff and Polio (1990) do not articulate which kind of methodology each language class had adopted, nor do they specify what kinds of activity their recorded lessons were about. Fortunately, more recent work (e.g. Kim and Elder, 2005; Guo, 2007) has been more concerned with this issue and has provided more detailed descriptions of their target lessons.

In view of the methodological issues and differences in local contexts across studies, it seems that undertaking a direct comparison of the linguistic distribution of L2 teachers' speech reported across studies, or attempting to make any generalizations about teachers' language use is not practical. To put it another way, any conclusions drawn from these studies are tentative and context-specific at best. Thus, the body of this line of research does not really contribute to an effort to establish principles regarding the quantity of teachers' L1 and L2 use. If this is the case, what does the research examining the function of teacher CS suggest? Can we establish any pedagogical principles through the examination of these studies? In order to answer this question, the following section will review studies examining pedagogical functions inherent in teachers' L1 use or CS.

2.3.5.2 Functions of Teacher Code-switching

Another strand of classroom CS research comprises studies examining a wide range of pedagogical functions that teacher CS fulfils in teacher-learner discourse. One of the difficulties in reviewing these studies is "the absence of any agreed taxonomy of pedagogical functions" of CS (Ferguson, 2009, p. 231), the reason for which could be attributed to the fact that most classroom CS research (in particular early studies) has not drawn on any theoretical framework from naturalistic CS literature. Consequently, the range of functions of CS observed in these studies appear to be a somewhat extensive list of *ad hoc* L1 uses, rather than a systematic categorization of pedagogical functions of

teacher CS. For this reason, rather than listing all the pedagogical functions presented in each study, two broad functions of code-switching will be discussed in light of findings from this strand of research: CS for teaching L2 items and CS for communicative purposes.

As for the first function, teacher CS is form-focused, calling learners' attention to specific linguistic items, and thus is 'medium-oriented' (Håkansson and Lindberg, 1988). This kind of CS function can be initiated by either 1) a teacher who voluntarily switches to the L1 from the L2 as he or she believes that the complexity of the target items is too high for his or her learners or 2) learners who signal difficulty in understanding the target items to their teacher. Either way, the purpose of CS in this context is to assist learners' understanding of teachers' explanations of target items. The following two functions have been most widely observed in this light: providing translations for unknown L2 lexical items (Guo, 2007; Rolin-Ianziti and Brownlie, 2002; Polio and Duff, 1994; Kharma and Hajjaj, 1989) and metalinguistic use of CS for explaining grammatical points (Gearson, 2006; Liu et al, 2004). In particular, a considerable amount of code-switching in bilingual classrooms has been claimed to be triggered by "lexical deficit" (Eldridge, 1996), and the purpose of CS in this light is usually to teach unfamiliar lexical items or to reinforce the meaning of the lexical items.

Teacher CS as a pedagogical strategy to target an L2 lexical item is of considerable relevance to the agenda of a meaning-focused or comprehension-based task in which a particular lexical item has some potential to impede the ease of the task. In such a case, bilingual teachers may opt for L2-only instruction or CS in explaining the meaning of the target item for the dual purposes of teaching the lexical item and enhancing learners' comprehension of the text (written or oral) during the task. While the maximal and virtual positions would argue for L2-only instruction for input-related

reasons, advocates of CS would suggest otherwise for two reasons: efficiency and cognitive effect of the CS. As for the efficiency, the CS could be as short as a single lexical intra-sentential switch to the L1 embedded in an L2 matrix (Rolin-Ianziti, 2002), yet deliver the meaning of the target item effectively. The consequence of using such a strategy is more discourse time, be it teacher-learner or learner-learner interaction, available for the meaning-focused or comprehension-based task at hand. While L2-only instruction could certainly work in such a case, a considerable amount of input modification on the part of the teacher would be inevitable (Macaro, 2005), which in turn could have a negative effect on the flow of teacher-learner interaction. A recent study by Guo (2007), who implemented stimulated recall interviews with Chinese learners of English at the university level, demonstrates that learners make use of a variety of mental strategies in processing teachers' CS input of the target English item (e.g. making a connection between the L1 and L2), and thus illuminates a positive effect of CS on cognitive processing.

Teacher CS as a communicative strategy has also been observed in a wide range of studies. The widely cited functions in this regard fall under the "classroom management" category, including giving procedural instruction to learners (Guo, 2007; Macaro, 2001), discipline (Liu et al., 2004), and discussing language objectives or tests (Levine, 2003; Franklin, 1990). Indeed, most examples of this strand of research report at least one of these functions, indicating that teachers in a wide range of contexts use CS for classroom management purposes. A possible reason for this trend would be that teachers' abrupt use of CS, from the formal L2-only instruction, could have some "rhetorical force" and consequently "make a special appeal" to students (Canagarajah, 1999, p. 133). Thus, teachers may have gained some knowledge through their previous teaching that the use of CS for classroom management is often more effective than

maintaining the L2. However, one may also suggest that teachers simply use the L1 as an "easy way out" or even because of fatigue (Franklin, 1990).

Teacher CS has also been found to have some positive effects on the interaction between teachers and learners in the target language, which is somewhat contrary to the arguments from the maximal and virtual positions. That is, teachers can prompt learners to speak in the target language (Üstünel and Seedhouse, 2005; Rolin-Ianziti and Brownlie, 2002) by delivering a message in the L1 to encourage them to participate in the communication in the L2. Thus, as in the case of the classroom management function, the teacher CS in an attempt to induce learners to engage in some L2 production could make some special appeal to learners, as observed in the above studies. Furthermore, teacher CS has been found to remedy learners' lack of comprehension when they process L2-only instruction, either in input processing or interaction with the teacher (Macaro, 2001; Polio and Duff, 1994). In this light, Hosoda (2000) found that, at the moment of the communication breakdown between the teacher and the learners due to the lack of learners' comprehension of the teacher's L2 input, teacher CS can "result in the resumption of the flow of interaction" (p.86).

Having seen the results of empirical studies on the functions of teacher CS in authentic L2 classrooms, what appears to emerge from this body of research is the lack of a guiding research agenda and comparable findings. Certainly, the nature of code-switching hinges on the local context of the classroom (e.g. national language policies, teaching methodology adopted, individual teachers' beliefs about CS use and so on) and the findings of a variety of CS functions may be deemed to be natural. Still, the functions of teacher CS observed in this line of research are almost unlimited and non-systematic, giving the impression of the "random nature" of teacher CS. A general claim which can be made from reviewing these studies, if any, would be that "Determinants of language

choice and codeswitching in the classroom are necessarily more complex than can be 'legislated' by language policy on medium of instruction" (Merritt et al., 1992, p. 105). This implies that while language policies in many language institutions stipulate that the L2 should be taught in the L2 as much as possible for all pedagogical functions, this expectation is generally not met in real L2 classrooms.

The lack of guiding principles and findings in empirical CS research points toward the need to carry out more interventionist research examining the effect of CS, with which to make informed pedagogical decisions regarding teacher CS. The following section will turn to previous studies examining the effect of teacher CS, which are directed at reducing the aforementioned random nature of teacher CS.

2.3.5.3 The Effect of Teachers' L1 Use on L2 Learning

One of the pioneering works examining the effect of teachers' L1 use on L2 learning is Kaneko (1992), who provided a set of correlation analyses between the amount of time spent in the L1 and students' uptake measured through an uptake questionnaire at the end of the lesson on the basis of their claim of what they had learnt during each lesson. Classroom interaction data collected from English lessons in Japanese high schools and uptake questionnaires comprised the empirical base of this investigation. From the correlation analyses, it was found that the amount of L1 use in English lessons was negatively correlated with students' uptake. In addition, students' L2 speech was demonstrated to be of positive correlation with their uptake, thus pointing to the positive role of students' production in L2 learning. As for the teachers' language use, Kaneko reported that teachers' mixed use of the L1 and L2 had a positive effect on learners' uptake in vocabulary and grammar; thus, the study provides some argument for the role of the L1 in L2 teaching/learning. While this study is one of the first attempts to deal

with the effects of teachers' L1 use, the study was not of an experimental type, and thus a causal relationship between the teachers' CS and participants' uptake of vocabulary and grammar learning cannot be claimed.

Meng's study (2005) attempted to address this issue of a direct relationship between teachers' L1 use and the degree of L2 learning. The primary focus of his study was the effect of teacher CS as a strategy to target unknown lexical items, with the dependant variable being vocabulary acquisition and retention on the part of learners. A total of 159 Chinese EFL students at the secondary level learnt new lexical items through their teachers' explanations during the comprehension of a written text. The students were randomly assigned to one of the three following conditions while learning two target texts: *Chinese Group* where the teacher provided L1 equivalents of new lexical items, *English Group* where the teacher provided L2 definitions, *English plus Chinese Group* where the teacher provided L2 definitions, followed by L1 equivalents. As for the immediate post-test of the first text, participants operating in the *English Group* and *English plus Chinese Group* outperformed the *Chinese Group*, whereas no significant difference was found between these groups in the immediate-post test of the second text. As for the delayed post-test, the language of instruction did not make a statistical difference two weeks after the instructional period ended in the case of both texts.

With the same goal in mind, Tian (2009) carried out an experimental design study, focusing on the effect of teacher CS on EFL learners' vocabulary acquisition in a listening comprehension task. One hundred seventeen English major freshmen in a Chinese university were randomly assigned to the following three conditions: 1) Code-switching condition where the teacher provided Chinese equivalents of English vocabulary, 2) non-codeswitching condition where the teacher did not use CS in overall instruction but provided definition and paraphrases for the meaning of English

vocabulary, and 3) a control condition without teachers' instruction. The first and second condition were further grouped as ones receiving "Focus on Form" instruction of vocabulary (either in the L1 or L2) and contrasted with the control group in terms of the amount of vocabulary retention. The results showed that Focus on Form instruction indeed yielded more vocabulary learning than the control group in the delayed post-test, thus demonstrating the benefit of drawing learners' attention to vocabulary in the middle of the comprehension task. Teacher CS was found to be superior to non-CS instruction in terms of vocabulary acquisition (as measured by the immediate post-test), but not in terms of vocabulary retention (as measured by the delayed post-test). Tian further found that the learners with the lowest prior lexical knowledge benefited more from the teacher's CS use in the short term than others with higher prior lexical knowledge.

Meng (2005) and Tian's (2009) studies are valuable pieces of work in that they provide some empirical evidence of the effect of teacher CS in L2 classrooms. The fact that these studies are based on meaning-focused activities (e.g. reading and listening comprehension tasks) adds more value to their work in view of the important point that the examination of the effect of teacher CS may only be meaningful where pedagogical purposes are directed at communicating meaning, rather than teaching a specific linguistic item. However, their work is considered to be of limited ecological validity, mainly due to the *experimental* nature of the studies. In both studies, a bilingual English-Chinese teacher gave different types of instruction to all the condition groups. If we consider the point that each teacher has his or her own teaching style (e.g. whether to use CS or not), one might wonder in their studies whether English-only instruction by bilingual Chinese teachers, who presumably use CS in their everyday teaching, would have mirrored the same type of instruction by native speaker teachers in reality. Also, their English-only condition would have been more conducive to drawing learners'

attention and subsequent vocabulary learning than *intact* classrooms with higher amounts of distraction (e.g. noise). Thus, it is open to debate whether the effect of English-only instruction evaluated in their studies was of high ecological validity.

To sum up, very few studies have considered the effect of teachers' L1 use on L2 learning. As a whole, these studies have found neither a detrimental nor a superior effect of teacher CS against L2-only instruction. This somewhat unexpected finding may be attributed to the methodological limitations of these studies discussed above. In particular, the weaknesses of Meng and Tian's studies call for more ecologically valid research, the findings of which would provide pedagogical implications for teaching practitioners.

Having reviewed the previous studies on the issue of the effect of teacher CS, it is the aim of the present thesis to provide a more "naturally occurring" type of study, examining the effects of teacher CS in intact L2 classrooms. If teacher CS is found to be more effective than L2-only instruction in naturally occurring situations (rather than in more experimental settings), this would provide the strongest rationale for reconsidering the role of teachers' L1 use in L2 classrooms. As in the case of the previous studies, the present thesis aims to examine the effect of teacher CS on vocabulary acquisition, and attempts to compare its results obtained in naturally occurring situations to those in more controlled settings (Tian, 2009; Meng, 2005). Vocabulary acquisition being the target language area of the study, the following sections will review studies on L2 vocabulary acquisition and other relevant areas.

2.4 Second Language Vocabulary Acquisition

As mentioned in the previous chapter, the present study aims to examine the effects of teacher code-switching (CS), focusing on one particular language area - vocabulary. In

recent SLA literature, vocabulary has been regarded as a crucial area in language learning (Zimmerman, 1997). Also, it is a generally accepted view amongst vocabulary researchers that lexical competence is an essential part of communicative competence (edited by Coady and Huckin, 1997; Meara, 1996a). This is certainly not an overstatement of the importance of vocabulary, provided that we take the proposition that lexical competence can be described as involving a certain breadth of vocabulary in the target language, knowledge about the "complex network structure" of vocabulary, and one's ability to "manipulate the words" in her mental lexicon (Meara, 2005, p. 271).

Given its considerable relevance to the present topic, this chapter will provide a selective overview of L2 vocabulary acquisition, focusing on the following issues: 1) psycholinguistic approaches to L2 vocabulary use and acquisition, 2) factors related to L2 vocabulary acquisition, 3) the theoretical framework of incidental and intentional vocabulary learning, and 4) an introduction to the notions of lexical "Focus on Form" in meaning-focused activities and the teacher as "dictionary and dictionary designer."

2.4.1 Psycholinguistics Models of L2 Vocabulary Use and Acquisition

The present section will introduce two psycholinguistic models of L2 vocabulary, respectively dealing with access to and acquisition of L2 lexical items. These models provide reasonable answers to the following questions: how does a bilingual process a new L2 word in his or her mind? How does the process of comprehending L2 words change or develop as a function of one's proficiency? What is the role of one's L1 in learning L2 words? It should be noted that these models and following discussions in this section only pertain to L2 learners who have established their L1 lexical system, not bilingual children who learn two languages simultaneously from birth in naturalistic settings.

2.4.1.1 The Revised Hierarchical Model

In literature which concerns the bilingual lexicon, researchers have attempted to describe the mental representation of the bilingual lexicon which is believed to operate on conceptual and lexical levels (Kroll and de Groot, 1997). After decades of research, Kroll and Stewart's (1994) Revised Hierarchical Model (RHM) is the generally accepted model of the bilingual lexicon system, which is illustrated in Figure 2.2.

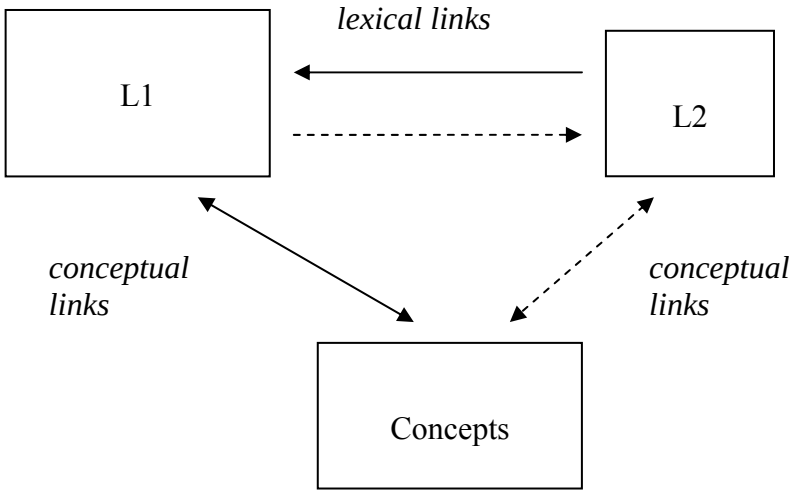


Figure 2.2 The revised hierarchical model (adapted from Kroll and Stewart, 1994)

In view of the fact that few bilinguals are balanced in terms of their language proficiency, the RHM attempts to account for the consequences of the development of L2 proficiency in its representation of bilingual lexicons. As illustrated in Figure 2.2, the RHM proposes independent lexical stores for words in each language and an integrated conceptual store, with the L1 lexical store being larger in size than the L2 lexical store. The major prediction of the model is that L2 learners at earlier stages of L2 learning are likely to access L2 lexical items by translating them into their existing L1 on a lexical level, due to stronger conceptual links between their L1 and concepts (semantics) than between their L2 and concepts. The consequence of this status in the bilingual lexicon

reflects an asymmetry in performance in the two routes of translation, with forward translation (from L1 to L2) being likely to be processed at the conceptual level and backward translation (from L2 to L1) being lexically mediated (and thus faster than forward translation). The model further puts forward the hypothesis that the development of L2 proficiency would strengthen conceptual links between the L2 and its associated concepts, hence producing less reliance on mediation through L1 equivalents in accessing L2 vocabulary meanings.

Kroll and her colleagues have designed several experimental studies to confirm the major predictions of the RHM (Kroll et al., 2002; Talamas, Kroll and Dufour, 1999; Kroll and Stewart, 1994), and the results of these studies have demonstrated the following: 1) backward translation is faster than forward translation, and only the latter suffers "category interference" when translation lists in the task are semantically manipulated (implying conceptual mediation of the forward translation), 2) more fluent bilinguals show improved performance in word-translation between the L1 and L2 than less fluent bilinguals, and 3) in a translation recognition task in which participants are asked to decide whether two words in different languages are translations of each other (and some pairs are manipulated such that they are not correct translations but form-related and semantically-related), more fluent bilinguals experience meaning interference to a larger degree than form interference, and the reverse pattern is seen for the less fluent bilinguals, indicating fluent bilinguals' ability to "access meaning directly for L2 words" (Talamas et al., 1999, p. 53). Therefore, the results of these studies generally confirm the predictions of the RHM and also show *developmental shift* in the representation of the bilingual lexicon (Kroll, 1993).

Contrary to the findings of the aforementioned studies, Altarriba and Mathis (1997), also using a translation recognition task, found that both beginners and proficient

learners of Spanish demonstrate semantic interference, suggesting that L2 words could be conceptually mediated even at the early stages of learning. Qasem and Foote (2010) also reported a similar finding with Arabic-English bilinguals at two levels of English L2 proficiency, finding that their two proficiency groups experienced both semantic and form interference. While these findings do not support the RHM, some methodological issues need to be discussed. In Altarriba and Mathis' study, participants went through some pre-experimental training for the target words involved in the study, and consequently the results of the novice learners' performance related to conceptual mediation may be a vestige of intensive training on target words (and a temporary mimicking of the performance of more proficient learners). In the case of Qasem and Foote, the unexpected results appear to be due to the typological distance between English and Arabic in terms of their morphological systems. However, it should also be pointed out that the less proficient speakers in their study were not novice learners in view of their self-ratings for the L2 in the participant questionnaires – indeed they were more like intermediate learners, indicating that conceptual mediation may have been possible for them. Thus, the results of these studies do not provide compelling evidence against the integrity of the RHM, although more research with different language pairs (e.g. English and Korean) as well as different word types is necessary to further confirm the predictions of the RHM.

A critical question for the RHM is concerned with its somewhat loose concept of "proficiency." Although it seems clear from Kroll and Stewart's original article that they use "proficiency" in a very general sense, one may wonder whether proficiency here could also refer to the development of one's L2 vocabulary size (or lexicon network). Even if we take the general sense of proficiency, it is still not clear from the model as to *how* the development of L2 proficiency results in developing "the ability to conceptually

process L2 words directly" (Kroll and Tokowicz, 2005, p. 546).

Despite the point mentioned above, the RHM has some pedagogical implications for the present study, and further generates a set of hypotheses regarding the effects of teacher code-switching on the vocabulary acquisition of both adult and young EFL learners. In view of these models, it seems that the choice of L1 or L2 input in teaching unknown L2 words would produce substantially different effects on adult and young learners in terms of the processing and acquisition of these words (given that the young learners in question are not bilingual children, but ones who have already acquired their L1 fully before they start to learn the L2). For example, adult learners with higher levels of L2 proficiency would be less reliant on their L1 lexical system and more directly access L2 lexical items on a conceptual level without operating *L2 to L1 lexical links*, than young learners with lower levels of L2 proficiency. Then, it can be further hypothesized that adult learners are less likely to require L1 input in learning L2 lexical items, whereas such input will be more facilitative of vocabulary learning for young learners who may rely heavily on the L1 lexicon for accessing L2 words.

Despite its usefulness, the RHM is largely a model of representation and processing, and thus does not provide, from a psycholinguistic perspective, many implications for the processes by which a learner initially encounters a new word, and this word develops in his or her lexicon. The next section will turn to a psycholinguistic model of L2 vocabulary acquisition to fill this gap.

2.4.1.2 Three-stage Model of L2 Lexical Development

The L2 vocabulary acquisition model we will review in this section is Jiang's (2000) three-stage model of L2 lexical development, which has its theoretical grounds in psycholinguistics literature. Adopting the distinction between the *lemma* (semantic and

syntactic specifications) and *lexeme* (morphological and phonological/orthographic specifications) in Levelt's speech production model (1989), Jiang's model constitutes an attempt to delineate the developmental process of an L2 lexical entry. One of the strengths of this model is that it recognizes the significance of two practical constraints of L2 learning in accounting for the procedures of L2 lexical development: the "poverty of input" for classroom L2 learners and "the presence of an established conceptual/semantic system with an L1 lexical system" (Jiang, 2000, p. 49). Thus, these two constraints built into the model fundamentally exclude bilingual children from consideration. This model is expected to provide a more accurate picture of the L2 lexical developmental stages of L2 learners involved in the present study than other L2 vocabulary acquisition models which neglect such practical constraints.

Jiang's (2000) model of L2 lexical development identifies three qualitatively different stages in accounting for the developmental process of an L2 lexical entry. These stages are termed 1) the formal stage, 2) the L1 lemma mediation stage and 3) the integration stage. Before looking at each stage in more detail, it should be mentioned again that this model is based on L2 learners who have developed their conceptual systems in accordance with their L1 lexical systems prior to L2 acquisition, and who suffer from limited L2 input in terms of quantity.

According to Jiang (2000), the initial task in learning L2 words involves learning the formal features (e.g. spelling and pronunciation) of words, which will result in the registration of the word forms as L2 lexical entries. In this initial stage, each L2 lexical entry does not usually constitute more than these formal specifications of words, and thus other aspects of lexical knowledge are likely to be ignored in the lexical entry. Then, how do L2 learners gain access to the meanings of newly encountered words, when they have established only the formal features of words?

Jiang suggests that these formal features will develop a certain pointer which "serves as a link between L2 words and their equivalent [L1 translation]" (p. 50). This pointer, which is not part of one's lexical knowledge but rather part of one's "episodic memory," enables L2 learners to gain access to the meaning and other grammatical information of target words through this L1-L2 lexical link. Thus, the lexical processing of L2 lexical items at this initial stage is more or less similar to the one illustrated in the processing for less proficient learners in the RHM (Kroll and Stewart, 1994), relying entirely on the L1 equivalent and its specifications in L2 word use. Similarly, N. Ellis (1997) also advances the idea that L2 word acquisition in the initial stage usually entails the process of connecting L2 words to their L1 translation equivalents. Accordingly, the links between the conceptual system and L2 words are very weak (Jiang, 2002).

Initially encountered L2 words then go through the second stage (L1 lemma mediation stage) through increased use of these words on the part of learners and the continuous activation of their corresponding L1 lemma information. It is where "L1 lemma information can be said to have been copied into the L2 lexical entry from its L1 translation and become part of the lexical knowledge represented in L2 entries" (Jiang, 2002, p. 619). In other words, the mediation of the L1 lexical *form* is no longer prerequisite in L2 word use, but rather a certain level of automaticity is achieved in using L2 words due to the integration of L1 lemma information within the L2 lexical entry. However, due to this registration of the L1 lemma information, transfer errors due to influence from the L1 lexical information are likely to occur in the processes of L2 speaking or writing.

In theory, the final stage (the integration stage) comes only after a significant amount of the exposure to and use of L2 words, and after all types of information – semantic, syntactic, morphological and phonological specifications – are integrated into

the L2 lexical entry, indicating the completion of the developmental process. However, Jiang further notes that most L2 words may not reach this integration stage, presumably because L1 lemma information integrated during the second stage is not easily discarded after it is steadily registered in the L2 lexical entry.

A three-stage model is illustrated in Figure 2.3, with each circle respectively being a graphic presentation of the formal stage, L1 lemma mediation stage and the integration stage.

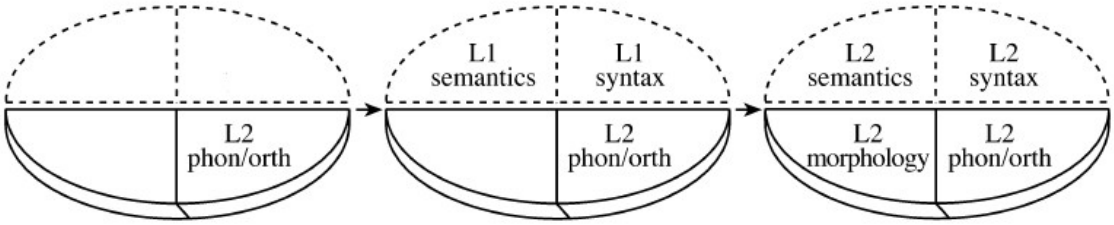


Figure 2.3 Lexical development in L2: from the formal stage to the integration stage (from Jiang, 2000, p. 54)

What pedagogical implications do Jiang's model and his research findings provide? Based on his findings, Jiang suggests that, provided that the L1 equivalent is semantically similar to the L2 target word, mapping of L2 words onto pre-existing concepts or L1 meanings would be inevitable, "no matter what strategies are used by the teacher to convey the meaning of the new word (2004a, p. 104)" and thus "avoiding the L1 is neither practical nor desirable in adult L2 acquisition" (2004b, p. 427). Jiang's suggestion raises two important pedagogical questions related to the role of instruction in L2 vocabulary acquisition; if L1 mediation is an inevitable process in L2 vocabulary acquisition for learners who have established another lexical system (i.e. an L1 lexicon), is it efficient or effective to use L2-only instruction in teaching unfamiliar L2 words? Given that the L2 lexical system develops with one's L2 proficiency, can learners benefit from L2-only instruction after reaching a certain threshold level of proficiency (as they

would be able to mediate L2 words with their rich L2 lexical systems without relying on their L1 lexical systems)?

While the RHM and Jiang's model have brought heightened attention to the role of the L1 lexical system in the field of L2 vocabulary acquisition, it should be pointed out that these models have generally not considered the role of factors other than the L1 lexical system in L2 vocabulary use and acquisition. The next section will discuss some of these factors, in particular ones related to the vocabulary acquisition contextualized in the present study.

2.4.2 Factors in L2 Vocabulary Acquisition

What factors play a role in L2 vocabulary acquisition? To answer this rather broad question, Ellis (1999) provided a literature review of potential factors affecting L2 vocabulary learning, focusing in particular on the effects of oral input on vocabulary acquisition. In this section, we will review some of these factors in reference to Ellis' writing and other relevant literature for the purposes of the present discussion.

2.4.2.1 Intrinsic Word Properties

Bogaards and Laufer (2004) point to word "learnability" as a significant factor in L2 vocabulary learning. In other words, regardless of a word's frequency, some words are easier or more difficult to learn due to their intrinsic properties. These properties vary widely, from length of word-form, to word class (e.g. noun, adjective, verb), imageability of words, and distinctiveness of word-form (Ellis, 1999; Laufer, 1997). Based on an amalgam of empirical findings in L1 and L2 vocabulary research, Ellis (1999) posits that learners will find it easier to learn 1) more imageable words than less imageable ones, 2) monosyllabic words than polysyllabic words, and 3) nouns than other parts of speech.

Among these, the concreteness of words was found to be positively related to children's incidental vocabulary learning (see section 2.4.3 for definitions of incidental and intentional learning), both in a written context (Schwanenflugel, Stahl and McFalls, 1997) and oral context (Elley, 1989). In other words, the more concrete a target word is, the more likely it is that children will learn the word. In a study of L2 vocabulary acquisition through a paired-associate learning technique, de Groot and Keijzer (2000) found that concrete words were retained to a greater degree than abstract words, thus pointing to the effect of the concreteness of words on intentional vocabulary learning.

As for the grammatical part of speech, the previous research evidence suggests that nouns may be more readily learnt than other parts of speech such as verbs, adjectives and so on. Elley (1989), in an L1 vocabulary study which involved reading stories aloud to children, found that 8-year-old learners demonstrated more gains with nouns than with adjectives and verbs. In addition, N. Ellis and Beaton (1993a) found in their study of intentional vocabulary learning through repetition and keyword techniques that correct recall of nouns was significantly higher than that of verbs, possibly due to their ability to arouse an image. On the other hand, Schwanenflugel et al. (1997) reported a contradictory finding in their L1 vocabulary study, that fourth-grade children in elementary school learnt fewer nouns than other grammatical parts of speech such as verbs, adjectives, and adverbs through story reading. However, as the authors acknowledged in their discussions, this finding may be due to the nature of their target nouns, most of which were abstract nouns (e.g. tribute) or nouns without clear boundaries (e.g. venom). Thus, it might have been the case that their child participants had even more difficulty in learning these nouns which might have been less frequent than in learning other parts of speech.

In terms of word-length, it is generally believed that polysyllabic words are more

difficult to learn than monosyllabic words. Interestingly, research evidence regarding the effect of length of word form is somewhat slim in the field. Perhaps, as previously suggested, word length may be associated with other factors, such as the frequency of words (Laufer, 1997) or lack of familiarity with the writing system of the target language on the part of learners (Meara, 1984). Scott (2005) claims that "word length and number of syllables appear to be less important in determining which words will be learned from context than other [intrinsic word] factors" (p. 74). Future research is necessary to confirm whether word-length is indeed an insignificant determinant of L2 vocabulary learning.

2.4.2.2 Interactional Factors

According to Ellis (1999), a great deal of meaning negotiation in L2 classroom interaction between teachers and learners is lexically oriented, as in the example below from Ellis et al. (1994, p. 476):

> T (teachers): We have an apple. And I'd like you to put the apple in the sink.
> S (student): What is the sink?
> T: Sink is a place to wash dishes. It's a hole where you wash dishes.
> S: One more time please.
> T: We have an apple. And I'd like you to put the apple in the sink.

As can been from the above example, the word *sink* triggered a comprehension problem on the part of the student during the communicative activity, and thus led to meaning negotiation directed towards the explanation of the word meaning. In this regard, Walsh (2002) identifies unknown words or phrases as frequently being the source of communicative breakdown in the L2 classroom, and points to the important role of the teacher in "pre-empting" this breakdown through his or her intervention in teaching these

words. Indeed, lexically oriented negotiation has figured widely in both L2-only interaction (Ellis et al., 1994; Pica and Doughty, 1985) as well as in bilingual interaction (Liu et al., 2004; Rolin-Ianziti and Brownlie, 2002), within which the meaning of words is defined and/or elaborated by L2 teachers.

Ellis (1999) further suggests that negotiation of meaning in oral interaction is conducive to the acquisition of word meaning, because it "is likely to result in more input" and it affords "elaboration that results in greater transparency of meaning" (p. 51). To put it another way, more input and elaboration related to lexical items respectively offer learners more time to process the item and more learner-oriented explanations of word meanings. On similar grounds, Nation (2005) also points to the merits of negotiation in vocabulary learning:

> "Negotiation, which involves working out the meaning of a word through discussion, sets up all the conditions needed for effective learning: interest, understanding, repetition, deliberate attention, and [on some occasions] generative use (the use of a word in a new context)" (p. 585).

In effect, this proposition that more interaction leads to better vocabulary learning has a thread of connection with *depth of processing*, which Hedge (2000) explained, stating that "learners are more likely to remember a word if they have worked on its meaning actively" (p. 121). Depth of processing, an idea originated by cognitive psychologists, thus suggests that degree of mental involvement has a significant bearing on vocabulary learning.

In reference to the context of the present study, the discussion of the interactional factor then raises the question of whether L2-only interaction, which would involve a high degree of *depth of processing* on the part of learners, would be more effective in promoting learners' L2 vocabulary learning than bilingual interaction involving some degree of teacher code-switching to learners' L1 which would be more time-efficient and

possibly more learner-friendly. As Tian (2009) found, a higher amount of input during this lexically oriented interaction and a longer time for processing target vocabulary may not necessarily lead to more vocabulary gains than a rather brief use of student's L1. Furthermore, learners' readiness to engage in negotiation of meaning in terms of the linguistic resources at their disposal (Pica, 1996) and practical constraints such as class size and learners' cultural characteristics (Ellis, 1995) would be important considerations in dealing with the above question.

2.4.2.3 L1 Factor

Another important factor to consider is the effect of the learner's L1 on L2 vocabulary acquisition. According to Grosjean's *language mode* (2001), which is defined as "the state of activation of the bilingual's languages and language processing mechanisms at a given point in time" (p. 430), it is very difficult for bilinguals to shut off one language completely while processing another language. This implies that the L2 and L1 are interconnected with each other in L2 learners' minds regardless of L2 teachers' adherence to L2-only teaching practices; as discussed above, the lexical system is not an exception in this light (see section 2.3.3.2 and 2.4.1.1), although the relationship between L1 and L2 lexical entries may be contingent on some factors such as the route through which the words were learnt and degree of knowledge of the words (Singleton, 1997).

More peculiar to L2 vocabulary teaching/learning, researchers have suggested that learners may benefit from the L1 in L2 vocabulary acquisition (e.g. Schmitt, 2008; Butzkamm, 2003; Cook, 2001), at least at initial stages. The major claim here is that, given the interconnectedness of L1 and L2 lexicons on phonological and semantic levels (Channell, 1988), it would be counter-productive not to use the L1 in teaching L2 vocabulary. In this light, McCarthy (1990) points to the advantages of presenting L2

vocabulary with L1 equivalents or translations as more accessible, time-efficient, and comprehensible routes of learning, while qualifying that learners may have less interaction with the target words (compared to processing the item through L2 input). Also acknowledging the role of the L1 in L2 vocabulary learning, Swan (1997) and Laufer and Girsai (2008) add that it could be better for learners to notice and recognize interlingual similarities and differences, so that errors resulting from lexical differences in two languages may be reduced.

2.4.2.4 Consideration of Factors in L2 Vocabulary Acquisition

The present section has considered a range of factors concerned with incidental L2 vocabulary acquisition from oral input. Such factors range from intrinsic word properties, to interaction factors, and to learners' L1. Although the large body of empirical research on this issue has been considerably informative in the investigation of the potential factors that influence vocabulary learning, the important question of "why each factor, be it word-related, interactional, or learner-related, affects the ease of L2 vocabulary learning" has remained unanswered. This question is of practical importance and concern to L2 teaching practitioners who plan to teach L2 vocabulary in classroom settings, given the limited time available for them to teach numerous L2 lexical items.

One of the possible directions for future L2 vocabulary research to better deal with this question would be to consider two notions underlying or related to the aforementioned factors: the benefits and costs (Hulstijn, 2003). That is, L2 vocabulary researchers need to take into account the amount of information processing involved with as well as time-efficiency concerned with each factor. Hulstijn rightly points this out, saying, "for each device, the benefits must be assessed against the costs" (p. 364), wherein the benefit refers to the retention of vocabulary and the costs indicate the price

of time taken in deep information processing and other side-effects following this deep processing. Hulstijn provides an example of glossed words in reading texts, suggesting that glossing would give a high level of comprehension but low amount of word retention as it appears only once in the text. On the other hand, the lack of glossing would lead to a higher rate of word retention as a learner would have to infer the meaning of each word (and thus involve higher information processing). However, "this benefit comes at the price of time and with the danger of incorrect inferencing" (p. 364).

Obviously, the research findings to date have mainly been concerned with the "benefits" aspect but not the "costs" aspect. Weighing benefits against costs, it can be argued, is of pedagogical importance in that it could better accommodate L2 teachers who cannot afford too much time in vocabulary teaching in their classes, but who at the same time want to facilitate their students' vocabulary learning. In the context of the present study, the important issue would then be the pedagogical value, as far as both the time and effectiveness are concerned, of briefly using learners' L1 in teaching L2 vocabulary, in comparison to L2-only instruction.

2.4.3 Incidental versus Intentional Vocabulary Learning

2.4.3.1 Theoretical Framework of Incidental and Intentional Vocabulary Learning

In L2 vocabulary research, a majority of the empirical work related to learning issues has been carried out within the "incidental and intentional" framework. According to Ellis (1999), the distinction between intentional and incidental learning can be construed in reference to the division between "focal and peripheral attention"; intentional learning involves focal attention on the target form (e.g. lexical items), whereas incidental learning distributes the focal attention to the meaning aspect of language ("message content"), with peripheral attention on the target form. This definition thus views two

types of learning as distinct categories, depending on how learners' attention resources are allocated. On the other hand, these two types of learning could also be seen as "two poles on a continuum" (Hulstijn, 2003, p. 361), if we follow Schmidt's argument (1994) that all learning involves at least some degree of attention and noticing (more in the case of intentional learning). To resolve this issue, Hulstijn (2003) concludes that both interpretations are possible; the distinction between incidental and intentional learning may not be clear-cut in that both types of learning require attention in varying degrees. Yet, intentional and incidental learning are different from each other in that "attention is deliberately directed to committing new information to memory in the case of intentional learning, whereas the involvement of attention is not deliberately geared toward an articulated learning goal in the case of incidental learning" (p. 361).

Based on the theoretical framework of incidental-intentional learning, two different approaches have constituted vocabulary teaching in L2 classrooms: a direct approach and an indirect approach (Nation and Newton, 1997). The direct approach is characterized as being more intentional, in that the primary focus of activities is deliberately geared towards vocabulary acquisition. Conversely, the indirect approach consists of more communicative or meaning-focused activities, with the incorporation of vocabulary learning as a by-product or secondary goal of said activities. It is the indirect approach (i.e. incidental approach) which has received more attention from L2 teaching researchers in the field, as it fits in better with the principles of communicative lessons in which most activities have the dual purpose of teaching meaning-focused materials and form-focused items. As a result, most of the theoretical discussions on L2 vocabulary acquisition have been based on incidental learning (Laufer and Hulstijn, 2001; Huckin and Coady, 1999; Gass, 1999).

The vocabulary learning contextualized in the present study is, in theory,

incidental vocabulary learning, with the target activity being a reading comprehension activity (meaning-focused) incorporating some unfamiliar L2 vocabulary. However, vocabulary learning here may not constitute a fully incidental situation given that the teacher is occasionally shifting learners' attention to the target item from the reading comprehension activity. It is likely that learners would deliberately attempt to register unknown lexical items in their memory at these moments of teachers' explanations of new L2 vocabulary. Therefore, this vocabulary learning should be seen as intentional, and it should be considered as a *sub-activity* incorporated into the more meaning-focused main activity.

In what follows, a number of empirical studies within the intentional-incidental framework will be reviewed in light of their implications for the present study. Due to the scarcity of literature related to vocabulary acquisition in an oral context, the following sections will inevitably draw on vocabulary studies using reading contexts.

2.4.3.2 Vocabulary Acquisition through Reading: Contexts and Input Enhancement

A large number of L2 vocabulary studies have sought to investigate which conditions promote or inhibit incidental vocabulary learning when learners are engaged in the reading process. A major interest of researchers in this area has been whether inferring the meaning of unknown words is more conducive to learning those words, in comparison with other methods of drawing learners' attention to the meaning of unknown words such as glossing (Watanabe, 1997; Jacobs, Dufon and Hong, 1994; Oskarsson, 1975), dictionary use (Laufer and Hadar, 1997; Knight, 1994), vocabulary exercises (Paribakht and Wesche, 1997) and so on. Although these studies are often categorized as incidental vocabulary studies in some reviews of articles on this issue

(Hulstijn, 2003; Laufer and Hulstijn, 2001), it is noteworthy that most of the abovementioned attention-shifting methods engage readers in intentional learning to some extent, rather than being examples of purely incidental learning. For instance, it is difficult to claim that referring to glossing in the reading text involves pure incidental vocabulary learning, considering the fact that learners will attend to both the form and meaning of the word glossed in the text. In other words, although the primary goal of the activity might be to comprehend the content of the text, it is quite possible that the particular moment when learners read the gloss involves some degree of intentional learning. In this sense, most of the above studies are "quasi incidental" vocabulary learning studies (Laufer and Shmueli, 1997), comparing the effects of varying conditions of vocabulary learning with the control group generally being situated in the incidental condition, deprived of such an attention-shifting device.

The assumption deeply rooted in this line of research is that a considerable number of words are incidentally acquired through reading (Coady, 1997; Krashen, 1989). It follows then that readers infer the meanings of unknown words from the contextual information around them, and retain these inferred meanings in their long-term memory. Huckin and Coady (1999) suggest the advantages of this kind of incidental vocabulary learning are as follows: 1) learning itself is more "contextualized" than direct teaching approaches, providing richer information on words' meaning and use, 2) it serves a dual purpose in L2 teaching (e.g. reading comprehension and vocabulary acquisition), and 3) it is more "learner-based", as learners' vocabulary learning becomes contingent on their own selection of reading resources. It was previously mentioned that the second point above fits well with the general principles of communicative lessons in which meaning-focused activities are prioritized but the acquisition of form aspects of language (e.g. vocabulary, grammar) is nevertheless not to be ignored at the expense of

meaning-focused activities.

However, the effects of inferences and incidental vocabulary learning through extensive reading have been questioned on the following grounds:

1. Readers occasionally make incorrect inferences (Hulstijn, 1992), and this wrongly inferred meaning may be retained in one's mental lexicon (Mondria, 2003).
2. Inferring the meaning of words is a time-consuming process and the success of such an endeavour is highly contingent on the quality of contextual information contained therein (Huckin and Coady, 1999).
3. Even if it is well-constructed, an associative context created by others may not be as effective as one created by the learner him- or herself (Laufer and Shmueli, 1997).
4. There might be a certain threshold L2 proficiency level (including the breadth of one's vocabulary knowledge) for incidental vocabulary learning to be effective (Coady, 1997).

Considering the fact that a great number of L2 learners cannot afford the amount of time needed for incidental learning to be effective, these points then raise the pedagogical question of whether some degree of intentional learning should accompany incidental learning (Schmitt, 2008; Laufer, 2005). This type of learning would perhaps allow learners to establish some level of an L2 vocabulary system at an earlier stage of L2 learning, which would in turn render incidental learning more effective in the future.

Indeed, previous empirical studies (Mondria, 2003; Hulstijn, Hollander and Greidanus, 1996; Prince, 1996) have provided empirical support for the claim that intentional learning (e.g. reading with glossing, learning vocabulary through translation) is generally superior to more incidental, context-oriented learning when it comes to L2 vocabulary acquisition. However, the results of these studies should not be interpreted as questioning the value of incidental vocabulary learning or extensive reading. Rather, they suggest that drawing learners' attention to vocabulary during reading comprehension

activities is of significant effectiveness in formal L2 classrooms in which incidental vocabulary learning might be possible, but perhaps less observable compared to incidental learning in naturalistic or "immersion" environments (Wode, 1999). Having discussed the positive effect of intentional learning, the next section will consider empirical studies examining the relative effects of L1 and L2 glosses on vocabulary learning, the results of which have significant implications for the present study.

2.4.3.3 Vocabulary Acquisition through Reading: L1- versus L2- Glossing

According to Nation (2001), glossing has many advantages, such as: 1) it allows the use of more advanced reading texts which otherwise would be too difficult; 2) it promotes vocabulary learning and reading comprehension; 3) it enables readers to proceed in reading with minimal interruption; and 4) it serves as an attention-shifting device to unknown L2 words, and thus facilitates learning of those words. Among these, the second and fourth points were of particular interest in the research field of L2 vocabulary acquisition, with the primary research inquiry being whether glossing effectively draws learners' attention to unknown words in text and furthers their vocabulary learning. In general, previous research has demonstrated the positive effects of glossing embedded in L2 reading texts on incidental vocabulary learning (Watanabe, 1997; Hulstijn et al., 1996; Jacobs et al., 1994). In view of this positive effect of glossing, the next logical research agenda was to find out which type of glossing promotes vocabulary learning better than others. It is the issue of the relative effects of L1 and L2 glosses which is most relevant to the present study.

Researchers' interest in this topic dates back to Oskarsson's early study (1975) in which the relative effects of bilingual and monolingual glossaries on English vocabulary learning were examined. The study was of "intentional" learning in that the participants

were given notice about following tests. The results of post-tests showed that the bilingual gloss (Swedish in the study) consistently yielded higher vocabulary learning than its counterpart.

Laufer and Shmueli's (1997) study also investigated the effects of L1 and L2 glosses by including them in different modes of presenting unknown L2 words, with varying amounts of quantity of context, ranging from 1) no context (i.e. only lists of words), 2) sentence context, 3) a normal text, and 4) an elaborated text. The results were fairly consistent in that, regardless of the methods of vocabulary presentation, L1 glosses always resulted in better vocabulary learning than L2 glosses in both immediate post- and delayed post-tests. In reference to this result, Laufer and Shmueli claimed that "maximum attention is directed to the new L2 word [by L1 glosses] since the L1 equivalent is fully familiar to the learner and consists of only one word" (p. 103).

However, a study by Jacobs et al. (1994) study suggested otherwise. Although their gloss group demonstrated higher vocabulary learning than their no-gloss group (i.e. the control group) on the immediate post-test, that there was no significant difference between the L1 and L2 gloss groups. Also, even this superiority of the gloss group over the control group disappeared on the delayed-post test, which was administered four weeks later. This result is rather contradictory to the other studies mentioned above, that is, finding no significant difference between L1 and L2 glosses in terms of their effects on vocabulary learning. Similarly, Yoshii (2006) reported the results of a study of incidental vocabulary learning involving Japanese university students during a reading activity on computers, comparing the effects of multi-media L1 and L2 glosses. The result of the study showed that there was no significant difference between the two types of glosses in terms of students' vocabulary learning. However, this was a small-scale study, with the number of target words being too limited (n = 14), and only one reading

text being administered in the study.

Miyasako (2002) examined the incidental vocabulary learning of Japanese high-school aged learners of English in a reading task, comparing the effects of four types of glosses such as L1 single gloss, L1 multiple gloss, L2 single gloss, and L2 multiple gloss, with multiple gloss conditions including one correct meaning of a target word and one distractor. As for vocabulary learning, the L2 gloss groups had significantly higher mean scores than the L1 gloss groups in the immediate post-test, and there was no significant difference between the single and multiple gloss groups. However, the superiority of the L2 gloss groups over their L1 counterparts was not found in the delayed post-test. This finding was further qualified by the interaction between learners' English ability and language condition (L1 or L2 gloss), suggesting the differential effects of L1 and L2 glosses on learners at different proficiency levels, with the L2 and L1 glosses respectively being more effective for higher- and lower-ability learners. A closer look at the vocabulary test employed in the study reveals that the higher mean scores of the L2 gloss groups in the immediate post-test may have been influenced by the format of the test, which was a multiple-choice test with options in the L2. In other words, the L2 gloss groups were given an advantage by administering this test format, as they had been exposed to the meanings of target words via the L2 glosses during the reading task.

To sum up, previous studies examining the effects of L1 and L2 glossing have not produced consistent findings and have not clearly determined the superiority of either type of glossing over the other in terms of learners' L2 vocabulary gains. However, these studies seem to suggest that 1) both L2 and L1 glossing, if carefully developed, could have a positive effect on vocabulary learning and 2) learners' vocabulary acquisition through L1 and L2 glossing may need to be measured as a function of their L2 proficiency. The next section will deal with studies involving bilingual and monolingual

dictionaries, another important area of literature which can provide a theoretical framework against which we can further explore the issue of L1 versus L2 input.

2.4.3.4 Vocabulary Acquisition through Reading: Dictionary Studies

Research studies in the fields of lexicography and SLA have investigated learners' preferences for, and the effectiveness of bilingual and monolingual dictionaries. This line of research shares some features with L1 and L2 glossing studies in that the relative effects of written L1 and L2 input on vocabulary learning have been examined.

As for learners' preferences, Baxter (1980) found that a majority of Japanese EFL students at the university level used bilingual English-Japanese dictionaries (97%). This result echoed a finding reported by Schmitt (1997), in which a bilingual dictionary was found to be the most frequently used vocabulary strategy of Japanese EFL learners. The questionnaire data in Ma's study (2009) also showed that Chinese university students generally consulted a bilingual dictionary over a monolingual dictionary when encountering unknown words, implying their preference for L1-based meanings.

Regarding the possible reasons behind this overwhelming preference for bilingual dictionaries, in particular among learners with a low level of L2 proficiency, researchers point to the higher comprehensibility of bilingual dictionaries (Nation, 2001) and the psychological needs of L2 learners (Laufer and Kimmel, 1997). These points were also voiced by L2 learners themselves (Wingate, 2002); Hong Kong Chinese learners of German felt that monolingual dictionaries were too difficult to use, and that words contained in the definitions were beyond their understanding on some occasions. In response to learners' preference for bilingual dictionaries, Baxter (1980) pointed to a shortcoming of bilingual dictionaries — that they predominantly provide literal translations, which would retard the development of one's paraphrasing skills. He further

promoted the benefits of using monolingual dictionaries, saying that they enhance the development of fluency by encouraging more "conversational definition" of L2 words. On similar grounds, Béjoint and Moulin (1987) contended that monolingual dictionaries may be of particular benefit to L2 learners in "introducing the user right into the lexical system of the L2" (p. 104), which is in some sense contradictory to the predictions of the Revised Hierarchical Model by Kroll and Steward (1994).

On the other hand, Thompson (1987) argued in support of bilingual dictionaries by pointing to a practical problem involved in using monolingual dictionaries on the part of L2 learners, which concerns the concept of "circularity." That is, learners frequently face situations in which L2 definitions of unknown words contain other unfamiliar words, which may require another search. Let us consider a situation wherein a beginner English learner looks up the word *stomach* in an English dictionary (i.e. a monolingual dictionary), and the definition reads, "the organ inside the body where food goes when you swallow it." In this case, it is possible that the words *organ* and *swallow* might be unknown to this learner, which leads to another search in the dictionary. Laufer and Shmueli (1997) presumed that this characteristic of L2 explanation could divert learners' attention from the L2 word at hand, and thus reduce the possibility of further learning.

While bilingual dictionaries seem to be the preferred option for most L2 learners, despite the criticism levelled against them, the issue of effectiveness is the other side of this coin. It is concerned with the relative effectiveness of bilingual and monolingual dictionaries for learners' comprehension, acquisition, and production of target words, rather than learners' willingness to use them. This issue may be of more theoretical interest to L2 vocabulary researchers than learners' preference for dictionary type, as it is concerned with the relative effects of different types of input (L1 and L2 here) on vocabulary acquisition.

Luppescu and Day (1993) and Knight (1994) provided support for a positive effect of bilingual dictionary entries on the vocabulary learning of university L2 learners. The results of their study showed that the participants who had access to bilingual dictionaries achieved higher test scores than another group without access to this resource. More interestingly, Knight found a further merit of dictionary access for a low verbal ability group, who were able to demonstrate almost the same amount of vocabulary retention as a high verbal ability group with access to bilingual dictionaries. However, Luppescu and Day also found that dictionary use could slow down reading speed to a great extent, suggesting a trade-off between benefit (vocabulary learning) and cost (time) in reading activities with dictionaries.

Laufer and Hadar (1997) compared the effectiveness of three different types of dictionary on EFL learners' comprehension of new English words and production of original sentences including these words. The dictionaries they compared were 1) monolingual, 2) bilingual, and 3) bilingualised, which is "a combination of a learner's monolingual dictionary with a translation of the entry" (p. 190). In their study, 123 Israeli learners of English as a foreign language were provided with 15 unknown words with three different types of dictionary entry randomly attached to each word, and subsequently the participants took comprehension and production vocabulary tests. Overall, the results indicated that the use of bilingualised dictionaries yielded higher scores on both comprehension and production tests than monolingual and bilingual dictionaries did. However, it was also revealed that unskilled dictionary learners benefited most from the bilingual dictionaries, whereas the other groups did to a lesser extent.

Regarding intentional vocabulary learning for secondary level ESL learners in Malaysia, Ramachandran and Rahim (2004) found that a group receiving definitions of

L2 lexical items extracted from a bilingual dictionary (i.e. L1-based meaning) demonstrated higher recall and retention in terms of vocabulary learning than a group which received L2-based meanings. The result of their study adds further weight to the effectiveness of L1-based meanings in that the latter group (i.e. the group receiving L2-based meanings) was even aided with "real stimulus" for comprehension of some of the target vocabulary.

Lastly, Kim (2009) compared the relative effects of monolingual (English-English) and bilingual (English-Korean) dictionaries on the vocabulary comprehension of Korean EFL learners at the university level during a reading activity. The participants were divided into four proficiency levels according to their reading comprehension scores and assigned to either a monolingual or bilingual dictionary group. The results showed that less proficient learners benefited more from bilingual dictionaries than from monolingual dictionaries in terms of their vocabulary comprehension, whereas the reverse pattern was observed for more proficient learners. However, the study was done on a small scale, with only one intervention session and with no retention test.

In view of the dictionary studies reviewed above, it appears that learners by and large prefer bilingual dictionary entries for accessing the meaning of L2 vocabulary regardless of their proficiency or age, whereas the findings regarding the relative effects of monolingual and bilingual entries on their vocabulary learning are less clear-cut. Based on the empirical findings so far, it appears that bilingual (L1) entries for L2 vocabulary generally seem to bring positive learning outcomes in terms of vocabulary acquisition and that less proficient learners would benefit more from bilingual entries than from monolingual entries. However, much research still needs to be done in order to further advance our understanding regarding dictionary effectiveness for different proficiency levels or age groups of L2 learners, in particular the effect of monolingual

entries, compared to that of bilingual entries.

Having discussed the relative effects of varying kinds of written input on incidental and intentional vocabulary learning, we will now shift our attention to the oral context – teachers' explanation of L2 vocabulary, remembering that this type of vocabulary acquisition is contextualized in the present study.

2.4.4 L2 Vocabulary Acquisition through Teachers' Oral Input

In this section, we will explore two notions central to an understanding of the nature of teachers' vocabulary instruction through oral input, which is the focus of the present study; "Lexical Focus on Form" and "Teacher as Dictionary". The discussions of these notions will feed into readers' understanding of the type of vocabulary acquisition contextualized in the present study. We begin this section by looking at the cause and consequence of lexically oriented interaction between teachers and learners.

2.4.4.1 Lexically Oriented Interaction and Focus on Form

As mentioned in 2.4.2.2, a considerable amount of meaning negotiation in the interaction between the teacher and learners is triggered by unknown L2 lexical items. In the context of communicatively oriented classrooms, it is likely that these lexical items are drawn from oral or written texts, which are designed for the purpose of meaning-focused or comprehension-based tasks. Consequently, these lexical items serve a dual purpose, as lexical components of the texts and as target language items to be taught. It follows then that, when these lexical items trigger communication breakdown or comprehension problems on the part of learners, L2 teachers' attempts to teach these items may benefit learners on two levels; on one level, they will help learners to grasp the general meaning of the text, which was not comprehended up to that point due to such lexical items. On

another level, they will overtly draw learners' attention to those particular lexical items, and promote such items to be further processed as intake.

Teachers' attempts in this light can be construed as "Focus on Form," which refers to "an occasional shift of attention to linguistic code features – by the teacher and/or one or more students – triggered by perceived problems with comprehension or production" during "meaning-focused classroom lesson" (Long and Robinson, 1998, p. 23). Initially, the term "Focus on Form" (FonF, henceforth) had been largely associated with the teaching of grammatical structures (Spada, 1997), and limited to the status of an incidental type, which arises in response to learners' lack of comprehension (Long, 1991).

However, FonF has recently gained considerable attention from L2 vocabulary researchers (Laufer and Girsai, 2008; Laufer, 2005; Haastrup and Henriksen, 2001) who point to the need for the implementation of the notion "FonF" in the realm of L2 vocabulary teaching – thus lexical FonF. The rationale behind such lexical FonF would be to effectively integrate intentional vocabulary teaching into meaning-focused activities, thus achieving the dual aims of meaning comprehension and the acquisition of lexical items within the same activity. In addition, the notion of FonF has been further expanded as a type of L2 instruction involving "pedagogical events which occur within meaning based approaches to L2 instruction but in which a focus on language is provided in either spontaneous or predetermined ways" (Spada, 1997, p. 73). Having said that, lexical FonF may be the consequence of 1) teachers' sensitivity to the lexical difficulty of a target text or discourse (McNeil, 2005), 2) teachers' intention to teach a set of target words embedded in meaning-focused lessons (Ellis, 2001), or 3) unexpected communication breakdown (due to lexical items) between the teacher and learners.

One caution should be exercised in understanding the notion of lexical Focus on *Form*. That is, technically, "form" here refers to more than just "formal properties of

words" such as orthography or phonology. Rather, it also involves "considerations of meaning" (Ellis, Basturkmen and Loewen, 2002, p. 419) and form and meaning connections of a word and so on; thus, the "form" may refer to various aspects of a lexical item. Following this idea, it would be the teacher's job to locate a problematic lexical item from a discourse or text, teach the meaning and form aspects of that item, and then make the target lexical item meaningful to learners by further contextualizing it within a meaningful discourse or text.

Having discussed the notion of the FonF, one might wonder what consequences teachers' lexical FonF in the middle of meaning-focused activities would bring about, in terms of learners' cognitive status? It can be postulated that the vocabulary acquisition of learners in comprehension-based or communicative activities would be incidental, as the focal attention on the part of learners is supposed to be, in theory, directed towards an understanding of the general meaning of a given text or discourse. However, it is reasonable to believe that teachers' lexical FonF could possibly change the nature of this vocabulary learning by shifting learners' attention from the meaning-focused task at hand to the relevant lexical items, thus shifting from incidental to intentional. Of course, this is beyond the control of the researcher or the teachers. Similarly, Ellis (2001) states that we have to keep in mind that "classroom learners may or may not respond in the way intended [in teachers' FonF instruction]" (p. 26). Nevertheless, we can assume that FonF instruction is likely to entail some degree of intentional learning on the part of learners, provided that teachers' FonF instruction effectively situates learners in the intentional learning condition and predisposes them to attend to target lexical items.

In addition to changing the nature of learning, teachers' FonF is also likely to reduce learners' cognitive burden by connecting the form and meaning of a target lexical item. That is, unlike the incidental learning condition wherein learners have to make

sense of unknown vocabulary on their own by tapping into surrounding contextual information, teachers' FonF provides information about form-meaning relationships of unknown lexical items. Given the limited attention resources at learners' disposal (Barcroft, 2002; VanPatten, 1990), it is likely that such effort to link form and meaning will allow more cognitive resources to be used on the part of learners to process and retain lexical items.

The effect of lexical Focus on Form was demonstrated by Alcón (2007) who undertook a study exploring the relationships among Focus on Form in the aural modality, the amount of noticing self-measured by students and their vocabulary learning. In her study, Alcón recorded classroom sessions using communicative activities and created vocabulary tests based on the lexical items which the students reported they had learnt in their diaries. She further distinguished between reactive Focus on Form Instruction (FFI) which occurs as a result of communication problems that occur during the negotiation of meaning and pre-emptive FFI, which "consists of attempts by the students or the teacher to make a particular form the topic of the conversation even though no error (or perceived error) in the use of that form has occurred" (Ellis et al., 2002, p. 427). The results showed that a great amount of FFI in her classroom was lexically-oriented, about 66.9%. Furthermore, she found a positive relationship between pre-emptive FFI, amount of noticing and subsequent vocabulary learning. On the other hand, there was a low correlation between reactive FFI and amount of noticing but a high correlation between reactive FFI and vocabulary learning, which implies that FFI could be effective regardless of the amount of noticing. For this result, she concluded that "teacher reactive FFEs [focus on form episodes] do not seem to raise explicit learning, as measured by learners' reporting of vocabulary items, but a positive effect is observed on vocabulary learning" (p. 56).

Through the implementation of experimental design and a listening comprehension task, Tian (2009) further demonstrated the superiority of teachers' lexical FonF over the lack thereof (i.e. incidental vocabulary learning) in terms of vocabulary retention. Thus, unlike Alcón (2007) which was largely descriptive, Tian's study provided strong evidence that teachers' lexical FonF is indeed worthwhile, consequently adding itself to a group of studies observing the positive effects of intentional learning and the FonF lexical approach (Laufer, 2009).

2.4.4.2 Teacher as Dictionary and Dictionary Designer

As seen in the previous section, an important role of the L2 teacher in meaning-focused tasks is to draw learners' attention to target lexical items which impede learners' focus on communicating meaning and consequently to facilitate their comprehension of a target discourse or text. This lexical explanation is also likely to be conducive to learners' vocabulary gains by increasing the likelihood of learners' focal attention being on the lexical items, provided that it is comprehensible to learners. Given this characteristic of the L2 teacher, Macaro et al. (2009) describes the L2 teacher as a "dictionary and dictionary designer" who can give both planned (pre-determined) and unplanned explanations of unknown L2 lexical items.

Compared to written dictionaries, the strengths of the L2 teacher as a dictionary and dictionary designer are numerous. To begin with, the L2 teacher has multiple options when explaining L2 vocabulary such as "definition, paraphrase, circumlocution, exposition, contextualization, synonym/antonym, and hierarchical exemplification" (Macaro et al., 2009, p. 131). In addition, the explanation of L2 vocabulary can accommodate learners' level of L2 proficiency, by virtue of the teacher's knowledge of his or her learners. The process of learning vocabulary can also be interactive rather than

unidirectional, as the teacher can attend to the depth of understanding of the target vocabulary on the part of learners, and subsequently cater to their needs for further explanation. Thus, we can speculate that the teacher's explanation of target vocabulary is likely to produce a higher amount of vocabulary acquisition than written dictionaries.

An important aspect of the "teacher as dictionary and dictionary designer" is the further distinction between monolingual and bilingual teachers. That is, a monolingual teacher of the L2, usually a native speaker teacher, will be able to provide L2 explanations when he or she attempts to deliver the meaning of L2 vocabulary. On the other hand, a bilingual teacher will be able to opt for L2- or L1-based explanations (or both) in such a situation by virtue of his or her knowledge of the two languages (i.e. the L1 and L2). In other words, a bilingual teacher has considerably more options for teaching L2 vocabulary than his or her monolingual counterpart. At the same time, this model includes the premise that, in order for a bilingual teacher to provide effective teaching, and consequently to become a good "dictionary and dictionary designer," he or she should have a high enough level of competence in both languages, which is indeed a challenging task for many non-native speaker teachers of the L2.

This overview of the teacher as "dictionary and dictionary designer" raises several pedagogical questions; given that bilingual teachers are at an advantage in teaching L2 vocabulary by virtue of their knowledge of two languages, are their explanations more effective than those of monolingual teachers in terms of learners' vocabulary acquisition? Are there any differential effects of bilingual and monolingual teachers' explanations of L2 vocabulary on different age groups with different L2 proficiencies? Lastly, do L2 learners prefer bilingual teachers' vocabulary explanations to monolingual teachers' L2-only explanations, as in the case of written dictionaries?

2.5 Adult and Young Second Language Learners

As mentioned in the Introduction chapter, the present study involves adult and young L2 learners, based on the assumption that the effect of teachers' code-switching (CS) might be differential for these two age groups. In order to explain the theoretical grounds for this assumption, the present section will consider SLA literature related to the age factor, focusing on the differences between adult and young L2 learners. Before going further, a brief description of the two age groups involved in the present study seems necessary to give readers a glimpse of some characteristics of the adult and young learners (19- and 12-year-olds, respectively) concerned here, although this information will be given in greater detail in the Methodology chapter.

The adult and young learners involved in the present study, respectively representing two different cohorts of freshmen at the undergraduate level and students in the final grade of the primary level, are Korean heritage learners of English as a Foreign Language (EFL), from the same cultural background and regions. In view of their ages, they are more like "young adults" and "early adolescent learners" to be more precise, although they are respectively called adult and young learners throughout this thesis for the sake of simplicity. The term "young learners" is drawn from McKay (2006), whose definition of young language learners is "those who are learning a foreign or second language and who are doing so during the first six or seven years of formal schooling…between the ages of approximately five and twelve" (p.1). In addition, it seems that twelve (or eleven) is a "reoccurring cutoff point" for dividing early learners and others in SLA literature related to age issues (Abrahamsson and Hyltenstam, 2008, p. 504).

These two groups are not subject to early childhood bilingualism (i.e. learning two languages simultaneously from birth or slightly later), but rather they have already

acquired their L1 language system (i.e. Korean) fully ahead of the time of their initial contact with English; thus, they are more like “sequential bilinguals” (Lightbown and Spada, 1999, p. 3). Allegedly, their L2 learning (especially that of the adult learners) is often described as more effortful, conscious, yet less fruitful than that of early childhood bilingual learners (Myers-Scotton, 2006).

In view of the characteristics of the participants involved in the present study, some difficulties arise in terms of extracting and reviewing the existing SLA literature related to the age factor. That is, a considerable amount of previous work on the age factor in SLA literature is of a limited relevance to the context and participants of the present study. As an example, the most widely cited studies in this line of research have been, with few exceptions, of second language contexts (e.g. Flege, Yeni-Komshian and Liu, 1999; Johnson and Newport, 1989; Patkowski, 1980), rather than foreign language instructional environments like the present study. The findings from these studies, albeit informative and enlightening in their own right, appear to have limited bearing on the present study.

Considering this point, instead of presenting a lengthy discussion of the body of research related to the age factor in second language contexts, this section will focus on the differences between the two age groups that interest us in terms of learner-attributes. The section will then continue to discuss the potential effects of L2-only instruction (or use of the L1) on their respective L2 learning.

2.5.1 Differences between Adult and Young Learners

It should be noted again that the adult and young learners involved in the present study are from the same cultural and language backgrounds. On the other hand, the adult cohort is biologically 7 years older, has received approximately 5.5 more years of

English learning, and is at a higher level of schooling (and consequently has more learning experience) than the young cohort. Consequently, we can assume that the adult cohort displays higher proficiency levels of both Korean and English than its younger counterpart. These points should be remembered throughout the upcoming discussion of the differences between adult and young learners.

2.5.1.1 Differences in Learning Expertise and Use of Learning Strategies

One of the consequences of language learning experience through years of schooling would be "expertise" in learning (Johnson, 2005), although amount of experience and expertise might not necessarily be of high correlation for some learners. Learners' expertise can be manifested on many levels so far as L2 learning is concerned (Rubin, 2005), with one of the most important features being the development of an ability to deploy various learning strategies such as cognitive and metacognitive strategies[1]. That is, expert learners, presumably with higher proficiency and maturity, differ from novice ones in that they deploy a variety of learning strategies effectively in the face of a given task. On a similar note, McKay (2006) also points out that, as young learners become more advanced in foreign language classrooms, they demonstrate a higher use of language learner strategies. A large-scale longitudinal study by Tragant and Victori (2006) with Spanish EFL learners confirms McKay's point by finding that, for a considerable number of learners, there are some positive associations between age and development in their reported strategy use (in terms of both the number and nature).

Apart from Tragant and Victori's work, there have been other studies that support the argument that "more proficient students deploy more sophisticated or complex combinations of strategies" (Macaro, 2010, p. 290). As an example, Schmitt (1997) found that, as Japanese EFL learners become more mature and proficient in

English, they tend to shift in terms of the use of vocabulary learning strategies from more simple ones such as “written repetition” and “studying spelling of word” to ones requiring deeper cognitive processing such as “guess from textual context” and “connect word to personal experience” (p. 223). Thus, their increase in proficiency leads to the use of more sophisticated strategies. On the other hand, it was further found that metacognitive strategies were used proportionately more by more proficient learners than less proficient ones (Magogwe and Oliver, 2007; O'Malley et al., 1985). It is noteworthy that the components of metacogntive strategies such as planning, monitoring, and evaluating during task performance are essential to the model of the expert language learner (Rubin, 2005). Lastly, Kern (1994) and O’Malley and Chamot (1990) reported that less proficient learners made use of “translation” as a learning strategy in L2 learning proportionately more than high proficiency learners, implying that more proficient learners could draw on other learning strategies in tackling L2 learning, without relying on their L1.

That being said, older learners are likely to have a wider range of strategic options at their disposal than younger learners. This assumption gives two somewhat different predictions regarding the effectiveness of L2-only instruction and teachers’ L1 use for adult and young learners; on the one hand, adult learners may benefit to a greater degree from teachers’ L1 use than young learners in that they are more analytical and strategic learners who could draw on their L1 knowledge as a strategic resource in L2 learning. On the other hand, strategic knowledge could also involve one’s ability to “infer the meaning encoded in L2-only instruction,” implying that English-only instruction would be more beneficial for adult learners than young learners who might not yet have developed a sufficient degree of this strategic skill.

2.5.1.2 Effects of Language Proficiency

One of the notable differences between the two age groups in the present study lies in the fact that the adults are undergraduate learners who have taken the national university entrance exams, whereas the young learners are ones in the primary education system. This fact further points to two important distinctions between the two age groups: first, the adult learners are the ones who have demonstrated their academic proficiency, as their status as undergraduate learners confirms. Second, it is likely that they have higher levels of L1 and L2 proficiency than the young learners through more years of compulsory education. In view of these characteristics of the two age groups, this section will discuss the potential effects of language proficiency on L2 learning, by tapping into the work of Jim Cummins (1980a, 1980b). Although the original application context of Cummins' work – immersion and bilingual programs – is distinct from that of this thesis, the underpinnings of his ideas are applicable to EFL settings, and have some implications for SLA issues related to age and the language of instruction.

In studying the effects of bilingual education and its relationships with learners' language proficiency, Cummins (1980b) puts forward the Interdependence Hypothesis, which makes predictions regarding the development of one's L2 proficiency as a function of one's L1 proficiency. In the Interdependence Hypothesis, Cummins further distinguishes between two types of language proficiency – basic interpersonal communicative skills (BICS) and cognitive/academic language proficiency (CALP). According to him, BICS describe one's everyday conversational skills, including the knowledge of vocabulary, syntax, and pronunciation; BICS, thus, are generally universal among native speakers, although individual differences may exist in some of the linguistic aspects. On the other hand, CALP is more related to literacy skills or problem solving skills in academic situations, sharing some common threads with both "overall

language proficiency" and "cognitive and memory skills."

Cummins (1980a, 1980b) suggests that BICS, the surface manifestations of a language, are independent across languages, with each language having its own features of syntax, vocabulary and phonology. On the other hand, CALP is interdependent and transferable across languages. It follows then that "previous learning of literacy-related functions of language (in L1) will predict future learning of these functions (in L2)" (1980a, p. 179). The idea of the Interdependence Hypothesis is illustrated in Figure 2.4.

In this Figure, BICS and CALP are represented as parts of icebergs, with the above surface part (each iceberg) indicating the BICS of each language and the below part referring to the CALP. Having seen the basic components of the Interdependence Hypothesis, what predictions does it make in terms of the development of L2 proficiency, in particular when age and proficiency are concerned?

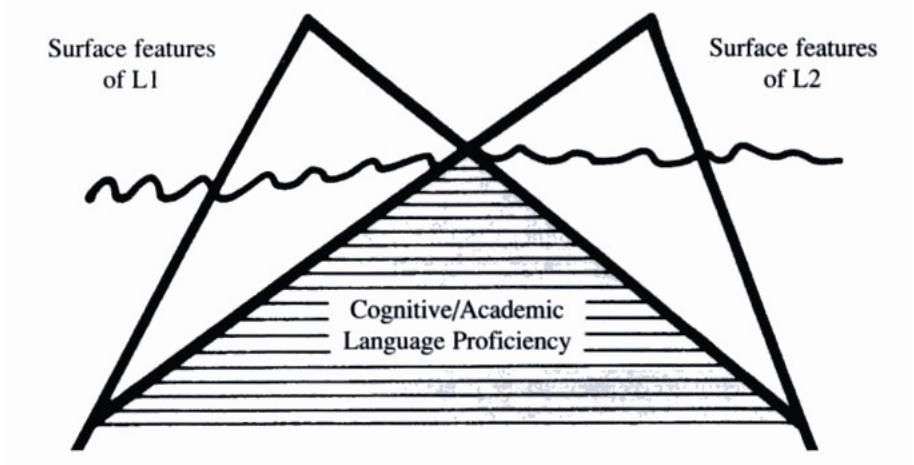


Figure 2.4 The "iceberg" representation of bilingual proficiency (Cummins, 1980b)

One of the important implications from this hypothesis is that "older L2 learners, whose L1 CALP is better developed, manifest L2 cognitive/academic proficiency more rapidly than younger learners because it already exists in the L1 and is therefore

available for use in the new context" (Cummins, 1980a, p. 184). In other words, older L2 learners with higher L1 CALP are fairly at a fair advantage in developing L2 CALP, because this domain is interdependent across languages. It should be noted that this proposition indeed fits in well with some research findings from age factor literature that older learners surpass their younger counterparts in L2 learning in initial learning stages (Cook, 2008).

A more relevant discussion to the present study in light of Cummins' work is the effect of language instruction on the development of L2 proficiency. That is, given the differences in terms of L1 CALP (as well as L2 BICS) between older and younger learners, what is the effect of L2-only instruction on their respective L2 learning? Cummins (1979) indirectly answers this question, arguing that, unless children' L1 skills have been well developed, "intensive exposure to L2 in the initial grades is likely to impede the continued development of L1. This will, in turn, exert a limiting effect on the development of L2" (p. 233). Thus, he believed that L2 proficiency is largely contingent on the development of L1 proficiency, and that too much L2 input would not necessarily lead to the best learning outcome for young learners with limited L1 proficiency.

On the other hand, building on the ideas of Cummins, Skinner (1985) contends that transfer of knowledge from the L1 to the L2 (in the CALP sense) may "result from the immediate connection of 'L1 thought' with L2 words" (p. 381). He continues by arguing that L2-only instruction would be likely to impede, rather than accelerate these connections, "and thereby it slows acquisition of meaning in L2" (p. 383). While Skinner generally supports the idea of some degree of the L1 over L2-only instruction throughout his writing, he further suggests that whether L2 instruction would be effective in connecting L1 thought with L2 words may be dependent on one's L2 comprehension level. Then, one may wonder whether young learners with limited L2 BICS make

successful transfers of knowledge from the L1 to the L2 in the face of L2-only instruction. Indeed, it was found in a previous study (Kim, 2002) that elementary school teachers of English in Korea identified pupils' "limited comprehension skills" in English as one of the hindrances to undertaking English-only instruction.

In brief, Cummins' work advances the idea that the development of CALP, the type of language instruction, and educational progress are all interconnected in a complex manner. While many pedagogical implications could be drawn in light of his Interdependence Hypothesis, the most relevant one to the present study is, as mentioned above, the effect of L2-only instruction for different age cohorts with different L1 and L2 proficiencies. From the above discussion, it seems that L2-only instruction might not be a very appropriate type of instruction for beginner levels of young learners. Then, the prediction regarding the effect of L2-only instruction for two age groups based on Cummins' work is similar to that made in view of bilingual mental lexicon (section 2.4.1.1), which points to the less positive effects of L2-only instruction for young learners.

2.5.1.3 Attitudes towards Instruction

Discussions up to this point have been concerned with differences between older and younger learners in terms of their learning experience and language proficiency. While these differences between age groups have been recognized and further studied in their own right (although not in light of their implications for teachers' language use), little attention has been paid to learners' attitudes towards or beliefs about L2 teachers' language use. Although the issue has not garnered much awareness from researchers, the importance of this issue is well summarized in Chavez's words (2003), "Learners' beliefs are central in communicative, learner-centered approaches…[because learners' views

therein] determine how students perceive, interpret, and react to their teachers' actions" (p. 164). The main questions here are; what are L2 learners' attitudes towards L2-only instruction or teacher code-switching (CS); what pedagogical value do they see in each language code as delivered via teachers' instruction; and how would their attitudes towards L2-only instruction or CS affect their L2 learning?

In one of the seminal works on this issue, Macaro (1997) presented interview data with English pupils at the secondary level, focusing on their beliefs about instruction in the L2. In this study, it was found that the cohort of pupils was generally divided into two groups; a minority group consisting of the most high-achieving learners who could tolerate large quantities of L2 use on the part of their teachers and another group which showed unease with this type of instruction. The latter group's negative reaction to this instruction was related to their insecurity about not being able to understand their teachers' L2 explanations (e.g. word meanings) and of consequently being disadvantaged in subsequent parts of lessons. However, both groups concurred with the need for L1 input for administrative information (e.g. instructions for tests).

On the other hand, Chavez (2003) administered a participant questionnaire to three different years of university-level L2 learners, examining their preferences for language codes across a variety of pedagogical functions. Some of the major findings from the study were as follows: 1) an increasing preference for the L2 with the increase of the students' L2 proficiency, 2) the students saw the value of teachers' L2 for performing mechanical practice (e.g. conducting grammar and vocabulary practice) or routines (e.g. greeting students), and 3) the students viewed teachers' L1 use as appropriate for "genuine communicative purposes" such as explaining the syllabus of the course, communication with learners in office hours and so on. Thus, Chavez concluded that the students in her study "viewed their speech community, the classroom, as

diglossic," (p. 193), indicating that the classroom participants associated certain functions with each code in agreement, not randomly.

Rolin-Ianziti and Varshney (2008) more directly addressed learners' attitudes towards teachers' L1 use in L2 classrooms, with university-level learners of French in a beginner course. It is noteworthy that the research context of the study was under the provision of the "maximal L2" position (Macaro, 2001), wherein the exclusive use of the target language is strongly recommended by the university. If learners still prefer to have teacher CS in such an environment, it could be suggested that the L2-only language policy would not be able to predispose learners towards maximal L2 environments. The results of the participant questionnaire showed that the majority of the learners saw the L1 as appropriate when teachers explained linguistic features (e.g. gaining access to the meaning of L2 vocabulary), whereas the learners preferred the L2 for instructions related to activities and homework. Rolin-Ianziti and Varshney speculated that learners' preference for the L2 for these message-oriented functions could be attributed to "the influence of teacher classroom practices [using the L2 for classroom management purposes] on learner preferences" in their study (p. 268); therefore, they implied that contextual factors (e.g. strong recommendation of target language use by the university) might have affected learners' attitudes towards teachers' language use. Still, most learners in their study recognized the value of the L1 in L2 classrooms, and consequently were not in favour of L2-only instruction.

In the Korean context, Oh (2006) administered a survey on the issues of English learning and immersion programs to both parents and Korean EFL learners at the primary level. Although the major focus of the study was not teacher CS, some of the findings deserve some attention here, in relation to English-only instruction and different types of teachers. As for the comprehensibility of English-only instruction, learners'

responses were almost dichotomously distributed to “it is difficult to understand, so it is not attractive/it is very difficult to understand” and “I can grasp most of it, so it is attractive /although I don’t grasp some of it, it is attractive.” Thus, the result of this item pointed to some divergence as individual differences among learners at this level. On the other hand, contrary to the prevailing assumption that primary students greatly prefer native speaker teachers to Korean bilingual teachers, the students in the study by and large showed positive attitudes towards Korean teachers or did not show any clear preference towards either type of teacher. The only tentative conclusion here would be that L2 learners can be generally distinguished as being those who are against maximal L2 instruction and prefer to have some degree of the L1 and others who are willing to take advantage of such instruction. Future studies with more diverse research instruments (e.g. stimulated recall, classroom observation) are necessary to advance our understanding of the nature of learners’ attitudes towards teacher CS and L2 instruction.

However, what emerges from these studies is that “individual learner differences,” rather than teaching methodology, appear to be the determinant of learners’ attitudes towards teachers’ language use (Macaro, 1997), as demonstrated by the wide range of learners’ responses towards the questionnaire items related to this issue from the aforementioned studies. If contextual factors such as language policy or teaching methods are to be strong determinants of learners’ attitudes towards teachers’ language use, such a wide range of responses should not be borne out within the same dataset.

An important point to be considered in light of these studies here, however, is not this summary of research findings, but rather a discussion of whether the effects of learners’ attitudes towards CS or L2-only instruction are likely to have some impact on their language learning. That is, it can be postulated that the mismatch between learners’ preference for a certain type of instruction and the actual type of instruction they receive

may negatively affect their L2 learning. For example, for an English learner whose English proficiency is low and is flustered by English-only instruction, taking English lessons with this type of instruction would presumably yield a less successful learning outcome than taking the same lessons with the other type of instruction he or she favours (e.g. instruction with CS).

Lastly, in view of the research agenda of the present study, one might wonder whether "age" as a group difference is an important factor that determines attitudes towards teacher CS and L2 use. While it is probable that learners gradually adapt themselves to L2 instruction with their increase in proficiency as well as age (Chavez, 2003), this hypothesis needs to be empirically verified by future studies. If there are (age) group differences in terms of their attitudes towards teachers' language use, this information may need to be taken into consideration for pedagogical decisions regarding L2-only instruction or CS.

2.5.2 The Effect of English-only Instruction and Code-switching for the Two Age Groups

In the previous section, several differences between adult and young L2 learners were discussed, tapping into SLA literature on age factors and other relevant bodies of research. This section will now make some predictions regarding the effects of English-only instruction and teacher CS on the English learning of two age groups in light of the discussions in the previous section. Table 2.1 summarizes the different learner-attributes between the two age groups and their implications for the effects of English-only instruction and CS.

Table 2.1 Differences between two age groups and predictions regarding the effects of English-only instruction and teacher code-switching

Domains /Aspects	Differences between older and younger learners	Predictions regarding the effects of English-only instruction and code-switching
Status of Mental Lexicon (section 2.4.1.1)	L2 lexicon system is more developed for adult learners. Comprehension of, and access to L2 words are more efficient for adult learners (the Revised Hierarchical Model).	Young learners are likely to benefit more from teacher CS in accessing and learning L2 words than adult learners.
Learning Expertise and Use of Learning Strategies	Given that proficiency, learning experience, and years of schooling are correlated to some extent, adult learners are likely to have more expertise in learning the target language and deploy a more sophisticated and complex set of strategies.	Adult learners are more likely to benefit from teacher CS than younger learners, as they are more expert learners who can strategically draw on the L1 in L2 learning. At the same time, adult learners may benefit to a greater degree from L2-only instruction than young ones in that they may have developed a skill to infer the meaning encoded in L2-only instruction.
L1 and L2 Proficiency	Adult learners are by and large more proficient than young learners in terms of their L1 and L2 proficiency. Cognitive/academic language proficiency, which is allegedly interdependent across languages, is also more developed for adults.	Young learners are likely to benefit more from teacher CS than adult learners in view of Cummins' Interdependence Hypothesis. Adult learners, however, may also benefit from teacher CS for their L2 learning.
Attitudes towards Teachers' Language Use	There is not enough empirical evidence to propose any noticeable differences between adult and young learners. Individual learner differences seem to be strong determinants of learners' attitudes towards teachers' language use. Individual Korean young learners of English appear to vary in terms of their attitudes towards English-only instruction.	Learners' attitudes towards CS or L2-only instruction are likely to have some impact on their language learning. It should be expected that the mismatch between learners' preference for a certain type of instruction and the actual type of instruction they receive may negatively affect their L2 learning.

As can be shown in Table 2.1, different domains/aspects of L2 learning make somewhat inconsistent predictions regarding the effectiveness of L2-only instruction and teacher CS for adult and young learners. On the one hand, the revised hierarchal model (Kroll and Stewart, 1994) and the Interdependence Hypothesis (Cummins, 1980b) point

to the limited L2 proficiency of young learners, and thus support the idea of teachers' CS use to promote their learning. On the other hand, in light of the literature related to learning expertise, it remains unclear as to which age group would benefit more from L2-only instruction or teacher CS. In addition, the remaining area – learners' attitudes towards teachers' language use – does not enable us to make any prediction regarding the effect of teacher CS on the two age groups, mainly because this area has not spawned fruitful empirical research yet. The investigation of this area is expected to advance our understanding of the effect of teacher CS as well as the age factor in L2 learning.

In brief, whether adult learners would benefit from teacher CS (or L2-only instruction) to a greater extent than younger learners remains unanswered from the literature discussed above, thus calling for empirical research addressing this issue more directly. It is noteworthy, in passing, that apart from Cummins, most of the researchers in this line of research have rarely made connections between their research topics (i.e. age factor in SLA) and the effects of teachers' L1 use on L2 learning. In view of the fact that FL settings (EFL in the case of the present study) are bound to involve two types of instructional environments (i.e. English-only by native speaker teachers and code-switching by non-native speaker teachers) for both adult and young learners, it is of prime importance to address the issue of the differential effects of teacher CS on L2 learning in order to provide the most learning-conducive environments for different age groups.

2.6 Summary

The present chapter first reviewed selected pieces of existing naturalistic CS literature, with an introduction to different types of CS and the structural approach to CS as well as a discussion of its implications for classroom CS. Subsequently, the chapter delivered

theoretical arguments of the positions both for and against the idea of teachers' L1 use in L2 classrooms, drawing on the interactionist research tradition, as well as socio-cultural, psycholinguistics, and sociolinguistics literature. The examination of these theoretical arguments was followed by a review of empirical classroom studies, which deal with the amount of teachers' L1 use in L2 classrooms and the pedagogical functions that teacher CS fulfils. It then went on to review previous studies which examined the effects of teacher CS in detail, discussing their implications for the present thesis and its methodological limitations.

Next, the chapter turned its attention to L2 vocabulary studies – the target language area of the study – and discussed the implications of the existing L2 vocabulary literature for the issue of the present thesis. In doing so, it first introduced two psycholinguistics models, respectively dealing with bilingual lexical processing and L2 vocabulary acquisition, and discussed their implications for teachers' L1 use in L2 vocabulary teaching. Then it discussed several factors related to L2 vocabulary learning, and reviewed empirical vocabulary studies situated in the incidental-intentional learning framework. Lastly, it explored two notions – "lexical Focus on Form" and "teacher as dictionary and dictionary designer" – which are central to an understanding of the nature of teachers' vocabulary instruction through oral input, which is the focus of the present study.

Lastly, various areas of SLA literature related to the age/proficiency factor in L2 learning were reviewed, pointing to several potential differences between the adult and young learners involved in the present study. It was mentioned that the two age groups in the present study might differ from each other in terms of their learning expertise and strategic options available in learning the L2, their L1/L2 proficiency, and their attitudes towards teacher CS. Then, based on this discussion, several predictions regarding the

effectiveness of L2-only instruction and teacher CS for adult and young learners were made for the purposes of the present study.

In light of the literature review provided in this chapter, the present state of research does not provide satisfactory answers to two major research questions of this thesis; i.e.1) whether teacher CS (or L2-only instruction) is effective for different age groups of learners, and 2) what different age groups' attitudes towards teacher CS are. As for the effectiveness of teacher CS, there has been some ongoing discussion among SLA authors and researchers without much basis in actual research, and without considering age/proficiency factors. Similarly, learners' attitudes towards teacher CS and L2-only instruction have not been dealt with in depth, leaving us largely ignorant of teacher CS issues from learners' perspectives. In view of these research gaps, the aim of this thesis is to find answers to the above questions, and contribute to the proposed model of teacher CS (section 1.2.3). The next chapter will provide a description of research methodology designed to fill these gaps in the field.

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[1] According to O'Malley and Chamot (1990), cognitive strategies, by definition, "operate directly on incoming information, manipulating it in ways that enhance learning" and metacognitive strategies refer to "higher order executive skills that may entail planning for, monitoring, or evaluating the success of a learning activity" (p.44).

Chapter 3 Methodology

3.1 Introduction

The aim of this thesis is to contribute empirical knowledge to a model of teacher Code-switching (CS). To this end, the research consists of two distinct parts: first, a comparison of the effectiveness of teacher CS and English-only (EO) instruction for adult and young EFL learners, and second, an examination of these two age groups' attitudes towards teacher CS and other relevant aspects of English teaching. For the investigation of these areas, complementary research methods were used: a quasi-experimental design, which concerns the effectiveness issue of teacher CS, and a survey/interview part which examines teacher CS from learners' perspectives. In this chapter, the research methodology used for these two parts will be described.

3.2 Research Questions

This section will delineate research questions developed for the aims of the present thesis, the order of which will correspond to that of the presentation of the findings in the following results chapters (Chapter 4 and 5).

The first research question aims to examine the effect of the two instructional types involved in the present study (i.e. teacher CS and EO instruction), which are both form-focused by their nature, *without* distinguishing between the two. This question is phrased as follows:

1. What patterns of progress across three time points (the outset of the study, immediately after instruction, and three weeks from the instructional period) did the two age groups of EFL learners make as a result of systematic Focus on Form (FonF) instruction for target lexical items?

This first research question is indeed a reframing of the question, "what is the effect of *time of assessment* (within-group) on the learners' vocabulary acquisition and retention?" That is, in view of the fact that the present study did not involve a traditional control group, and that every participant was provided either form-focused CS or form-focused EO instruction of vocabulary, the examination of the effect of *time of assessment* was conceptually equivalent to looking at the vocabulary learning of the entire group of participants, without distinguishing the two different instructional types. The meaning of "systematic" in this question will be elaborated in section 3.3.1.

Then, the second and third research questions reflect the central problems of this quasi-experimental study, dealing with the effect of differential instructional types (i.e. teacher CS and EO instruction) on the vocabulary acquisition and retention of the two age groups:

2. What is the effect of different instructional types on the vocabulary acquisition and retention of adult freshmen EFL learners?

3. What is the effect of different instructional types on the vocabulary acquisition and retention of young EFL learners?

Having observed the results of each age group individually, the fourth research question concerns the comparison of the results for the adult and young learners, and thus will be based on the results of the second and third research questions. It is noteworthy that this question does not intend to compare the two age groups in a direct manner. Rather, it should be understood as carrying out *between-group* comparisons not of actual results but by examining if the tendencies emerging from the between-group

comparisons (i.e. which condition results in better learning) are the same or different for the two age groups. The effect size will serve as a primary criterion in this comparison. The fourth research question is therefore framed as follows:

4. Are there any differential effects of instructional type on the vocabulary acquisition and retention between the adult and young learners?

While the principal issues of this research regarding the effectiveness of teachers' CS are reflected in the second, third, and fourth research questions stated above, another research question further aims to examine whether instructional type is still a significant predictor for each age groups' vocabulary learning while holding constant the effect of English proficiency. This question was based on the hypothesis that English proficiency would have some bearing on the learners' vocabulary acquisition and retention in the context of the present study. The research question addressing this issue is phrased as follows:

5. Is instructional type still a significant predictor of vocabulary acquisition and retention, for both age groups, while controlling for the effect of English proficiency?

Then, the sixth research question for the quasi-experimental part of the study examines the relationship between intrinsic word properties (e.g. word class, word length, concreteness of word) and the mean gain for each target word, which is phrased as:

6. Are there relationships between intrinsic word properties and the gains for each

target word? Also, if any intrinsic word property is related to learners' vocabulary gains, does teacher CS bring about more positive outcomes on words that vary in terms of this intrinsic word property than EO instruction (or vice versa)?

While the six research questions above deal with the effects of CS and EO instruction on vocabulary learning and other relevant variables (i.e. the learners' English proficiency and word variables), the last research question is concerned with the two age groups' attitudes towards teacher CS, which will be answered through the implementation of the questionnaire and interviews with the participants. This research question is phrased as follows:

7. What are both age groups' attitudes towards teacher CS in relation to vocabulary learning?

Having reviewed the research questions for the present study, section 3.3 and 3.4 will present research methodologies developed for examining the research questions stated above.

3.3 Methodology for the Investigation of the Effect of Teacher Code-switching

3.3.1 Study Design

As mentioned in the Introduction section of this chapter, the aim of the present study concerns the evaluation of one certain instructional type against another, and thus necessitates an experimental type of research design. In designing the study in an attempt to examine the effect of teacher code-switching (CS), the following two points need to be recognized and taken into consideration:

1) In order to infer a causal relationship between teacher CS and language learning outcomes (e.g. vocabulary in the present study), the effect of CS needs to be *compared* with other types of instruction, as "the logic of making comparisons is fundamental to testing causal models" (De Vaus, 2001, p. 39). In light of the SLA literature related to this issue (see section 2.3.3.3 and 2.3.4.1), English-only (EO) instruction appears to be the best fit for this comparison. It follows then that teacher CS and EO instruction represent the two categories of the independent variable, with a certain language area being the dependent variable.

2) The effects of teacher CS needs to be examined within communicative or meaning-focused parts of lessons (Macaro, 2009), in which the target language (rather than learners' L1) is the primary medium of instruction and learners' intentions are centred on the communication of "meaning" (rather than form). In such environments, teacher CS may serve several pedagogical purposes, with the explanation of L2 vocabulary being one of them (see section 2.3.5.2).

In view of these points, the present study draws on two types of "intact" classes, which for the most part are similar to each other in terms of age, class size, and general English proficiency level, but taught by two different types of English teacher. In one condition, a monolingual teacher uses English exclusively as the medium of instruction (*English-only* condition), and in the other condition, an English-Korean bilingual teacher uses English for the most part and typically switches to Korean when he or she believes it to be necessary for teaching English items (*Code-switching* condition). In this regard, the independent variable in this study is a "classifying variable" (Hinkle, Wiersma and Jurs, 2003), rather than one manipulated by the researcher. In other words, the researcher

handpicks the two types of intact classes which respectively fit into each condition of the study and examines whether the presence of teacher CS or lack thereof makes any difference to vocabulary learning between the two intact groups after an instructional period; in this regard, the approach to the independent variable in the current study is naturalistic. Consequently, this characteristic of the independent variable makes it share some commonalities with studies which take place in naturally occurring situations (The Evidence for Policy and Practice Information and Co-ordinating Centre, 2008), or 'a natural experiment' in which the independent variable (or intervention) "is not controlled by the researcher(s) but by others, or even by situational factors" (Stommel and Wills, 2004, p. 92).

Within this more or less naturally occurring environment in the present study, we draw on a classroom situation in which L2 teaching is centred on reading comprehension tasks integrating L2-vocabulary teaching. In parts of these lessons, English teachers explain unknown English lexical items from reading passages to their learners in the middle of a reading comprehension task. In this lexically-oriented interaction between the teacher and learners, the learners may ask questions of the teacher about unknown English words while they are engaged in reading the texts or the teacher may spontaneously explain these words from the passages to the learners as he or she considers these words to be unfamiliar to most of his or her learners. These words may be pre-determined as target vocabulary to be taught prior to the lesson. Thus, they would make both planned (i.e. systematic) and unplanned decisions regarding vocabulary teaching (Macaro et al., 2009).

The L2 vocabulary teaching integrated into the reading comprehension task here can be described as adopting the 'Focus on Form (FonF)' approach (see section 2.4.4 for discussions), in which a teacher briefly shifts his or her learners' attention to other

'linguistic code features' (e.g. vocabulary items) from more meaning-oriented tasks (e.g. understanding the meaning of a written text) (Long and Robinson, 1998). In fact, this is arguably one of the most common methods of vocabulary teaching in today's EFL classrooms, and also fits in well with what this study aims to explore, namely the effect of teachers' oral input on L2 learners' vocabulary acquisition; thus it has been chosen as the specific context for the present study. By drawing on this context, which is already familiar to EFL teachers and learners, the study attempts to minimize the intrusion to the target classrooms so that the relevant variables in question can be examined in a naturally occurring situation.

In this investigation, the present study reflects the four possible combinations derived from the following two criterion dimensions: the first being the age of learners (*adults* and *young* learners) and the second being the teaching condition (*English-only* and *Code-switching*). It should be stated again that this study does not intend to compare the two different age groups in a direct manner. When we take into account differences between the two age groups in terms of variables such as L2 proficiency, learning contexts, and the developmental stage of L1 literacy and cognitive skills, it is obvious that a direct comparison is not rational; thus this design should not be understood as a *2 X 2 factorial design*, although it seemingly resembles such a design. Rather, a general aim of the study is to investigate *whether the age of the learners is a factor that should be considered in the general debate on L1 use in Communicative Language Teaching (CLT) classrooms*. Table 3.1 presents the group composition of the present study.

Table 3.1 Group composition of the present study

EFL learners	Condition	
	ENGLISH-ONLY (TEACHER: ENGLISH MONOLINGUAL TEACHER)	*CODE-SWITCHING* (TEACHER: ENGLISH-KOREAN BILINGUAL TEACHER)
Adult EFL learners (Age 19-20)	Adult learner group in *English-only* condition (Group 1)	Adult learner group in *Code-switching* condition (Group 2)
Young EFL learners (Age 11-12)	Young learner group in *English-only* condition (Group 3)	Young learner group in *Code-switching* condition (Group 4)

Having provided a general description of the study, the present section will now turn to more detailed aspects of the research design. In particular, it will focus on the questions of "to what extent the research design of the present study is a *naturally occurring* or *experimental* type of study" and "what are the methodological justifications for, and rationales behind this study design?" Table 3.2 summarizes "naturally occurring" and "experimental" aspects of the present study. Discussions of each aspect will follow, in reference to the research designs of previous studies on the same topic.

Table 3.2 "Naturally occurring" and "experimental" aspects of the present study

"Experimental aspects"	• **Dependent variable** – vocabulary tests employed in the present study were devised by the researcher, in collaboration with the sampled teachers. • **Reading materials** – the same reading materials were given to all sampled teachers (in different conditions/schools) in order to have them standardised across all groups of learners. • **Systematizing teachers' vocabulary teaching** – The teachers were instructed to teach *all the target words*, even on occasions when the students would not ask about the target words and would pretend to know them.
"Naturally occurring" aspects"	• **Independent variable** – the present study sampled native speaker teachers and bilingual Korean teachers, whose English lessons respectively represent English-only and code-switching teaching conditions in real L2 classrooms. • **Research context** – the study was conducted in intact classrooms, rather than laboratory environments. • **Randomization** – the present study was not able to employ a randomization control trial. Instead, a general English proficiency test and baseline vocabulary test were administered at the outset of the study to make sure that the different groups were relatively homogenous in terms of their English proficiency and initial knowledge of target vocabulary.

As can be seen in Table 3.2, the experimentalisation in the current design was concerned with providing reading materials and researcher-devised vocabulary tests, through which the effects of teacher CS and EO instruction were evaluated. The only reason to provide reading materials, rather than using texts in the respective sampled schools was to have them standardized across the different schools, so that all the learners would be given the same materials (see section 3.3.5 for details of the reading materials). Instructions or guidelines for the sampled teachers regarding reading

materials were minimized in order not to alter their ordinary teaching style. However, the researcher and sampled teachers went over how they would go about teaching the target reading materials at the outset of the study, to make sure that all the sampled teachers would adopt reasonably similar approaches to teaching the reading comprehension activities. Another experimental aspect of the study concerned the implementation of the researcher-devised vocabulary tests (see section 3.3.6 for details), which was inevitable for the main purpose of the present study – attempting to infer causal relationships.

Apart from providing external materials (reading texts and vocabulary tests), the other experimental aspect of the study was related to *systematizing teachers' vocabulary teaching*. That is, in naturalistic situations, say during a reading comprehension task, English teachers may *selectively* teach unknown English words included in a target reading text. However, in the present study, the sampled teachers were instructed to teach *all the target words*, even on occasions when the students would not ask about the target words and would pretend to know them. This was for the purpose of research, in order to ensure that all the students in the variety of classes were provided with equal teaching time regarding the target words before they took the tests. It should be noted that this experimental aspect did *not* alter the way they teach vocabulary in their ordinary pedagogical practices, but rather systematized their vocabulary teaching in terms of teaching the target vocabulary items (which were of interest to the researcher). In this regard, a *systematic lexical Focus on Form* (FonF) was imposed on the sampled classrooms, which allowed us to experimentally examine the effects thereof in terms of two age groups' vocabulary learning (as addressed in the first research question).

On the other hand, the researcher intended the other aspects of the research design to be more conducive to ecological validity (Bronfenbrenner, 1976), in particular in terms of the independent variable and research contexts. The rationales for such

decision making are discussed in reference to previous studies on the same topic, which were more experimental by nature than the present study.

As for the independent variable, previous studies on the effect of teacher CS (Tian, 2009; Meng, 2005) employed more experimental approaches, taking one bilingual teacher who is fluent in both English and Chinese (the learners' L1), and the teacher adjusted his or her teaching style (whether to use CS or not) in different treatment conditions. In other words, in the EO condition the sampled bilingual teacher restrained himself or herself from using CS, and in the CS condition the same teacher interchangeably used both English and Chinese in teaching the participants. In brief, their studies intended the only difference between the conditions to be the presence of the teacher CS (the independent variable), by using the same teacher in all treatment conditions. While such a design could minimize the "teacher factor[1]," it should be pointed out that this characteristic of their studies also bears some methodological weaknesses. If we consider the point that every teacher has his or her own teaching style (including whether to use CS or not), it is possible that asking that teacher to adapt his or her teaching style to different treatment conditions for research purposes would result in unnatural teaching practices in one of the conditions. Consider for example the typical Korean English teacher who uses CS on a regular basis in his or her teaching, and the situation in which he or she is asked not to use CS in one condition and use it in the other condition. His or her teaching in the EO condition would not reflect his or her ordinary teaching style but rather a researcher-manipulated and artificial one. At the same time, asking them to undertake EO instruction for research purposes might also present some difficulty for these teachers if they do not have much experience in providing this type of instruction. Lastly, there is the possibility that the results of the study might be biased because the sampled teacher might have some expectations about the forthcoming results

of the study, which could in turn unwittingly influence his or her teaching behaviors.

In view of this methodological weakness regarding the independent variable, the present study sampled native speaker teachers and bilingual Korean teachers, whose English instruction respectively represent EO and CS teaching conditions in real L2 classrooms (i.e. the sampled teachers did not alter their ordinary pedagogical practice for the present study). It was expected then that the results of the present study would be more ecologically valid than those of the previous studies, as the instruction that each condition group respectively received matched that of the learning environments in reality. However, this design has some weak points, most of which are concerned with the possibility of the "teacher factor" (i.e. the teaching characteristics of individual teachers) having some bearing on the results of the study. That is, the design of the study has less power to reduce the effect of the teacher factor, compared to other quasi-experimental designs described above (e.g. Meng, 2005). As a way of compensating for this weak point, more than one teacher was involved for each condition, as involving more than one teacher for each condition would be more likely to cancel out or reduce the effect of the teacher factor.

Another "naturally occurring" aspect in the research design was the context of research – the intact L2 classroom. That is, the research was conducted in intact English classrooms in their official class-time with some help from the sampled teachers, rather than in a laboratory (or more experimental) setting where the researcher has more control over variables. A strong methodological justification for the naturally occurring environment over the laboratory setting comes from the fact that the EO condition in the laboratory setting would be qualitatively different from the same condition in the naturally occurring environment. To elaborate on this idea, let us consider the EO condition in the laboratory (or less naturally occurring) setting. In such a condition, it can

be expected that there would be generally fewer participants compared to an intact classroom and that there would be less distraction (e.g. noise, peer pressure) during the learning process, and subsequently that the participants would have higher levels of concentration. Also, in the EO environment in reality, as in the case of the present study, it would be very difficult for teachers (i.e. mostly likely native speaker teachers) to cater to the needs of a group of learners showing large variability in terms of their English proficiency levels and other individual differences in terms of explaining the meaning of vocabulary. While it might be fair to claim that individual differences among participants are also likely to exist in experimental-design studies, this might be a more relevant issue in intact classrooms. It follows then that, in intact classrooms with more distraction (and low levels of learners' concentration) and large variability among learners, it would be much more difficult for a teacher to put across the meaning of vocabulary items in an EO environment, compared to in a laboratory setting. In other words, the results drawn from the EO condition in the laboratory setting, although they would likely show more positive learning outcomes compared to those from the same condition in the naturally occurring environment, would not greatly inform pedagogy for intact classrooms. This is largely because such ideal EO conditions in the laboratory setting hardly exist or at least would be very difficult to reproduce in reality. In Bryman's words (2008), "the setting of the laboratory is likely to be unrelated to real-world experiences and contexts" (p. 40). For this reason related to pedagogical implications, the present study opted for a naturally occurring environment over a laboratory setting as a research context.

Lastly, the present study was not able to employ a randomized control trial (RCT), as the research context was a naturally occurring environment wherein the researcher did not have control over the manipulation of the group compositions. The relevant methodological concern was how to make sure that the differences between

groups in terms of outcomes would be due to the independent variable, rather than other extraneous variables. Clearly, the inability to identify such variables is a threat to internal validity. In order to compensate for this methodological weakness, the present study employed a general English proficiency test and a pre-test of vocabulary, which enabled the researcher to determine whether the two groups in the different conditions were relatively similar to each other in terms of their English proficiency and vocabulary knowledge. Furthermore, scores on these tests serve as a covariate in later statistical analyses, controlling for the potential effects of extraneous variables. Indeed, the employment of these pre-tests could be seen as the experimental aspect of the study, as a pure "naturally occurring" design would generally not involve such methodological elements.

In brief, the research design of this quantitative study shares many characteristics with that of naturally occurring evaluation in terms of the way the researcher controls for the independent variable as well as the characteristics of the research context. However, it also has some features of a quasi-experimental study, with a clear goal of examining the causal effects. In particular, considering the fact that the dependent variable (vocabulary learning) is measured by tests developed by the researcher, it seems erroneous to regard the present study as a purely naturally occurring evaluation. Therefore, it might be valid to view this quantitative study as a quasi-experimental study but conducive to ecological validity.

3.3.2 Methodological Issues Concerning the Study Design

An important methodological issue to be addressed here is that individual words in the English-only (EO) explanations of vocabulary should not be difficult for most learners to understand clearly so that the EO groups are not at a disadvantage in learning unknown

vocabulary items in comparison with the code-switching (CS) groups. Indeed, this point seems to apply to all the studies which attempt to compare the relative effect of the L1 and L2, whatever modality of input (written or spoken) they examine (e.g. teachers' oral input, glossaries or dictionary entries). Accordingly, the researcher took this point into consideration over the course of the pilot study, interviewing a subset of the participants who took part in the pilot study to ensure that the monolingual teachers' explanations were comprehensible to them without any difficulty (see section 3.3.4 for the outline of the pilot study). The interviews with these participants revealed that both adult and young learners in general did not have many problems comprehending EO instruction in their respective English lessons taught by native speaker teachers. However, as we shall see, it was further found that EO instruction, albeit comprehensible, could cause some cognitive overload on the part of the learners with a limited level of English proficiency.

Another methodological concern which arises with this sort of research design is related to the effect of different types of teachers' accents, namely those of native speaker teachers and bilingual Korean teachers in this study, on learners' listening comprehension. The question is, does bilingual Korean teachers' Korean-accented English negatively affect learners' understanding of their English instruction? Butler's (2007) study directly addressed this issue with Grade 6 Korean students who were very similar in profile to the young learners in the current study. Using a matched-guised technique (Lambert et al., 1960), a bilingual female recorded the same oral materials in both American-accented English and Korean-accented English for young EFL learners. The results of the listening comprehension test failed to show any significant differences in the participants' performance between the American-accented and Korean-accented conditions. Although the study had only one speaker as a stimulus and investigated only one aspect of language learning (listening comprehension), the study suggests that the accents used by

different types of teachers are not as significant a concern as might be assumed.

Lastly, although the researcher himself was not directly involved in the instructional sessions, it was of considerable importance for him to act as an observer during these sessions, to determine if the research agenda manifested itself in the target classrooms via the teachers' instruction as well as to monitor the quality of instruction given by the sampled teachers. It should be noted that this monitoring of teachers' instruction was not performed in order to have control over individual teachers' teaching behaviours and techniques, which would be against the nature of a naturally occurring study, but rather for the sake of fidelity of treatment. To this end, permission was obtained from the sampled teachers to observe and audio-record their instructional sessions.

3.3.3 Participants

3.3.3.1 Criteria for English Teachers

A list of criteria has been developed in order to select the most suitable teachers who meet the conditions of the present study. First, teachers in the two different conditions should have some level of expertise in CLT methodology, rather than other traditional L2 teaching methods. In other words, these teachers normally carry out some communicative activities and maintain meaningful communication with their learners in English. Second, the monolingual English teachers involved in this study, usually native speakers of English, should be ones who rarely use Korean words, phrases, or sentences in English classrooms[2]. Third, the bilingual teachers (most likely Korean English teachers) should be ones who use English for the most part and typically code-switch to Korean only for purposes such as teaching difficult English lexical items and for other classroom management reasons. Lastly, the teachers in the two different conditions

should be similar or almost identical to each other in terms of their teaching contexts, the characteristics of their target students, assigned teaching materials, adopted teaching methodology and so on.

In consideration of these criteria, the present study endeavoured to find schools or undergraduate institutions in which very similar English classes in terms of groups of learners were taught by bilingual and monolingual English teachers under the same curriculum. While it was very difficult to sample this kind of school and English teachers working in such an environment, this was expected to ensure that English classes under the two different conditions were very similar to each other in many ways.

3.3.3.2 Learner Population and Sampling Frame

In the present study, Korean EFL learners at the ages of 12 and 19 who are sixth-grade students at elementary schools and freshmen at undergraduate institutions, respectively, represent the two populations of EFL learners. These learners have the following characteristics: their mother tongue is Korean, they have not studied (or lived) in English speaking countries more than three months, and they regularly attend formal English classes in Korean school settings.

Due to restricted resources, on a school level, the sampling frame of the present study was limited to public elementary schools and undergraduate institutions in the cities of Seoul and Incheon. The sampling frame was further narrowed down to schools and undergraduate institutions wherein very similar English classes in terms of groups of learners were taught by bilingual and monolingual English teachers, as mentioned above. Another important consideration for the sampling frame was whether it was possible to incorporate the researchers' materials into the curriculum of English lessons at target schools. As can be expected, most of the elementary schools and undergraduate

institutions were very much reluctant to give the researcher permission to incorporate the external materials (reading texts and vocabulary tests) into their English curricula. Thus, public elementary schools and undergraduate institutions in Seoul and Incheon which met the conditions of the present study were on the list of potential schools in the sampling frame.

3.3.3.3 Sample of the Present Study

As mentioned in section 3.3.1, this study draws on intact EFL classrooms. In view of the characteristics of the data collection design described above, it was most sensible to sample existing schools which involve EFL learners and two types of teachers (monolingual and bilingual) who meet the conditions of the study; thus, a 'purposive sampling' technique was adopted for the present study (Robson, 2002).

The researcher contacted the headmasters of the elementary schools in the sampling frame and the English teachers employed therein in person, and asked them for permission to carry out research that was to last one semester. Among the limited number of the elementary schools which provided the researcher with permission to conduct the research in question, the researcher selected two public schools in Incheon[3]: one in a central, upper-middle class area (school N) and the other in a suburban, middle class area (school S). As a result, 497 young EFL students – the entire cohort of the sixth grade in each school – participated in the present study. The students were recruited from these two schools of different circumstances to reflect the reality in Korea that young English learners who live in the centres of cities and those who live in suburban areas tend to differ from each other in the number and quality of their English learning opportunities (e.g. in general, more private English language institutions are available in urban areas). However, as was found in the results of the participant questionnaire (see section 3.4 for

details), there was no large difference between the learners in the two schools in terms of the percentage of the students who studied English outside the classroom (81.1% of the learners in school S and 83.3% of the learners in school N) as well as the percentage of the students who attended English institutes or took private tutoring (46.3% of the learners in school S and 50.3% of the learners in school N).

Apart from this geographic difference, the students in the two schools learnt English under the same education curriculum, and were provided the same English textbook (i.e. the official English textbook developed by the Korean Ministry of Education and Human Resources Development). The learners had already learnt English in school settings for two years prior to the present study. The teaching objectives of English classes for these sixth grade young learners were to stimulate their motivation to learn English and to develop the basic level of their communicative repertoire and vocabulary. Their English textbook was largely theme-based, with the use of a wide range of English activities relevant to each theme.

Out of the 497 participants, 54 young learners who did not complete all the session materials were excluded from further statistical analysis. As a result, 270 students enrolled in school N and 173 students enrolled in school S were included in the final analysis. In total, 220 students were exposed to the English-only (EO) environment and 223 were exposed to the code-switching (CS) environment. At the transition from the 5th grade to the 6th grade, all the students in the two sampled schools were systematically distributed by their respective school to each class according to the following procedure; for example, in the case of school S, there were six classes for the sixth grade students in a school. The first ranked student (in terms of academic performance) in the fifth grade was allocated to class number 1 in the sixth grade. Then the second ranked student was allocated to class number 2 and so on until the sixth ranked student was allocated to class

number 6. Next, the seventh ranked student was allocated to class number 6 again and the eighth ranked student was allocated to class number 5. Through this method, the twelfth ranked and thirteenth ranked students were allocated to class number 1, along with the first ranked student. This went on until all the students were distributed to each class. Hence, it can be expected that, after this distribution, classes in the sixth grade would be fairly similar to each other in terms of students' academic performance.

For the sampling of the adult learners, several steps were taken as follows: the researcher first searched for paired groups of undergraduate students registered in mandatory freshman English courses in the same undergraduate institution, which were respectively taught by a native speaker teacher and a bilingual English teacher under the same curriculum. During the sampling procedure, the researcher also consulted each undergraduate institution to make sure that these paired groups were by and large homogenous in terms of their academic/English proficiency, socio-economic backgrounds, and their interests in future careers. The researcher then contacted the instructors in charge of these courses, and asked for their permission and cooperation in undertaking the research for a period of one semester. In the end, twelve instructors in four undergraduate institutions in Seoul and Incheon (six pairs of native speaker teachers and bilingual teachers) agreed to participate in the present study. Among these six pairs, one pair of teachers was excluded from the final sampling, as it was found through discussions that their teaching methods were somewhat divergent with respect to those of the rest of the pairs. As a result, 320 college freshmen enrolled in their respective English classes participated in the study. The mandatory freshman English courses at which the adult learners were registered were more or less based on the "weak version" of CLT methodology (Howatt, 1984) with a particular focus on the development of EFL learners' communicative abilities. The course activities ranged from reading comprehension tasks

integrating classroom discussions to pure communicative activities (e.g. information gap activities). The participants' majors varied widely, including physics, hotel management, tourism, English language and so on; thus the sampling frame for the adult learners was fairly broad in terms of the students' majors. Also varied was their English proficiency regarding the English proficiency test as we will see in Chapter 4. This was deemed natural, considering the variety of their majors. It should be noted that the variety in terms of learners' English proficiency was only found among different majors (and institutions), little among the learners in the same major.

Regarding the different groups of learners, it was hypothesized that English-major learners' level of English proficiency would be higher than the other learners. The results of the English proficiency test (see section 3.3.6.1) did not confirm this hypothesis. It was revealed that the learners in M university (Table 3.3), majoring in physics or math, scored higher on the English proficiency test (M = 50.14) than the other groups (M = 42.74), indicating that their level of English proficiency was higher than that of the English-major learners. Though this result might be an unexpected one, it should be mentioned here that the adult learners in the present study had just started their undergraduate studies at the outset of this quasi-experiment and had received fairly similar types of formal English instruction at their middle and high schools for six consecutive years (approximately two to three hours per week). Thus, it might have been the case that the English-major learners were more interested in studying English language and culture, but they were not more advanced learners of English than the others.

As in the case of the young learners, 34 adult learners were excluded as they did not complete all the session materials. In total, 144 adult learners in the English classes taught by five native speaker instructors, and 142 adult learners in the English classes

taught by five bilingual Korean instructors took part in the study, and respectively represented the EO and CS conditions. In order to prevent a situation wherein the two instructional conditions (EO and CS) involved a different proportion of the learners in different majors (e.g. if one condition involved a relatively higher number of English-major learners than the other), the two English classes which respectively met each instructional condition in the same major were sampled. Table 3.3 summarizes the specifications of the sample of the study. More details on the demographics and English learning history of the participants will be given in section 3.4.4.

Table 3.3 The specifications of the sample of the study

Group	School	Major	No. of students	No. of teachers
Adult EFL learners	M University	Physics or Math	56	2
	I College	Hotel management or Tourism	103	4
	G College	English	67	2
	N College	Tourism	60	2
		Total	286	10
Young EFL learners	Elementary school N	N/A	270	2
	Elementary school S	N/A	173	2
		Total	443	4

3.3.3.4 Ethical Considerations

Before moving onto the ethical considerations related to the present study, it should be noted that the ethical aspects of the present study were reviewed and approved by the Central University Research Ethics Committee (CUREC) on May 12th, 2008. The original CUREC 1 and CUREC 2 forms submitted to the committee along with its issued

approval letter are not included in this paper due to a lack of space, but may be requested from the assessors.

At the outset of the study with the adult learners, the sampled teachers and the researcher gave the participants a brief introduction to the present study and asked their permission to include them in the research. The participants were informed that they could ask any questions about the research before they decided to participate and that they had the right to withdraw anytime during the course of the research without any consequences. Also, the sampled teachers assured them that the research materials would not affect the participants' final grade in any possible way. The procedure for informing them of the research and obtaining consent from the participants was carried out very carefully, following Gomm's point (2004) that "in codes of ethics for social researchers informed consent is among the most important principle (sic)" (p. 307).

A different approach was taken for the young learners. Following Cohen, Manion, and Morrison (2007), the researcher first approached the participants' classroom teachers and headmasters of the schools, and discussed the pertinent ethical issues. Among these, the most critical one for the young learners was to 'avoid harm' to them; the researcher paid close attention to reduce any 'psychological distress' and 'discomfort' on the part of the learners which might be caused by undertaking the instruments (e.g. vocabulary tests) involved in the study (Israel and Hay, 2006). The sampled teachers were of considerable help in developing and tailoring the materials to be as familiar to the young learners as possible. After consulting with the teachers, the researcher sent informed consent forms (opt-out) to the participants' parents.

The protection of the 'participants' privacy' was also considered ahead of the data collection stage (Gomm, 2004; Creswell, 2003; Homan, 1991). Of particular relevance here was the use of pseudonyms in order to ensure anonymity for the

participants. For both age groups, their names as well as the name of their institution were coded to prevent any identification of a particular person or organization either by in-group participants or outsiders. This was mentioned in the informed consent form by saying that the researcher would "disassociate names from responses during the coding and recoding process" (Creswell, 2003, p. 66).

As concerns the full details of the research, the participants were not informed of the fact that this study attempted to examine English teachers' language use. This was because of the possibility that the disclosure of this information to the participants might have resulted in the *Hawthorne effect* or other extraneous effects which could have threatened the internal validity of the study. Thus, despite the fact that the participants had the right to know the full details of the research in which they were about to participate, here endeavouring to protect this right would have come at too high a cost.

Lastly, a traditional control group (i.e. one which does not receive teachers' vocabulary instruction) was not included in the present study for ethical reasons. While the inclusion of such a group would have allowed the researcher to examine a wider range of research questions (as well as statistical analyses), it was simply not possible ethically in the research context of the present study.

3.3.4 Outline of the Pilot Study

The pilot study was carried out in one elementary school and one undergraduate institution[4] located in Incheon over the period of May 20th -June 30th, 2008. In total, 119 elementary sixth grade students and 66 undergraduate freshmen in Incheon participated in the pilot study. The goal of the pilot study was twofold: to determine the feasibility of the entire project and to test each research instrument. In order to achieve these goals simultaneously, a pilot study on a relatively large scale was carried out, following the

prospective research procedure of the main study, rather than simply testing research instruments on a small number of participants.

For the first goal, several administrative and practical issues such as *refusals* or *drop-outs* at the outset of the study or during the study (Gomm, 2004), and the exact timing of research sequencing (e.g. the approximate amount of time required to undertake the study) were considered. Also considered was the question of whether the sampled teachers' teaching styles and methods matched with what the researcher had in mind at that stage of the research design.

For the second, the pilot study aimed to see whether the research instruments including the questionnaires, vocabulary tests, general English proficiency tests, and reading texts for the main study were feasible and appropriate for the target participants. This involved testing of the following: the comprehensibility and difficulty of each question item in these instruments. Testing the suitability of the vocabulary measurements was of considerable significance as other standardized vocabulary tests were not available for the purposes of the present study, in particular for the young EFL learners. The research instruments employed in the pilot study were subject to improvement and revision according to the results of the pilot study. Discussions of these issues will be provided in detail in the following sections where relevant.

3.3.5 Materials

In order to measure the relative effectiveness of the two instructional types on vocabulary learning, appropriate reading passages first had to be selected and target words included in the texts had to be examined for their suitability for our target participants. The rationale behind presenting target words in reading texts was that written texts represented the most familiar route for encountering new vocabulary for a majority of our target population. While previous research (e.g. Tian, 2009; Elley, 1989)

presented new vocabulary through listening activities or similar kinds of tasks, these types of activities were deemed uncommon for introducing new vocabulary within the context of Korean English classrooms. This unfamiliarity with the type of activity could have affected learners' vocabulary acquisition negatively or it might not reflect the ordinary process of learning vocabulary on the part of learners. Furthermore, a reading activity was expected to be more suitable for eliciting further classroom discussions on the topic of the text, and thus was more likely to foster meaning-focused learning than a listening activity. For these reasons, the present study opted for a reading activity in which new vocabulary items were introduced.

Given that this study aimed to maximize its sensitivity to the settings under study, the researcher attempted to create materials which were closely in line with participants' school curricula in terms of the difficulty of language and content so that they could be incorporated into their regular English classes. In brief, the intention of this research was to use linguistically and cognitively appropriate teaching materials in order to benefit our target participants as much as possible, and simultaneously minimize the intrusion into our target classrooms.

3.3.5.1 Reading Texts and Target Words for the Adult Learners

The first decision to make in selecting the target reading texts was whether to use *authentic* texts or not. While the concept of *authenticity* is elusive in the field, Nation and Deweerdt (2001) note that there is a widely-held view that syntactically or lexically simplified texts no longer serve as authentic texts. With regard to linguistically simplified texts, Yano, Long and Ross (1994) criticize them as denying learners' access to linguistically challenging items and discouraging the development of "non-text-specific" reading skills. On the other hand, Nation and Deweerdt (2001) hold a different view

regarding simplified texts, saying that "controlled texts are among the most suitable means of bringing the important strands of learning from meaning-focused input and fluency development into play" for beginner and intermediate language learners (p. 63). In other words, when a text is not controlled, it can pose some serious difficulties for learners. For this reason, the present study utilized controlled texts, which are more appropriate for our target populations, with limited levels of English proficiency.

During the pilot fieldwork, the researcher and two English instructors from two different universities, who are experienced in teaching university level students, selected four reading texts from two English readers called "Reading Challenge 2" (Malarcher and Pederson, 2005) and "Reading Advantage 2[5]" (Malarcher, 2004). These two readers are widely used ones in a great number of undergraduate institutions in Korea. The selection criteria for the texts were 1) the suitability of the topic, 2) the length of the text, and 3) the presence of English words that participants would not know at their current level of English proficiency.

The topics of the texts were expected to be typical of the reading passages that our target participants would encounter in their English classrooms. It was also expected that these texts were interesting enough for them to read and would elicit further classroom discussions. In view of these points, four texts titled *Coffee Culture, Urban Legends*, *Shakespeare, where are you?,* and *I cut the cheese* were selected. The first article, *Coffee Culture* (Appendix A), deals with the story of the coffee bar in Seattle called *Starbucks* and its journey to becoming a worldwide coffee franchise. The topic was a suitable one to introduce some aspects of American culture, as *Starbucks* is a cultural icon in American people's lives. The storyline of the second topic, *Urban Legends* (Appendix A), revolves around some wide-spread urban legends (e.g. an office worker who was dead for five days without being found) and their characteristics. *Coffee*

Culture and *Urban Legends* are two reading texts which do not require much knowledge schemata for understanding, and thus can be read without too much difficulty. On the other hand, the topics of the third and fourth reading passages were history and science, thus knowledge schemata could help reading comprehension to some extent. The third reading text, *Shakespeare, where are you?* (Appendix A), deals with the history of the Globe Theatre in London, England. The text describes how the Globe Theatre became popular in the first place in reference to Shakespeare's plays and its destiny afterwards. As with *Coffee Culture*, it was deemed that the topic was suitable for introducing some aspects of English culture regarding Shakespeare and was also appropriate in English language classes. The last reading text, *I cut the cheese* (Appendix A), reports on some interesting facts about flatulence that many people might be curious about. Although the text deals with the scientific nature of flatulence and introduces some difficult words such as *intestine* and *highly-strung*, it was deemed to be very enjoyable and informative to read.

Considering these texts, one might wonder whether the adult learners majoring in English (the learners at G college) would have benefited more than other learners in other majors in learning vocabulary from *Coffee Culture* and *Shakespeare, where are you?*, which were by and large English-related topics. That is, was there any facilitating effect in reading these texts due to "subject matter familiarity" for English-major adult learners (Alderson, 2000, p. 44)? While such postulation is legitimate, it should be noted here again that these learners were freshmen who had just started their undergraduate study at the outset of the present study. Thus, it was likely that the effect of the learners' majors on learning these texts had been minimal. Furthermore, the English-major learners were almost equally distributed to the code-switching (n = 35) and English-only conditions (n = 32) (although this distribution was not manipulated by the researcher),

and thus the effect of subject matter familiarity, if there was any, would have been canceled out.

Text length was also an important criterion in selecting the texts. As the lessons sampled for the present study varied in terms of the length of time per class (as they are from different undergraduate institutions), which ranged from fifty to seventy five minutes, it was necessary that each session be completed in fifty minutes. This means that the teachers needed to carry out the reading activity with participants and complete the administration of two vocabulary measures within fifty minutes. Reading texts with a length of around 350 words were assessed as feasible for a fifty-minute class in a pilot run of the study. The selected reading texts above all met this condition regarding the length of the text.

After the pilot study, the original texts were modified in cases such as:

1) when too much contextualizing information was available for the meaning of a single target word, to the extent that the participants would not need the teacher's explanation of the word,

2) when the text included sentences deemed too syntactically demanding for a majority of the participants,

3) when a certain part of the text markedly repeated a single target word more than the other target words, and thus could affect participants' vocabulary learning,

4) when the ratio of unknown to known words in a given paragraph diverged too much from that of other paragraphs.

In revising the texts with regard to the second case, the researcher collaborated with the sampled instructors in the pilot study as he did not have much knowledge of the grammatical competence of the participants. With regards to the fourth case, the number of unknown words (target words in most cases) in a paragraph was rectified by adding or

removing them.

Based on the results of the pilot study, the list of the target vocabulary items included in the selected reading texts was scrutinized and modified by the researcher and the sampled teachers. As a consequence, the total number of target words included in the four texts for the adult learners was 64, ranging from single words in different word classes such as noun (*n* = 16), verb (*n* = 13) and adjective/adverb (*n* = 16) to lexical strings[6] (*n* = 19). In terms of the General Service List (West, 1953) and the Academic Word List (Coxhead, 2000), seven target words were in the range of 2000 high-frequency words, and another six target words were in the academic vocabulary list. The rest of the target words (*n* = 51) were either lexical strings, or in the range of low-frequency words. In terms of the word properties for these target words, the length of the target words ranged from 4 (e.g. prop) to 19 (e.g. gain an understanding).

Apart from the word class and word length, another word property of interest was the concreteness of words, which indicates the extent to which each word was concrete or abstract (or the extent to which the word easily aroused an image). To obtain a numeric value for the concreteness of each target word, an imageability task (see Appendix C for a description of the imageability task) was distributed to twelve native speakers of English (4 English, 3 Americans, 5 Canadians), and they were asked to rate the concreteness of each target word on a scale of 1 (hardly arousing an image, for example *no doubt*) to 7 (arousing an image relatively easily, for example *wallet*). Cronbach's coefficient alpha (inter-rater reliability) was very high, α = .912. The mean rating of the target words for the adult learners was 3.22 (*SD* = 1.33).

3.3.5.2 Reading Texts and Target Words for the Young Learners

A different approach to the selection of materials was taken for the young learners.

During the pilot work, it was found that English teachers at the sampled elementary school for the pilot study utilized a variety of extra teaching materials for the review of each chapter of their English textbook. During the discussions of the pilot study, the researcher and teachers decided to develop new reading materials (texts and vocabulary items) in collaboration for both research purposes and their teaching purposes. Collaboration with the teachers in developing the materials for the young learners was of particular benefit as they had a considerable amount of knowledge about our target population in terms of their linguistic and cognitive abilities. In such a way, the teachers could use these materials in their regular class times as supplementary materials and the researcher could obtain useful data without intruding too much on the target classes. In order to do so, the researcher and teachers decided to develop original reading texts, for which topics were based on the themes of the chapters in their official English textbook. The English textbook, which was developed by the Korean Ministry of Education and Human Resources Development (2002), was based on a notional-functional syllabus, consisting of a variety of themes such as greetings, jobs, shopping, seasons, and so on.

Among the sixteen themes, the ones selected for the present study were *seasons*, *birthday, shopping* and *family/job*, which were respectively drawn from chapter three, four, five and seven in their textbook. A native speaker teacher first wrote a plot outline for four reading texts based on these themes. Then, the researcher and teachers developed and revised the texts based on criteria similar to those used in the selection of the reading texts for the adult participants. An iterative process was undertaken in developing reading texts for the young learners, including collecting feedback from other English teachers, changing the target words in the text and balancing out the ratio of unknown words to known words in the four texts.

The storylines of the texts were intended to be both enjoyable to read and age-

appropriate for our participants. Also, it was expected that these texts would work well as supplementary materials for each textbook chapter as the topic of each text corresponded to the theme of each chapter. Table 3.4 summarizes 1) the titles of the chapters, 2) their themes and 3) the title and storyline of each reading text.

Table 3.4 Specifications of the reading texts for the young learners

The title of the chapter	The theme of the chapter	The title of the text	The storyline of the text
When is your birthday?	Birthday	Jinho's birthday	Jinho's birthday is on Sunday and he is excited about his upcoming birthday party.
May I help you?	Shopping	The magic store	Nami visits a magic store to learn to change her naughty brother into a frog by magic.
I like spring	Seasons	Four seasons hotel	Jinho's family takes a thrilling vacation at a very special hotel in which one can experience four seasons at once.
My father is a pilot	Family/Job	Seven people and one bathroom	Jinho has a big family but there is only one bathroom for the whole family, which makes Jinho very upset.

The pilot study confirmed that the majority of our target population (i.e. 12-year-old learners) was not able to cope with a text of around 200 words in a forty minute class. The class time was not long enough for the administration of the two vocabulary tests when a text of such length was implemented. Thus, the length of the original texts developed for the pilot study was reduced from about 200 to 150 running words in order to make it possible for the teacher to carry out the reading activity as well as administer

the vocabulary tests (see Appendix B for the full texts).

For the young learners, the total number of target words included in the four texts was 56, ranging from single words in different word classes such as noun (*n* = 19), verb (*n* = 11) and adjective/adverb (*n* = 14) to lexical strings (*n* = 12). In terms of the General Service List (West, 1953) and the Academic Word List (Coxhead, 2000), 23 target words were in the range of 2000 high-frequency words, and 2 target words were in the academic vocabulary list. The rest of the target words (*n* = 31) were either lexical strings, or in the range of low-frequency words. In terms of further word properties for these target words, the word length of the target words ranged from 3 (e.g. beg) to 18 (e.g. make your mouth water) and the mean rating of the target words by 12 native speakers in terms of the concreteness (see section 3.3.5.1 for details) was 4.04 (*SD* = 1.32).

3.3.6 Testing Materials

3.3.6.1 Test of English Proficiency

As stated in section 3.3.1, the present study employed an English proficiency test for the following two reasons: 1) it enabled the researcher to ensure that the groups under the two conditions were comparable in terms of their English proficiency and 2) it could serve as a predictor variable which accounts for the variance in the dependent variables (i.e. the gains in vocabulary acquisition and retention) in the multiple regression analysis (see section 3.3.9 for details).

To these ends, the TOSEL (Test of Skills in the English Language) – an English proficiency test developed for Korean test takers (TOSEL Organization, 2009) – was administered to all learners by the researcher and their respective English teachers. The TOSEL was initially developed in 2004 by specialists in language testing and prominent

professors in the field of English Education, in an attempt to replace other foreign English proficiency tests such as the TOEIC (Test of English for International Communication) and the TOEFL (Test of English as a Foreign Language). Currently, the TOSEL is increasingly being adopted by a wide range of organizations and educational institutions in South Korea.

The rationale behind choosing the TOSEL as the English proficiency test for the present study was three-fold. First, unlike the TOEIC, the TOEFL or the IELTS (International English Language Testing System) which target international test takers, the TOSEL is a test originally developed for Korean test takers, and thus takes into account Korean English learners' characteristics better than other English proficiency tests. Second, the TOSEL is divided into five levels according to different age groups (or different English proficiency levels) of test takers, and thus enables more age-appropriate evaluations and suits a wider range of population of test takers. This is the most prominent difference between the TOSEL and the other English proficiency tests mentioned above. As the present study involves two age groups (first-year undergraduate students and sixth-grade elementary students), the TOSEL was the most suitable test for measuring their English proficiency. Third, it was the only English proficiency test for which the researcher could gain access to real test copies, rather than commercial test copies not authorized by the test developers. In order to gain access to real test copies, the researcher contacted the chief of the TOSEL organization and received three original TOSEL tests of different levels (*Intermediate, Junior and Basic*), provided the tests would by no means be used for commercial purposes and not be exposed in public for any other purposes than research.

The TOSEL is divided into an *Advanced* level for adults of the highest English proficiency, an *Intermediate* level for university students and high school students at a

very high level, a *Junior* level for college students and high/middle school students and a *Basic/Starter* level for elementary students. For the purposes of the present study, the *Basic* level test, which was originally developed for upper elementary school students, was selected as the test for the young learners. The selection for the adult learners posed some difficulty because of the English proficiency of the target population. That is, although the *Intermediate* test was originally developed for undergraduate students, the test was assessed as too challenging for our target population during the course of the pilot study. That is, the results of this test produced rather positively skewed data (i.e. a considerable number of the test takers did poorly on the test). On the other hand, the *Junior* level was appropriate for most participants, but slightly easy for some of the participants. In order to prevent the ceiling effect from occurring, the *Junior* level test was first selected, and then modified with some of the items from the *Intermediate* test. In selecting the items from the *Intermediate* test, the researcher consulted two professors with linguistics backgrounds at the sampled universities.

In total, 30 listening and indirect-speaking test items and 25 reading and indirect-writing test items were included in the *Basic* level test for the young learners. For the adult learners, a test with 35 listening and indirect-speaking test items and 30 reading and indirect-writing test items was administered. Five reading and indirect writing items from the original *Basic* level test were removed on the grounds that they included some English words (e.g. hexagon) which were not present in the list of vocabulary recommended in the Teacher's Guide developed by the Ministry of Education and Human Resources Development (2002). That is, it was very likely that such words would be unknown to a majority of the participants, and thus could bias the results of the test. Also, the direct writing test in the *Intermediate* level test was not included in the test for the adult learners due to a lack of financial resources to hire and train test scorers.

The adult learners were given 20 and 30 minutes to complete the listening and reading sections, respectively. The young learners were given 17 and 23 minutes to complete the listening and reading sections, respectively. The overall reliability values of the two versions of the TOSEL implemented in the present study were .864 for the version used with the adult learners and .904 for the version administered to the young learners (see section 4.2.1 for details).

In terms of the format of the test, most of the items in the TOSEL are of a multiple-choice format regardless of the level, except for the direct writing test in the *Intermediate* and *Advanced* levels. The test taker must choose one of four options (three distractor alternatives and one correct answer) after hearing short conversations or reading passages of varying lengths. In this regard, the TOSEL has some resemblance to the TOEIC or other similar English proficiency tests, despite some minor differences in terms of what each section attempts to measure. The noteworthy difference between the TOSEL and other proficiency tests is that the TOSEL has five different levels of tests, each of which is designed for different age groups and takes into consideration their linguistic and cognitive abilities. Also, the five different levels of tests vary considerably in their content and stimulus of testing items. Below are examples of testing items from the *Basic, Junior* and *Intermediate* level tests. The three items are part of the listening section and they are all drawn from the section called *Listen and Retell*. The scripts of the recordings are reproduced here for readers.

Directions: You will hear short talks or conversations. They will be spoken TWICE. Listen carefully, read each question and choose the best answer.

Girl: What does your mother do in her free time?
Boy: She never has free time.
Question: Which picture best describes the boy's mother?



Figure 3.1 An example of a listening question item from the Basic test

Girl: Excuse me, how long does it take to the train station?
Boy: Usually about 5 minutes, but the traffic is bad today.
Girl: Thanks! Could you let me know when to get off?
Question: Where is the girl?

(A) on the bus
(B) in a plane
(C) on the subway
(D) on a train

Figure 3.2 An example of a listening question item from the Junior test

M: This smells great. What's in it?
W: Well, I added lots of tomatoes, mushrooms and a bit of onion.
M: Shall I pour some on top of your pasta?
W: Wait a bit until it cools down.
Question: What is the couple probably talking about?

(A) spaghetti sauce
(B) salad
(C) pizza
(D) breakfast

Figure 3.3 An example of a listening question item from the Intermediate test

As can be seen from the above examples, the testing items differ from each other in many aspects. For example, the length of the conversation between interlocutors

gets longer as the level of the test gets more difficult. Also, as for the stimuli of the testing items, the *Basic* level test gives visual stimuli as options for the answer, rather than verbal ones. Furthermore, in the case of the *Intermediate* test, the listener has to "infer" the correct answer from the conversations, and thus requires more skills on the part of test takers than the other example items above. While other sections of the test are not all written exactly in this manner (e.g. visual stimuli are present in only some of the sections in the *Basic* level test), the above example items are enough to give a general idea of the differences among the *Basic*, *Junior* and *Intermediate* level tests within the TOSEL.

3.3.6.2 Vocabulary Tests for Adult and Young Learners

Nation (2005, 2007) points out the importance of using more than one vocabulary measure in experimental intervention studies such as the present one, as it might reveal the effect of the intervention on different kinds of knowledge, which otherwise would not be found. In line with Nation, Laufer (1998) supports the idea of using a "multiple test approach," the results from which would yield a more comprehensive representation of one's vocabulary knowledge and its development, compared to using a single test. In fact, there is a research trend among L2 vocabulary studies to employ more than one vocabulary measure (e.g. Fitzpatrick, Al-Qarni and Meara, 2008; Webb, 2005; Laufer et al., 2004; Joe, 1995).

Following Nation's suggestions, the pilot study included three formats of vocabulary test: 1) a bilingual multiple-choice (MC) test which is similar to that in Meng's study (2005), 2) the Vocabulary Knowledge Scale (VKS) developed by Paribakht and Wesche (1997), and 3) a gap-filling vocabulary test which measured limited-productive vocabulary knowledge. Among these, while the VKS and MC tests worked

reasonably well for both age groups (see sections 3.3.6.3 and 3.3.6.4 for the details on each test), the gap-filling tests did not work for the young learners; fewer than five learners in the pilot study were able to handle the test correctly. It appeared that it was too difficult a test format for young EFL learners at age 12. In view of the results of the pilot study, the main study employed a bilingual MC test which measured receptive recognition vocabulary, and a simplified version of the VKS which enabled the measurement of the initial development of target vocabulary, from unfamiliarity with the word, through familiarity with the form of the word, to the recall of the meaning of the word.

Here, the terms, "recognition" and "recall," are used to refer to the type of test as well as the nature of mental processing on the part of learners. In terms of test type, recognition tests refer to "multiple-choice [type] … where the questions, distractor alternatives, and correct answers are part of the item presentation, and the learner must recognize and select the correct answer," whereas recall tests are "constructed response or fill-in-the-blank type activities where the learner … must come up with the answer from memory" (Clariana and Lee, 2001, p. 24). These definitions further imply that recall knowledge would signify a "better memory trace" than recognition knowledge (Laufer et al., 2004, p. 208), and thus the acquisition and retention of the former would require more mental processing on the part of learners. This idea then leads to another hypothesis that participants' performance on recognition tests, in general, would be better than that on recall tests. While these terms are useful in distinguishing different types of tests and mental processing, it should be noted that not all researchers in the field of SLA have used these terms in the same way when they talk about different types of tests (e.g. Read, 2000), not least when these are used with terms such as "productive" and "receptive." In the present study, receptive tests refer to the tests in which the learner

is presented with target vocabulary, as opposed to productive tests in which the learner needs to supply the target vocabulary with or without contextual information.

The vocabulary testing instruments in the present study were administered at different points in time to measure the development of participants' vocabulary knowledge. These included 1) a vocabulary pre-test which was administered at the outset of the study to measure the degree of learners' vocabulary knowledge of the target words (also including non-target words – distractors), 2) immediate post-tests which measured the acquisition of vocabulary knowledge, and 3) delayed post-tests which measured the retention of vocabulary knowledge. While the two formats of vocabulary tests were both administered in the immediate post-tests and delayed post-tests, only the VKS test was employed as the vocabulary pre-test. The rationale behind this decision to not implement the MC format on the pre-test was not to expose the learners to the meaning of the target vocabulary prior to the instructional period. That is, the learners could potentially have learnt the meanings of the target vocabulary items incidentally through the answer choices in the MC test items on the pre-test, which could later, in turn, have made it difficult to discern the effect of teachers' instruction of vocabulary from that of being exposed to the answer choices (i.e. correct meaning) in the MC test.

Having provided a general description of the vocabulary testing measures, the next two sections will deal with each test in more detail in light of the implications from the pilot study.

3.3.6.3 Vocabulary Knowledge Scale

The first vocabulary testing instrument to measure vocabulary acquisition and retention was a simplified version of the Vocabulary Knowledge Scale (VKS), developed by Mari Wesche and Sima Paribakht at the University of Ottawa. According to Wesche and

Paribakht, the VKS is an instrument which "captures certain stages in the initial development of core knowledge of given words" and which is designed "to reflect changes in knowledge during relatively limited instructional periods" (Wesche and Paribakht, 1996, p. 29). Also, it is a "generic instrument," with which researchers can test any set of target words (Read, 2000); thus it is particularly applicable for (quasi) experimental designed studies such as the present one.

The VKS consists of two scales, with one being an elicitation scale for test takers' self-responses and the other being a scoring scale. For each word that the researcher attempts to assess, the test taker is presented with a five-point scale and asked to self-evaluate their current knowledge level of the target word. As we can see from the self-report scale (see Figure 3.4), the five point scale can indicate a varying degree of one's knowledge of a target word. Category I and II indicate that the target word is not recognized or recognized without the meaning being retrieved. For Category III and IV, the test taker is asked to demonstrate their knowledge of the word by providing a synonym or translation of the word into their L1; thus, on this level it is testing receptive recall. As with Category I and II, the distinction between III and IV relies on the test taker's self-judgement, with Category IV indicating more confidence for the knowledge level of the target word than Category III. Category V, the highest category of all, indicates the progression of the test taker's knowledge from receptive to productive. In this Category, the test taker must provide both the meaning of the word and a sentence containing the word.

I: I don't remember having seen this word before.

II: I have seen this word before but I don't know what it means.

III: I have seen this word before and I think it means _____(synonym or translation).

IV: I know this word. It means _____ (synonym or translation).

V: I can use this word in a sentence. e.g.: _____

(if you do this section, please also do section IV.)

Figure 3.4 VKS testing instrument and instructions for the subjects (from Paribakht and Wesche, 1997, p. 180)

The scoring scale takes self-reported scoring of Category I and II at face value. That is, "VKS scoring accepts self-reported word knowledge of categories I and II for scores of 1 and 2" (Paribakht and Wesche, 1997, p. 179). For other categories except for Category I and II, a score of 2 is given when a wrong response is provided for the target word (e.g. wrong translation or synonym). Conversely, the correct synonym or translation will lead to a score of 3. A score of 4 is given when the use of the target word is semantically appropriate in a composed sentence and a score of 5 when the use of the word in the sentence is both semantically and grammatically appropriate. Figure 3.5 illustrates the VKS scoring categories and the meaning of scores.

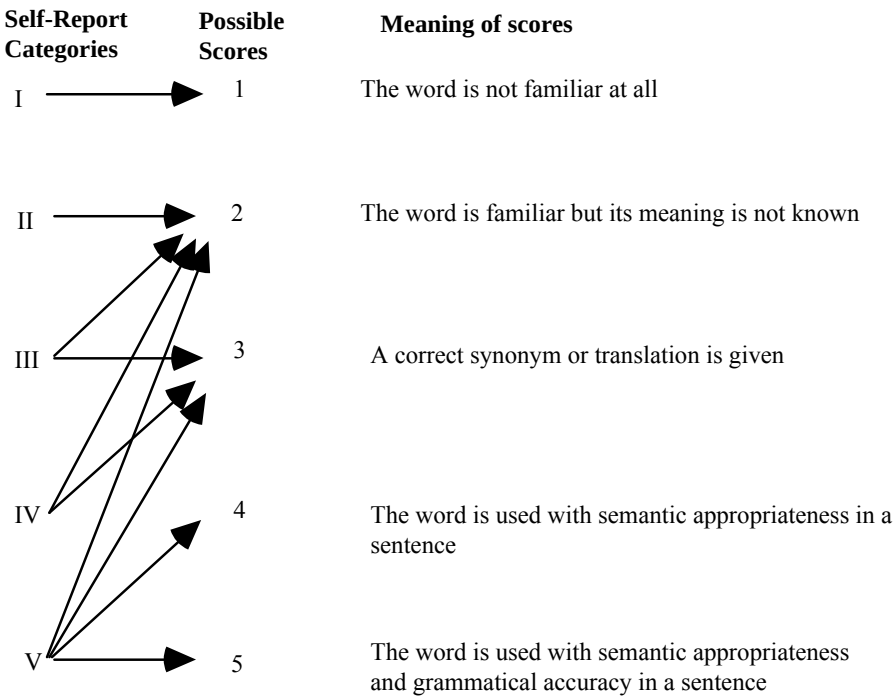


Figure 3.5 The interpretation of the VKS scores (from Paribakht and Wesche, 1997, p. 181)

With regard to the reliability and validity of the VKS, Wesche and Paribakht (1996) reported the test-retest reliability estimate of the VKS as .89 and the concurrent validity as .55, which was the correlation between a group of ESL learners' scores on the VKS and the same group's scores on the Eurocentres Vocabulary Size Test (EVST) (Meara and Jones, 1990). While the value of the reliability is acceptably high, the value of the validity is not very impressive. However, as Read (2000) states, it should be noted that this low value is due to the nature of the EVST, which measures the breadth of vocabulary knowledge, rather than depth as intended in the VKS; thus, the value might not be theoretically credible. Wesche and Paribakht (1996) further reported high correlations of 0.92 to 0.97 between students' self-rating and the subsequent scoring by the raters, "which suggests that the students reported their level of knowledge of the target words reasonably accurately" (Read, 2000, pp. 135-136).

Despite these high values, there have been some criticisms levelled at the VKS,

with most of them centring around the idea of using a “Scale” in measuring vocabulary knowledge. According to Read (2000), the limitation of the VKS is that it attempts to “reduce the complex nature of vocabulary knowledge to a single scale” (p. 138). On the other hand, Meara (1996b) suggests that the scale of the VKS might not properly reflect the “volatile” nature of vocabulary knowledge. For example, one of the assumptions inherent in the scale of the VKS is that “once a transition from one level to the next has been completed it remains permanent” (p. 7), which is rather problematic from his perspective. However, despite its limitations, Read (2000) acknowledges that the VKS seems to serve rightly its original purpose of tracking down the early development of knowledge of a group of words in the intervention type of vocabulary study. In view of their discussions, the pilot study adapted the original VKS and tested whether it was appropriate and useful for the current study or not.

The pilot study adopted the original scale of the VKS for both adult and young learners who were very similar in profile to the participants of the main study. After the administration of the original scale and interviews with a few participants in the pilot study, it was found that the original scale had some potential problems for our target population of students, thus requiring some modifications. First of all, very few students were able to demonstrate their level of knowledge at Category V, which asked them to compose a sentence containing the target word. Some of the adult and young learners mentioned during the interview that the task of composing a sentence containing a newly encountered (and taught) word was of great difficulty for their current English proficiency level. With regard to Category V, one of the teachers who participated in the pilot study commented as follows:

> "It might be too much to ask [students] to provide a sentence containing a newly learnt word. The way they learn the words in this study, which is rather in a receptive manner, might not enable them to do Category V, which is productive, in such a short period" (personal communication, June 16th, 2008, name withheld).

Considering these views held by the teacher and participants, the researcher decided to remove Category V from the original scale. Furthermore, Category III (I have heard this word before, and I *think* it means _____) was also taken out from the original scale on the grounds that many of the adult and young participants mentioned that they had confused this category with Category IV in the VKS (I know this word. It means _____). Typical comments among the test takers in the pilot study were as follows:

> *I can't distinguish between Category III and IV.*
> *Both of them are asking us to provide the meaning of the word.*
> *It is difficult for me to distinguish between "I think I know" and "I am sure I know."*

Thus, based on the results of the pilot study, the researcher reduced the original five item scale to three (see Figure 3.6). Following this simplified version of the VKS, the new scale consisted of Category I (indicating unknown), Category II (indicating partially known) and Category III (indicating receptive recall knowledge). This simplified VKS is thus more or less similar to the "four point scale" measure developed by Meara and Rodríguez Sánchez (2001), in which a test taker is asked to indicate his or her familiarity with target words, from "I think I have never seen this word before, and I do not know what it means" to "I have seen this word before, and I am sure I know what it means" (p. 273). Also, both are devoid of the scale level requiring test takers to compose a sentence containing the target word. The difference between the two is that the simplified VKS here requires test takers to come up with the meaning of the target

word to verify their semantic knowledge, whereas the "four point scale" does not. Scoring of the simplified version of the VKS will be detailed in section 3.3.7.

I: I don't remember having seen this word before.
II: I have seen this word before but I don't know what it means.
III: I know this word. It means _____ (synonym/definition or translation).

Figure 3.6 Simplified VKS (three-point scale) in the present study

Another minor change to this simplified VKS from the original version was the revision of the instructional phrase "synonym or translation" in scale level III. In view of the fact that some L2 words may not have synonyms, it was deemed that the test taker needs to be entitled to provide the L2 definitions as well as L2 synonyms of target words, if he or she decides to provide the meaning of the word in the L2. To this end, the phrase was modified to "synonym/definition or translation," as can be seen in Figure 3.6.

3.3.6.4 Bilingual Multiple-choice Test

Another vocabulary testing measure was of the multiple-choice (MC) type, measuring receptive recognition knowledge of vocabulary (Laufer et al., 2004). The MC test used in the present study is very similar to the one employed in Meng's (2005) study in which the effect of teacher code-switching (CS) on vocabulary acquisition was evaluated in comparison to the effect of English-only (EO) explanations. The MC format in his study can be understood as the integration of 'monolingual and bilingual testing' (Read, 2000); half of the MC question items in their test consist of L1 equivalent options, the other half of L2 definitions. The format of the test is as follows:

Multiple-choice questions with L2 definitions:

casualty 1. someone killed or injured

2. noisy and happy celebration

3. being away from other people

4. middle class people

(Nation, 2001, p. 352)

Multiple-choice questions using the L1 equivalent options:

Suffering 1. 조각

2. 고통

3. 무거운 책

4. 얼룩말

The rationale behind using this format of vocabulary measure is that it enables the researcher not to favour either condition in the study. That is, if the test only consists of L1 equivalent options, the CS group who learnt L1 equivalents for the target words are likely to score better than the group in the EO condition who learnt the words through English definitions, and vice versa. Thus, the bilingual MC test aims to minimize such effects. In this regard, Category III in the VKS (asking the test taker to provide either a *synonym/definition* in the L2 or a *translation* in the L1) can be construed as serving a similar function.

In view of the advantages mentioned above, the pilot study adopted this MC test format, half of the question items consisting of Korean equivalent options, and the other half of English definitions. In developing the preliminary version of the MC test for the pilot study, the target words were randomly distributed to each version of the test (the

English or Korean part), except for some English words, the English definitions of which are too long to put in an MC format (e.g. intestine – a long tube in the body between the stomach and anus). Such words had to be tested in the Korean version, rather than in the English version for practical reasons. The researcher recognized that this could have affected the test performance of the participants in MC questions, and thus minimized the number of such items, and consequently most of the items were randomly distributed to each version. In creating the distractor alternatives, the researcher referred to the range of answers provided by the participants on the vocabulary pre-test, which was in the VKS format. Here is an example of part of the pre-test:

Provide the English or Korean meaning of each target word

Odor _____

For example, for the item *Odor*, a majority of the participants in the pilot study provided the definition of *Order* in Korean, *jumun* [주문]. Following this observation, for the MC question for the target word *Odor*, which was given in the English version, the distractor alternative, "a request for food in a restaurant" was included as one of the three distractors. In this way, it was ensured that very attractive distractor alternatives would be included in the MC test. However, such wrong answers by the participants were included as distractor alternatives only when the word classes of the wrong answer and those of the target words were identical.

Another important issue in creating the MC test was the source of correct answers for target words. This was of particular concern in creating the MC test for the young learners due to their low level of English proficiency. That is, it was important to preclude a situation in which the learners would not get the item correct because the

correct answers among the options for the target words created some obstacles to their comprehension, which in turn could bias the results of the tests.

In order to provide the most manageable answer choices, which are English definitions or synonyms of the target words, the researcher referred to the Oxford Elementary Learner's Dictionary (edited by Crawley and Ashby, 1994) which provides very comprehensible definitions and synonyms of English words, even for most beginning learners. For some of the target words which were not contained in the Elementary Learners' Dictionary, the researcher referred to the Oxford Advanced Learner's Dictionary (Hornby, 1998) to extract the definitions or synonyms of such words. Care was taken to ensure that the definitions or synonyms of the target words from the Advanced Learner's Dictionary did not include any words beyond the list of vocabulary recommended to be learnt, which was developed by the Korean Ministry of Education and Human Resources Development (2002).

The results of the preliminary MC tests indicated that the participants of both age groups tended to perform better on the question items using the Korean equivalent options, regardless of the conditions. In the follow-up interviews with the participants in the pilot study, it was revealed that although they were very much familiar with this kind of test format through their previous experience in school-based settings, the MC questions using English definitions were still more demanding for them than the questions with Korean equivalents as MC options. Most of the participants related the difficulty of the MC questions with English definitions to psychological reasons, rather than their inability to comprehend the options written in English. Regarding these psychological reasons, one of the participants in the pilot study commented that the English part of the MC test appeared to be more challenging and difficult regardless of the target word. However, this psychological difficulty on the part of learners should not

be seen as a methodological problem as this testing format intends not to favour either condition; if the test consisted of either type of format exclusively, the test results would inevitably be prone to bias for the reason stated above.

After the pilot study, a subset of the participants in the pilot study (15 adult learners and 12 young learners) was asked to highlight any Korean or English words in the preliminary version of the MC tests they did not understand. Based on their feedback, the researcher replaced the Korean or English words that the learners highlighted with more common words. This procedure was to ensure that the distractor alternatives and correct answers in both the Korean and English versions were by and large comprehensible to our target populations.

The vocabulary tests employed in the main study for the adult and young learners are included in Appendix D and E, respectively. The test instructions were translated into Korean when the tests were administered to the participants.

3.3.7 Scoring of the Vocabulary Tests

The MC test was scored dichotomously, with each correct answer receiving one point and an incorrect answer receiving no points. When the participant provided more than one answer for one question item, no point was given. The test items in the Korean and English versions were weighted equally in scoring, thus one point was given for the items in both versions.

The scoring of the simplified VKS was as follows: when the participants chose Category I (“I don’t remember having seen this word before”) or Category II (“I have seen this word before but I don’t know what it means”), they received no point. However, this information on their self-reported word knowledge was later used in the analysis of the degree of target vocabulary knowledge between the CS and English-only groups.

For Category III, which required the participants to provide the meaning of the target word either in English or Korean, a set of criteria was necessary in the scoring procedure, as the range of the answers the participants provided was expected to vary to some extent. The following passage defines the scoring procedure for Category III.

1) One point: One point was awarded when the participant provided a correct translation or synonym of the target word, following the original scoring procedure of the VKS. For example, when the participants provided either "easy to see" or "명백한" for the target word "apparent," one point was assigned to such answers.

2) No point: No point was given when the participant provided a wrong translation or synonym of the target word. There were three examples of this. First, some of the participants confused the target words with phonetically or orthographically similar words. For example, a great number of the adult participants provided 주문 (which means *the order* in Korean) for *odor* and *a camera brand* for *cannon*, which implies that the participants confused *cannon* with *canon*. As another example, some of the young participants provided 크다 (which is equivalent to *big* in Korean) for *beg*. Second, some of the incorrect responses were simply Korean transcriptions of the target words. For example, they provided 프리징 [pri·ziŋ] for *freezing*. Third, there were incorrect responses, which were simply wrong guesses, including *smell* for *intestine*, *breath* for *open-air*, *long time ago* for *sooner or later* and so on.

For the scoring of Category III responses, the researcher and one of the sampled teachers independently scored the answers according to the criteria discussed above. This was to minimize any bias from having one rater in the scoring procedure. In this procedure, there was some discrepancy in scoring between the two raters for one of the

target items, *in high demand*. For this item, the participants provided a great range of responses in Korean, which made it difficult to judge whether the Korean translations of the items were correct or not. It makes sense that many versions of Korean translations of such multi-word items could be generated, given the linguistic differences between Korean and English. To solve this matter, the two raters first accumulated the range of responses from that part of the tests and discussed with another sampled teacher as to which ones should be awarded a point and which ones should not.

The values of inter-rater reliability ranged from .93 to .97 across the tests in the VKS format (Cohen's kappa). Discrepancies in scoring the rest of the target items were resolved through discussion.

3.3.8 Procedures

The present study was conducted at four undergraduate institutions and two elementary schools in South Korea over the period of March 2nd to July 3rd, 2009. The instructional sessions and the administration of the tests were carried out by the sampled teachers, with occasional help from the researcher in giving the participants instructions for the tests of vocabulary. The places in which teaching and testing took place for both age groups were ordinary classrooms with good acoustics. According to the participants' weekly schedule (two English classes per week for both adults and young learners), one class or occasionally two classes per week was allotted for the present study. Before the study, the researcher held a meeting with all the teachers and instructors in order to 1) arrange their teaching schedules to accommodate the material of the present study, 2) explain the purposes of the present study, 3) make sure that each native speaker teacher and non-native speaker pair of teachers in each university (and each elementary school) would teach the material of the present study and administer the vocabulary measures in

a fairly identical way, and 4) go over all the target words, and make sure that each teacher was capable of teaching them (and providing the meaning of them to his or her students) without any difficulties. Although the researcher and the teachers discussed how they would go about administrating the reading activity, he did not give them any detailed lesson plans, and thus allowed them to teach using their own styles. However, the teachers in the same pair (native speaker teacher and bilingual teacher) were encouraged to discuss the teaching procedure, if necessary. The researcher also asked the sampled teachers for permission to engage in classroom observation and recording of lessons, for the sake of fidelity of treatment.

In total, there were 9 sessions, which comprised both teaching and testing sessions. The following description of the procedure applies to both age groups, if not specified. Ethical issues were dealt with ahead of the study (see section 3.3.3.4 for details).

1st and 2nd sessions

In the first session, the participants were given 50 minutes to complete the TOSEL (40 minutes for the young learners), the general English proficiency test. The listening section was played twice following the instructions from the original test. In the second session, the participants were given 20 minutes to complete the vocabulary pre-test in the simplified VKS format. Before the administration of the vocabulary pre-test, the sampled teacher gave them brief instructions about how to complete the test.

3rd and 4th sessions

In the third and fourth sessions, the teachers used the first and second reading texts as teaching materials. In each session, the students were allotted about five minutes to skim

through the reading text. The students were not warned that there would be forthcoming vocabulary tests. This was to prevent them from focusing solely on vocabulary during this reading activity, although it is likely that after a few sessions they might have noticed that the reading activity would be followed by vocabulary tests. After the students finished their skimming, the teachers read the text with the students and discussed the content of the text. In so doing, the teachers occasionally asked the students to answer some of their questions about the content of the text (e.g. In what way are urban legends different from traditional ones?). The teachers and students sometimes diverted their discussions from the text and discussed other topics relevant to the theme of the text when they were raised. Therefore, in general, the reading comprehension activity was meaning-focused, rather than form-focused.

However, whenever communication breakdowns occurred due to unknown English words in the text or the questions the students had about them, the teachers shifted their attention from the reading comprehension to these unknown words (including both target and non-target words), and explained the meaning of them. Thus, this lexically oriented explanation was either teacher-initiated or student-initiated, although the instances of the former were much more common than those of the latter. As far as the target words were concerned, their meanings were still provided by the teachers even on occasions when the students did not ask about them (for the purpose of the *systematic lexical FonF*). In teaching these English words, the teachers in the code-switching condition gave the students the meaning of the words in Korean, whereas the teachers in the English-only condition explained the meaning of the words in English.

The following excerpts offer examples of teachers referring to vocabulary in the two conditions. In these excerpts, the English translation of what was uttered in Korean (both by the teacher and learners) is placed in brackets. Teacher 1, a bilingual English

teacher at one of the undergraduate English lessons, is trying to explain the meaning of the word “prop,” by code-switching to Korean :

Excerpt 1

T1: So they didn’t use many props at the Globe. Do you know what prop means?
Ss: No.
T1: Prop is 소도구 [translation: small objects that people use]…연극에서 사람들이 사용하는거 있잖아 [you know, those things that people use in plays]. 소도구 [small objects that people use]. Do you get it?

On the other hand, excerpt 2 shows that a native speaker teacher exclusively uses English in explaining the same word in another class:

Excerpt 2

T2 : Shows at the Globe used very few props… you know props?
Ss: No.
T2: What’s a prop? A prop is some object that actors use…ok? For example … ah…you watch TV or you watch a movie…the actor has a gun…is it a real gun?
Ss: No.
T2: No. It’s a prop…or they have a sword… is it a real sword? No…it’s a prop. A prop is an object that an actor uses. Some objects…okay? It’s not a real gun…it’s not a real sword.
S: Something like imitation?
T2: Imitation, very good …imitation… copy….something that looks like real objects.

As we can see from the above two excerpts, the native speaker’s explanation of English vocabulary required higher amounts of discourse space than that of the bilingual teacher’s CS. With few exceptions, this pattern was consistent for other target words as well. Likewise, very similar patterns were observed in the case of the young learners’ English lessons.

After the reading comprehension activity was completed, the teacher

immediately collected the reading text from the students. Then, the immediate post-test of vocabulary in the simplified VKS format was distributed to the students, and the students were given 5 minutes to complete the test. After the test sheets were collected by the teacher, another vocabulary test in the MC format was distributed to the students, and they were given 7 minutes to complete the test. The immediate post-test in the MC format had to be administered after the VKS test as the former contained the definition of the target words.

5th session

Three weeks after the fourth session, the first delayed post-test on the target words from the first and second reading texts was administered without advance notice to the students. The purpose of the delayed post-test was to measure the retention of the target vocabulary. As in the case of the immediate post-tests, the tests were administered in order of the simplified VKS and the MC test. The delayed post-test contained the same target words as the first and second reading texts. However, the order of the target words and the four choices (three distractor alternatives and one correct answer) for each target word in the MC test were shuffled in order to minimize the practice effect.

6th and 7th sessions

The same teaching and testing procedure as in the 3rd and 4th sessions was followed in the 6th and 7th sessions.

8th session

Three weeks after the 7th session, the second delayed post-test on the target words from the third and fourth reading texts was administered without prior notice. The same testing

procedure as for the 5th session was followed.

9th session

In the last session of the research, the participant questionnaire was administered for 30 minutes (see section 3.4.2 for details on the administration of the questionnaire).

In brief, the experimental part of the present study consisted of 1) a pre-testing phase, 2) four reading lessons and four immediate post-tests of vocabulary, 3) two delayed post-tests three weeks after the instructional period, and 4) the administration of the participant questionnaire. Each test session except for the pre-testing comprised two tests, the VKS and MC. The research procedure of the present study is summarized in Figure 3.7.

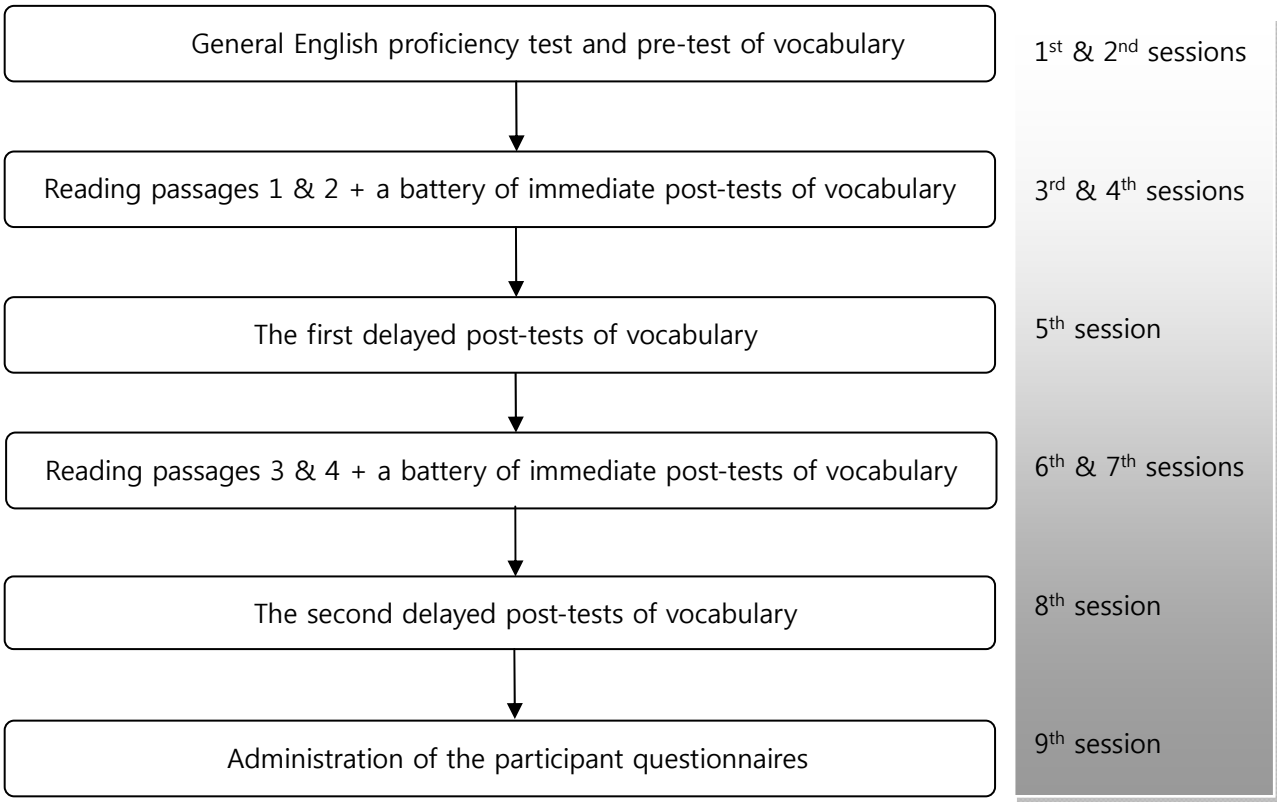


Figure 3.7 The procedure of the present study

3.3.9 Data Analysis

This section presents a description of methods of statistical analysis used for the results of the vocabulary tests. The selection of statistical analysis methods was determined by the nature of the research questions described in section 3.2.

To begin with, when examining the results for the baseline tests (i.e. the English proficiency test and baseline vocabulary test), an independent *t*-test or Mann-Whitney test (the non-parametric equivalent of the independent *t*-test) was used, depending on the normality of the given dataset, to determine whether there was any significant difference between the two groups. Then, the next stage of the analysis was to measure the effect of form-focused instruction (i.e. English-only and Code-switching) on the vocabulary gains of the adult and young learners, without distinguishing between the two (as addressed in the first research question). To this end, Friedman's ANOVA (the non-parametric equivalent of the repeated measures ANOVA) was first used to determine whether or not there were significant changes in the participants' vocabulary knowledge across three testing points (i.e. pre-test, immediate post-test, delayed post-test). Subsequently, the Wilcoxon signed-rank test (the non-parametric equivalent of the paired *t*-test) was used as a *post-hoc* test for comparing test scores at different points in time. The rationale for using the non-parametric tests in this investigation is provided at the beginning of section 4.4.

Next, the effects of different instructional types on the vocabulary acquisition and retention of adult and young learners (respectively concerning second and third research questions) were examined using Analysis of Covariance (ANCOVA), with instructional type (English-only instruction and teacher code-switching) as a *between-group* variable, the score of the vocabulary pre-test as a *covariate*, and each vocabulary test administered at different points in time as a *dependent variable*. As noted in the

Procedure section, the pre-test of vocabulary in the MC format was not administered, and thus the score of the pre-test in the VKS format served as a covariate for the results of the immediate post-, and delayed post-tests in the MC format. The main purpose of the ANCOVA was to estimate the statistical significance and *effect size* of the instructional type on the participants' performance on each post-test of vocabulary while holding constant the effect of the covariate, which indicated their knowledge of target words at the outset of the study. The effect sizes generated through the ANCOVA procedures served as yardsticks for examining differential effects of instructional type on the vocabulary acquisition and retention between the adult and young learners (addressed in the fourth research question).

Subsequently, multiple regression methods were carried out to examine the relationships between instructional type and the score of each post-test of vocabulary, while holding constant the effect of English proficiency, an issue which was addressed in the fifth research question. In doing so, English proficiency and instructional type were entered as the independent variables (i.e. predictors) and the score of each post-test of vocabulary was included as the dependent variable (i.e. criterion variable). Instructional type was "dummy" coded (English-only group = 0, Code-switching group = 1). The "Enter" method in the SPSS was used as there was "no theoretical model in mind" (Brace, Kemp and Snelgar, 2006, p. 234).

Similarly, multiple regression procedures were also used in examining the relationships between word variables (intrinsic word properties) and the mean gain for each target word (as addressed in the sixth research question), with each word-related variable being the independent variables and the average of the test scores across the participants for each word being the dependent variable. These independent variables included 1) length of words, 2) the concreteness of words, 3) word class (i.e. whether the

word was a noun or non-noun), and 4) whether the type of English word was a "single word" or "lexical string." While the first and second variables were included as continuous variables in the regression models, the third and fourth variables were dummy coded (non-nouns = 0, nouns = 1 and single word = 0, lexical string = 1, respectively). The "Enter" method in the SPSS was used in these regression analyses.

Prior to the use of these statistical tests, several assumptions were tested (see Chapter 4 for details). Alpha was set at .05 for all statistical analyses. All the results from the vocabulary tests were analyzed using the Statistical Package for Social Sciences (SPSS) (SPSS Inc., 2006).

3.4 Methodology for the Investigation of Learners' Attitudes towards Teacher Code-switching

While the quasi-experimental part of the present study concerned the effect of teacher code-switching (CS) on the vocabulary learning of EFL learners, the participant questionnaire was designed to investigate the participants' attitudes towards some aspects of English language teaching including 1) different types of English teachers, 2) English-only instruction/teacher CS, and 3) English teachers' vocabulary teaching practices in EFL classrooms. The research method of the participant questionnaire was expected to enable us to gain a more multilayered understanding of the topic at hand. Also, using the participant questionnaire would enable us to compare the adult learners' attitudes towards the variables in focus with the young learners' directly, unlike in the quasi-experimental part of the study in which the results of the tests with adult and young learners were compared in a less direct manner (e.g. using the effect size).

The questionnaire part of the present study was carried out in two phases: a questionnaire survey with the adult learners and young learners who took part in the quasi-experimental part of the study and a set of follow-up, semi-structured interviews

with the participants who marked their willingness to be interviewed on the questionnaire.

3.4.1 Instruments

3.4.1.1 Initial Constructs

As there exists no published questionnaire which exactly suits the purposes of the present study, the researcher first reviewed several studies on L2 learners' attitudes towards L2 teachers' language use and native/non-native L2 teachers, which employed a participant questionnaire as a primary or supplementary research tool (e.g. Ling and Braine, 2007; Benke and Medgyes, 2005; Liu et al., 2004; Levine, 2003). The purpose of this literature review was to identify potential keywords or constructs that would contribute to L2 learners' attitudes towards the variables under study (e.g. teachers' language use and different types of teachers).

Having reviewed the areas and questions covered in these studies, exploratory interviews[7] as a form of pre-pilot work for the questionnaire construction were carried out with Korean English learners (10 adults and 12 young learners) who were similar in profile to the participants in the main study. The purpose of the interview was not to gather any statistics, but rather was "to improve the conceptualization of the research problem" in reference to the population and context within which the research would be conducted (Oppenheim, 2000, p. 70). That is, although the previous literature could provide some ideas and concepts regarding L2 learners' attitudes, it might not be sensitive enough to the context of the present study. To this end, these exploratory interviews broadly covered the topics which had emerged in the previous literature and also other issues that the interviewees spontaneously brought up during the interview sessions, which were not initially on the researcher's agenda. The topics dealt with in the

interviews were as follows: the idea of using Korean in English classrooms, their preferences as to different types of English teachers, and their preferences as to English learning.

During the course of the exploratory interviews, some of the keywords and constructs were identified. The initial constructs extracted from both the previous literature and the interviews with the Korean learners of the two age groups were the following: the relative advantages of native speaker teachers and non-native speaker teachers, the effect of English-only instruction, the functions of teacher CS, and learners' English use in EFL classrooms. Based on these emerging constructs, several attitudinal question items were developed for the construction of the questionnaire. For example, many of the interviewees commented that their native speaker teachers were generally more capable of teaching English conversation than bilingual Korean teachers. This idea corresponded to the results of previous studies which also compared the characteristics of native speaker teachers and non-native speaker teachers (e.g. Benke and Medgyes, 2005; Lasagabaster and Sierra, 2005). In cases such as this, the comment by the interviewee was transformed into the attitudinal question item, "a native speaker teaches conversation more effectively."

As a result, some of the questionnaire items used in the previous studies and the categories which emerged from the interviews during the pre-pilot phase were incorporated to create a preliminary version of the participant questionnaire for the present study. The questionnaire was also enhanced with some original question items on vocabulary acquisition, which were open response type questions (e.g. how do you want your English teacher to teach English vocabulary?; between teacher CS and English-only instruction, which do you prefer in learning unknown English words, and why?). The purpose of these vocabulary-specific questions was to glean a range of responses from

the participants in the pilot study and further create attitudinal questionnaire items for the questionnaire of the main study.

In creating the questionnaire, several points made by Brown (2001) and Dörnyei (2007) were taken into consideration. These included the need to "avoid double-barrelled questions," "avoid negative statements," "use simple and comprehensible language" and so on. The first draft of the questionnaire in English was then reviewed by the researcher's supervisor, two other faculty members of the Department of Education, University of Oxford, and three ESL teachers in practice.

3.4.1.2 Pilot Questionnaire

The first draft of the questionnaire in English was translated into Korean for the participants, given their limited English proficiency. Then it was slightly modified for the young learners in terms of language difficulty and length, considering their Korean literacy and limited attention span. Before being administered to the participants in the main study, the Korean versions of the questionnaires were proofread by the sampled teachers who participated in the pilot study.

Once the preliminary version of the questionnaire was produced, a pilot was conducted in June, 2008, to ensure that the questionnaire items were comprehensible to our target populations. All the participants of the two age groups sampled in the pilot study (119 elementary sixth grade students and 66 undergraduate freshmen) completed the preliminary version of the questionnaire. Among them, 5 elementary 6^{th} grade students and 7 undergraduates agreed to follow-up interviews to provide some feedback on the length, format, and difficulty of language and terminology of the questionnaire. Based on the results of the pilot study, two major modifications were made to finalize the questionnaire.

The first modification for the questionnaire of the main study was the categorization of the responses elicited from the open-ended questions (e.g. ‘why do you prefer your English teacher to use Korean in teaching new vocabulary items?); in other words, the high frequency responses from the open-ended items (e.g. because using both languages will result in better understanding) were turned into Likert-scale items through the process of coding (Bryman, 2008). Thus, vocabulary-specific questionnaire items were developed based on the sources derived from the pilot study in order to compensate for the lack of existing questionnaire items in the literature that fit the purposes of the study.

The second modification was to change some of the wording, in particular of the version for the young learners. The changes were made based on the follow-up interviews with the participants in the pilot study. For example, the phrase “switching to Korean” was modified to “brief use of Korean” as the term turned out to be incomprehensible to most learners. Also, some multiple-choice options (e.g. *English institutions* as in *where have you experienced English-only instruction?*) were included with specific examples familiar to Korean English learners (TOSS, which is one of the most popular English learning institutions for young learners in Korea) to enhance their understanding of the question items.

3.4.1.3 Description of the Questionnaire

The finalized questionnaire was divided into four sections as below.

1) The participants’ background information and their language learning history: the first part of the questionnaire was designed to gather factual information about the participants’ backgrounds and their past history of learning English. The information that was sought included their gender, age, number of years of previous study in English,

their previous experience of English learning in English-only environments, their self-assessed abilities in English, their efforts to learn English outside the classroom and so on.

2) Current English teaching practice in their classrooms: another set of questions asked the participants about the English teaching practices of their current English instructors, including their self-reported amounts of English used by their instructors that they could understand, the instructors' techniques for teaching vocabulary, English skills (areas) they think they would benefit from because of their teachers' CS or English-only instruction (exclusive to the questionnaire for adult learners) and so on. The question items in this section all consisted of multiple-choice questions.

3) The participants' attitudes towards English teachers' language use, native/non-native English teacher, vocabulary learning: the last set of questions were from the Likert scale, which asks the participants to indicate the degree to which they agree with a certain attitudinal statement. All the questionnaire items in this section were based on a five-point scale, with 1 indicating "strongly disagree," 3 indicating "neutral" and 5 indicating "strongly agree." Thus the participants were asked to show their negative, positive or neutral standpoints on the statements at hand. This part of the questionnaire was designed to elicit learners' attitudinal responses to the variables under study. Such variables included 1) their attitudes towards native speaker teachers and non-native speaker teachers and their relative characteristics, 2) their attitudes towards English teachers' use of CS and English-only instruction, 3) their preferences for teachers' language use in learning English vocabulary and possible reasons for such preferences, and 4) their preferences with regard to teachers' vocabulary teaching techniques of varying kinds.

4) *An option for the following in-depth interviews:* at the end of the questionnaire sheet, there was an option for the subsequent in-depth interviews, which asked for the participants' contact information, if they were interested in providing their opinions on a range of issues related to English learning (see section 3.4.5 for details).

The English-translated version of the finalized questionnaires for the adult and young learners is included in Appendix F and G (the questionnaires were translated into Korean when they were administered to the participants).

3.4.2 Data Collection Procedures

Although the original intention was to put the participant questionnaire online, many of the sampled teachers warned the researcher that there would be a very low response rate. Thus, it was decided to administer the participant questionnaire in the classroom during the final session of the quasi-experimental part of the study (section 3.3.8), which was in June, 2009.

Before the administration of the questionnaire, instructions on how to fill in the questionnaire and the purpose of the questionnaire were read to the participants by the researcher. The participants were allowed to raise any questions regarding wording and content of the questionnaire while completing the questionnaire. Also, they were reassured that their current English teachers would not gain access to the questionnaire data afterwards. The participants were free to choose whether or not to provide their identity. This was to promote their honesty in answering questionnaire items. On average, it took approximately 30 minutes to complete the questionnaire for both the adult and young learners.

As mentioned above, the questionnaire session was conducted as part of the

experimental phase of the study, thus the participants in the two parts of the research were basically the same. However, the total number of participants who completed the questionnaire (311 adult and 487 young learners) was slightly higher than that of the participants who were included in the statistical analyses of the vocabulary testing measures due to some data attrition that occurred during the quasi-experimental part of the study.

3.4.3 Analysis of the Questionnaire Data

Before any analysis could be carried out, the first issue to be taken care of was how to handle missing data. Considering the relatively large number of responses given on the participant questionnaire (311 adult and 487 young learners), a few missing values were occasionally found, and consequently it is not clear whether these missing values were accidents or intentional omissions. In such a situation, we can opt for either "listwise deletion" or "pairwise deletion," with the former indicating the deletion of a whole case from the following analysis and the latter indicating the temporary deletion of a case in which the missing value of the case is involved in the analysis. Following Dörnyei's recommendation (2007), pairwise deletion was used for all the analysis, as the former option could have led to a significant loss of data.

The next stage of the data analysis was to calculate the frequencies and percentages for each question item, either of Likert-scale or multiple-choice type, by age (adult and young learners). An independent *t*-test determined whether there were any significant differences between the adult and young learners in their attitudes towards, or beliefs about 1) different types of English teachers, 2) English-only instruction/teacher code-switching, and 3) English teachers' vocabulary teaching practices in EFL classrooms. All the statistical analyses for the questionnaire data were performed using

the SPSS (SPSS Inc., 2006).

3.4.4 Background Information about the Participants

This section provides information on the demographics and English learning history of the participants of the present study (Table 3.5 and 3.6 respectively), based on the descriptive analysis of the questionnaire data.

Table 3.5 Demographic information about the participants

	Age	Gender	Parents' English use
Adult learners	*n* = 311 Mean (M): 19.32 Std Dev: 1.29 Max/Min: 28/18 Missing: 0	*n* = 311 Male: 74 (23.8%) Female: 237 (76.2%) Missing: 0	*n* = 311 Both of them speaking English: 54 (17.4%) Either of them speaking English: 77 (24.8%) Neither of them: 180 (57.9%) Missing: 0
Young learners	*n* = 487 Mean (M): 11.98 Std Dev: .191 Max/Min: 14/12 Missing: 0	*n* = 485 Male: 260 (53.6 %) Female: 225 (46.4%) Missing: 2 (.4%)	*n* = 482 Both of them speaking English: 94 (19.3%) Either of them speaking English: 202 (41.5%) Neither of them: 186 (38.2%) Missing: 5 (1%)

As can be seen from Table 3.5, there was a higher percentage of female adult learners than male adult learners, whereas a similar proportion of male and female young learners were included in the present study. This result may be due to the fact that one of the sampled undergraduate institutions was a women's college (I college in Table 3.3). The adult and young learners were respectively 19 and 12 years old, on average, at the time of the research. The proportion of either of their parents speaking English was

higher for the young learners (41.5%) than it was for the adult learners (24.8%).

Table 3.6 English learning history of the adult and young learners

	Years of English learning	Type of previous English-only instruction	Outside-classroom English learning
Adult learners	*n* = 305 M: 9.21 Std Dev: 2.47 Missing: 6	*n* = 310 At school: 228 (73.3%) Private tutoring: 9 (2.9%) Private English learning institution: 65 (20.9%) Studying abroad: 8 (2.6%) Missing: 1 (.3%)	*n* = 311 Yes: 198 (63.7%) No: 113 (36.3%) Missing: 0
Young learners	*n* = 453 M: 3.76 Std Dev: 1.83 Missing: 34	*n* = 485 At school: 289 (59.3%) Private tutoring: 61 (12.5%) Private English learning institution: 131 (26.9%) Studying abroad: 4 (.8%) Missing: 2 (.4%)	*n* = 485 Yes: 402 (82.5%) No: 83 (17.0%) Missing: 2 (.4%)

Table 3.6 showed that the adult learners had learnt English approximately 5.5 more years than the young learners had, at the time of the research. With regard to the previous English-only instruction they had received, a majority of the adult and young learners had experienced it at English lessons in their schools, 73% and 59% respectively (in the case of the adult learners, they experienced it at their primary or secondary schools). Lastly, about 64% of the adult learners and 83% of the young learners were doing some sort of English learning activities outside their current English lessons. It was further found that the most popular English learning activities for the adult learners were self-study with textbooks (e.g. grammar and vocabulary) and learning through their preparation for official English examinations (approximately two and half hours on

average per week). On the other hand, the young learners opted for learning in private English learning institutions or through private tutoring as their major outside-classroom learning activities (approximately three hours on average per week).

3.4.5 Aim and Procedure of the Follow-up Interviews with the Participants

The purpose of the follow-up interviews after the questionnaire survey was to confirm the data gathered from the questionnaire and to elicit more in-depth and open responses which were not obtainable through the single administration of the questionnaire. In other words, the interview served to compensate for the weakness of the questionnaire data which "usually reveals little about the exact nature of the relationship" (Dörnyei, 2007, p. 170).

The interviews were semi-structured ones, which were largely informed by more unstructured interviews which were carried out as a form of pre-pilot work for the questionnaire construction (section 3.4.1.1). Thus, the interview schedule in this phase included "the specific possible questions to be put for each topic; the issues within each topic to be discussed, together with possible questions for each issue" (Cohen et al., 2007, p. 361). However, as the interviews were not completely structured, the order and wording of the interview questions were interactive, depending on the responses from interviewees.

The follow-up interviews basically dealt with the same topics and issues which were covered in the questionnaire survey with the aim of generating more insightful data and shedding light on some of the psycholinguistic and psychological issues (e.g. how learners process English-only instruction of the unknown English words in their heads, and are they comfortable with English-only instruction in general?), which are topics that are difficult to touch on through quantitative data-collection methods.

The follow-up interviews were conducted within a week of the final session day of the quasi-experiment because of the participants' memory attrition. In total, 12 adult and 10 young learners voluntarily took part in the interviews with the researcher. The interview sessions were conducted in places other than the learners' classrooms (e.g. the common room at the school) without the presence of their English teachers so that they would feel more comfortable during the interview sessions. The interview sessions were scheduled to accommodate the learners' personal time schedule. The Korean English teachers helped the researcher to schedule the interview sessions (e.g. venue and time) with the young learners. The adult learners were personally contacted by the researcher. The duration of the interviews with the participants varied, ranging from 25 minutes to one hour. All interviews with the participants were conducted in Korean.

Prior to the interview sessions, the researcher explained the purpose of the interview[8] and asked permission for audio-recording from all the participants. The researcher assured the interviewees that confidentiality and their anonymity would be guaranteed, and that their English teachers would by no means gain access to the interview data. At the beginning of the interview sessions, the researcher started with relatively neutral questions such as "how long have you learnt English?" and "how many times do you see the current English instructor every week?," and subsequently moved on to more personal and attitudinal questions such as "what do you think about the advantages and disadvantages of native speaker teachers?" and "do you see any value of teachers' CS in English classrooms?" As the interviews were semi-structured ones, the researcher allowed the interviewees to talk freely without interrupting them, as long as they did not venture off the issues. After going through all the questions, the researcher provided the interviewees with a list of the English words that they had learnt in the quasi-experimental part of the study. Then, he asked them to underline any difficult ones

among the target words they had learnt, and explain why it was difficult to learn them, which could in turn offer some insights into the participants' performances on the vocabulary tests. At the end of the interview, the researcher gave the interviewees an opportunity to make further comments on the previous questions or on other relevant issues which were not covered during the interview session.

3.4.6 Analysis of the Interview Data

The interview data were partially transcribed and analyzed, based on the coding scheme which reflected the general constructs involved in the participant questionnaire, including 1) the characteristics of different types of English teachers, 2) the benefits and limitations related to English-only instruction/teacher CS, and 3) English teachers' vocabulary teaching practices and learners' preferences for them. The interview data were transcribed, and translated into English by the researcher. Then, the original Korean transcriptions and translated English transcriptions were cross-checked by two professors with linguistics backgrounds at one of the sampled universities for the sake of reliability. Consequently, some portions of the English-translated transcriptions were revised based on their feedback.

3.5 Summary

3.5.1 Methodology for the Investigation of the Effect of Teacher Code-switching

The present chapter began with a description of the quasi-experimental part of the study, which aimed to investigate the topic of "the effect of teacher code-switching on EFL learners' vocabulary learning." First, it provided a description of and rationale for the research design employed in the present study, which reflected the characteristics of both quasi-experimental design and naturally occurring evaluation. It was suggested that this

design endeavoured to compare the relative effects of teacher code-switching and English-only instruction on EFL learners' vocabulary learning without exerting too much control over the relevant variables, and thus would be conductive to ecological validity. Then it delineated the sampling frame and procedure, and provided some background information about the sampled Korean learners of English who were drawn from intact EFL classrooms. It was mentioned that 320 adult undergraduate freshmen and 497 elementary sixth grade young learners had participated in the quasi-experimental part of the study, with some attrition occurring during the course of the research. Next, with a brief introduction to the outline of the pilot study, the research materials were described, focusing on how a group of target words and reading texts presenting these target words had been developed and refined in light of the results of the pilot study. This section was followed by a description of the research instruments including the English proficiency test and two vocabulary instruments (i.e. simplified Vocabulary Knowledge Scale and bilingual multiple-choice tests) which respectively measured receptive recall and receptive recognition of target vocabulary.

Having seen the research materials and instruments employed in the study, the chapter then described the research procedures of the quasi-experiment, which consisted of 1) a pre-testing phase, 2) four reading lessons and four immediate post-tests of vocabulary, and 3) two delayed post-tests carried out three weeks after the instructional period. A detailed account of "how each session was carried out" was presented in this section, along with some administrative information about the implementation of the vocabulary tests. In addition, it presented the method of scoring for the two vocabulary tests and a description of the subsequent quantitative data analysis for the results of these tests.

3.5.2 Methodology for the Investigation of Learners' Attitudes towards Teacher Code-switching

The rest of the chapter described the methodology and data collection methods employed for the investigation of EFL learners' attitudes towards teacher code-switching and other related aspects of English language teaching. The first part of the section was devoted to a description of the instrument, including the procedure of extracting the initial constructs (or keywords), the development of the preliminary version of the questionnaire and subsequent pilot use. Then it provided a description of the finalized questionnaire, delineating the formats and contents of the questionnaire items in each section of the questionnaire. It was mentioned that the finalized questionnaire was comprised of three major parts, each respectively dealing with the biographic information about the participants, current English teaching practices in their classrooms, and their attitudes towards teacher code-switching and other related aspects of English language teaching. Next, the procedure of the questionnaire administration and method of data analysis for the questionnaire data were explained.

In what followed, the aim and procedure of the follow-up interviews with a subset of the participants were explained. It was stated that the main purpose of these interviews was to confirm the data gathered from the questionnaire and to elicit more in-depth and open responses which were not obtainable through a single administration of the questionnaire. The chapter was rounded off with a description of the method of the analysis for the interview data.

Chapter 4 and 5 will respectively present the findings from the quasi-experimental part of the study and the participant questionnaire along with the follow-up interviews.

1 Teacher factor in this context refers to the potential effect on the dependent variable resulting from teaching styles or behaviours of an individual teacher other than the independent variable.

2 The pilot study informed the researcher that 100% English-only teaching is rare on many occasions.

3 Incheon, which is located to next to Seoul – the capital city –, is a fast-growing city which is becoming a centre for international trade and English education in Korea.

4 These schools were also sampled in the main study, which was undertaken one year later.

5 The researcher contacted the writers of the reading texts and obtained permission to use the materials from them.

6 “Lexical string” here may be construed as multi words such as phrasal verbs or idiomatic expressions.

7 These interviews were conducted prior to the outset of the pilot study in December, 2007.

8 There was no need to introduce the researcher himself at the beginning of the interview session, as the learners were already acquainted with the researcher to some extent during the course of the experimental part of the study.

Chapter 4 Results: Comparing Code-switching and English-only Instruction

4.1 Introduction

This chapter presents the results of the quasi-experimental part of the study. This part of the study, which retains a higher status than the questionnaire part in the mixed method design of the present thesis, was concerned with the question of whether teacher code-switching (CS) is more effective for Korean EFL learners in terms of their vocabulary gains, in comparison to English-only (EO) instruction.

As described before in section 3.3.9, this investigation begins with an examination of the effect of *Focus on Form* (FonF) instruction on the two age groups' vocabulary learning (section 4.4), thus looking at the effect of the two instructional types involved in the present study (i.e. EO instruction and teacher CS), without distinguishing between the two. Then the following sections constitute an examination of the relative effectiveness of the two instructional types on the two age groups' vocabulary learning (section 4.5 and 4.6 respectively presenting the results for the adult and young learners), which is the central focus of this quasi-experimental study. Next, a set of effect sizes obtained from the statistical procedures used in section 4.5 and 4.6 will serve as a yardstick for the investigation of the differential effects of instructional type on the two age groups of EFL learners (section 4.7). This chapter additionally includes the results of *post-hoc* analyses, which examine the question of whether instructional type is still a significant predictor of vocabulary learning, for both age groups, while controlling for the effect of English proficiency (section 4.8), relationships between word-related variables (intrinsic word properties) and the gains for each target word (section 4.9), and the effects of the two instructional types on the learning of abstract and concrete words (section 4.10).

Before examining the first part (i.e. the effect of FonF instruction), the results of the TOSEL (English proficiency test) and baseline test of vocabulary will first be presented in the following section (section 4.2), in order to see whether the two groups under the different instructional conditions were relatively similar to each other in terms of their general English proficiency and initial knowledge of target vocabulary at the outset of the study. This was an important condition to meet, as the present study did not employ a randomized control as a methodological safeguard against any bias in the outcome which might occur due to the lack of such. This will be followed by the preliminary analyses of the post-tests of vocabulary – simplified VKS and multiple-choice tests – implemented in the study (section 4.3).

Lastly, in inspecting the normality of the data throughout this chapter, the Kolmogorov-Smirnov test was not employed in view of the fact that the sample sizes of the present study were relatively large (n = 286 for the adult learners and n = 443 for the young learners); in such a case, the Kolmogorov-Smirnov test is very sensitive to even small deviations from normality (Field, 2005). Thus, histograms showing the distribution of data were inspected in making an informed decision about the extent of non-normality of the data, and the subsequent use of (non) parametric tests. The histograms of the relevant variables (i.e. a battery of tests involved in the study) are included in Appendix H.

4.2 Baseline Tests

As mentioned in the previous section, this chapter begins with the results of the baseline tests (i.e. the English proficiency test and baseline vocabulary test), which are directed at examining differences between the English-only (EO) and Code-switching (CS) groups in terms of their English proficiency and vocabulary knowledge prior to the instructional

period. In section 4.2.1 and 4.2.2, the findings concerning the English proficiency test and baseline vocabulary test will respectively be presented.

4.2.1 General English Proficiency Test

The values for Cronbach's α as a measure of the internal consistency of the two versions of the TOSEL are presented in Table 4.1. Cronbach's α for the junior version of the TOSEL, which was administered to the adult learners, was acceptably high (.864), with the estimates for the subsections being lower to some extent (.784 for the listening section and .777 for the reading section). Similarly, the same value for the basic version of the TOSEL, which was given to the young learners, was very high (.904), with the estimates for the subsections being slightly lower than the overall reliability of the test (.834 for the listening section and .830 for the reading section). The values in the column labelled *Alpha if Item Deleted* in the SPSS output were checked in order to see whether the removal of any single item could improve the overall reliability of the test. The inspection of the column showed that no single item increased the overall reliability more than .005 for the junior test and .003 for the basic test, indicating that there was no need to delete any item to improve the reliability of the test. Overall, the reliability of the two versions of the TOSEL was high enough to be included in further statistical analysis.

Table 4.1 Reliability of the two versions of the TOSEL

	Subsection and total	Cronbach's α	Number of items
Junior version (administered to adult learners)	Listening section	.784	35
	Reading section	.777	30
	Total	.864	65
Basic version (administered to young learners)	Listening section	.834	30
	Reading section	.830	25
	Total	.904	55

Having determined the value for the reliability of the tests, Table 4.2 reports the descriptive statistics of the general English proficiency test (listening, reading and total score) for the adult learners. Results of the independent *t*-tests confirmed that there were no significant differences between the two groups in each section as well as the total score ($t = .80$, $df = 284$, $p > .05$ for the TOSEL listening section; $t = 1.38$, $df = 284$, $p > .05$ for the TOSEL reading section; $t = 1.17$, $df = 284$, $p > .05$ for the TOSEL total). As can be seen from Figure H.1 (Appendix H), the distribution of TOSEL scores for the adult-learner participants was approximately normal.

Table 4.2 Adult learners: Descriptive statistics of the TOSEL

Group	Test	Mean (SD)	Range	Max
English-only (EO) ($n = 144$)	Listening section	22.53 (4.99)	7	31
	Reading section	22.21 (3.72)	22	28
	Total	44.74 (7.74)	38	58
Code-switching (CS) ($n = 142$)	Listening section	22.06 (4.92)	21	32
	Reading section	21.58 (3.88)	20	28
	Total	43.64 (8.04)	38	59

On the other hand, Table 4.3 reports the descriptive statistics of the general English proficiency test (listening, reading and total score) for the young learners. The results of the independent *t*-tests confirmed that there were no significant differences between the two groups in the TOSEL test ($t = 1.075$, $df = 441$, $p > .05$ for the TOSEL listening section; $t = .093$, $df = 441$, $p > .05$ for the TOSEL reading section; $t = .639$, $df = 441$, $p > .05$ for the TOSEL total). This result ensured that the two groups of the young learners were very comparable for the purposes of the present study, prior to the evaluation of the instructional type. The distribution of scores on the TOSEL test was

fairly normal as well in the case of the young learners (Figure H.2 in Appendix H).

Table 4.3 Young learners: Descriptive statistics of the TOSEL

Group	Test	Mean (SD)	Range	Max
English-only (EO) (n = 220)	Listening section	18.28 (5.76)	24	30
	Reading section	12.53 (5.28)	20	24
	Total	30.81 (10.37)	41	53
Code-switching (CS) (n = 223)	Listening section	17.69 (5.82)	26	30
	Reading section	12.48 (5.51)	24	25
	Total	30.17 (10.66)	48	53

4.2.2 Baseline Vocabulary Test

Earlier we saw in the Methodology chapter that the baseline vocabulary test consisted of both target words and distractors (i.e. non-target words). In order to distinguish the results for each group of words, the result for the target words will be referred to as the "pre-test of vocabulary" and that for the distractors will be referred to as "basic vocabulary," henceforth.

In terms of the pre-test of vocabulary, the distributions of the scores for both adult and young learners were rather positively skewed (Figure H.3 and H.5 in Appendix H), suggesting that the participants' scores were clustered around the low end of the scale. This result was deemed natural as a great number of participants did not know most of the target words prior to the instructional period, and consequently scored low on the pre-test, by and large. On the other hand, the histograms for basic vocabulary for both age groups showed negatively skewed distributions (Figure H.4 and H.6 in Appendix H), indicating that a majority of the participants knew most of the basic vocabulary included in the baseline vocabulary test. Table 4.4 and 4.5 respectively report the descriptive

statistics of the baseline vocabulary test for the adult and young learners.

Table 4.4 Adult learners: Descriptive statistics of the baseline vocabulary test

Group	Test	Mean (SD)	Median	Range	Max
English-only (EO) (n = 144)	Pre-test of vocabulary	11.02 (6.72)	10	28	28
	Basic vocabulary test	17.07 (2.85)	18	11	20
	Total	28.09 (8.17)	29	37	48
Code-switching (CS) (n = 142)	Pre-test of vocabulary	9.78 (7.58)	8	28	28
	Basic vocabulary test	16.79 (2.51)	17	13	20
	Total	26.57 (8.57)	25	36	48

Table 4.5 Young learners: Descriptive statistics of the baseline vocabulary test

Group	Test	Mean (SD)	Median	Range	Max
English-only (EO) (n = 220)	Pre-test of vocabulary	1.75 (2.77)	0	15	15
	Basic vocabulary test	8.37 (2.56)	8	12	12
	Total	10.12 (4.73)	9	27	27
Code-switching (CS) (n = 223)	Pre-test of vocabulary	1.60 (2.72)	0	15	15
	Basic vocabulary test	8.07 (2.24)	8	12	12
	Total	9.67 (4.38)	8	27	27

Due to the non-normality of the data, the Mann-Whitney test, the non-parametric equivalent of the independent *t*-test, was used in comparing the two groups' performance on the baseline vocabulary test. The results of the Mann-Whitney test confirmed that there were significant differences in the basic vocabulary between the two groups in the adult-learners category (Mdn^1 = 18.00 for the EO group, Mdn = 17.00 for the CS group, U = 8867.50, p = .049), but not in the pre-test of vocabulary (Mdn = 10.00 for the EO group, Mdn = 8.00 for the CS group, U = 8952.00, p = .069). In the case of

the young-learners, there were no significant differences on both tests between the two groups (*Mdn* = 0.00 for the EO group, *Mdn* = 0.00 for the CS group, *U* = 23695.50, *p* = .499 for the pre-test of vocabulary; *Mdn* = 8.00 for the EO group, *Mdn* = 8.00 for the CS group, *U* = 22186.00, *p* = .071 for the basic vocabulary test).

Having observed that there was by and large no difference between the EO and CS groups before the instructional period began, section 4.3 will present the preliminary analyses of the post-tests of vocabulary.

4.3 Preliminary Analyses of Post-Tests of Vocabulary

The present section will report the preliminary analyses of two types of vocabulary tests implemented in the study. The section will first deal with a preliminary analysis of the simplified Vocabulary Knowledge Scale (VKS), and then with that of the multiple-choice (MC) tests.

4.3.1 Preliminary Analysis of Simplified VKS

It should be remembered that for the VKS, the participants were asked to indicate their familiarity with each target vocabulary item, with possible answers ranging from “I have not seen this word before,” “I have seen this word before but I don't know what it means” to “I know this word, and I can provide the meaning of the word.” In the latter case, participants were further asked to provide the meanings of the target vocabulary either with English synonyms/definitions or Korean equivalents/translations. With this information in mind, we will now turn to the answer patterns of the adult and young learners on the simplified VKS.

Somewhat unexpectedly, less than 1 percent of the adult and young learners’ responses involved English synonyms/definitions, indicating that the participants mostly

recalled their knowledge of the target vocabulary in Korean. Indeed, there were very few recalls of the meanings in English, even among the learners in the English-only condition who had learnt the target vocabulary exclusively in English. This pattern emerged in both the immediate and delayed post-tests. Further thoughts on this result will be given in the Discussion chapter (section 6.5.1).

4.3.2 Preliminary Analysis of Multiple-choice Tests

It was mentioned in the Methodology chapter that the multiple-choice (MC) test of vocabulary in the present study was designed such that the group representing either condition would not be at a disadvantage, with half of the question items consisting of Korean equivalent options, and the other half of English definitions. The aim of the preliminary analysis for the MC test was to examine the validity of this instrument. To be more specific, the following phenomena should not be borne out in the results, if the instrument is to be deemed of sufficient instrumental validity:

- The Code-switching (CS) group performs very well on the test items with the Korean options and at the same time very poorly on the test items with the English options,
- The English-only (EO) group performs very well on the test items with the English options and at the same time very poorly on the test items with the Korean options,
- The CS group performs very poorly on the test items with the Korean options or the EO group performs very poorly on the test items with the English options.

If one of the above phenomena is reflected in the results of the MC tests, it could

be suggested either that the instrument did not serve the original purpose of not favouring either condition or that the MC options were somewhat ill-constructed. For instance, given that the MC items were well-designed, it would be unlikely that the CS group would perform very poorly on the test items with Korean options, as they learnt the target vocabulary through the Korean equivalents in their condition. On the other hand, it could be possible that the EO group would perform slightly better on the items with Korean options than those with English options, as Korean options would be more familiar to them than the English options. However, too great a difference in performance between these two types of test items on the part of the EO group may be indicative of the need to question the validity of the MC items.

The descriptive statistics regarding the adult and young learners' performance on the MC test items in the two language options are presented in Table 4.6 and 4.7, respectively.

Table 4.6 Adult learners: Descriptive statistics of MC test items in the two language options for the two groups

Group	Items with *Korean* options	Mean (SD)	Items with *English* options	Mean (SD)
EO	Immediate post-test	23.78 (4.14)	Immediate post-test	20.92 (5.56)
(*n* = 144)	Delayed post-test	20.80 (4.83)	Delayed post-test	18.11 (6.03)
CS	Immediate post-test	26.66 (4.05)	Immediate post-test	20.91 (6.38)
(*n* = 142)	Delayed post-test	22.57 (4.78)	Delayed post-test	17.92 (6.20)

Table 4.7 Young learners: Descriptive statistics of MC test items in the two language options for the two groups

Group	Items with *Korean* options	Mean (SD)	Items with *English* options	Mean (SD)
EO	Immediate post-test	12.80 (4.78)	Immediate post-test	11.22 (5.93)
(*n* = 220)	Delayed post-test	11.73 (4.46)	Delayed post-test	9.40 (4.31)
CS	Immediate post-test	21.03 (5.98)	Immediate post-test	11.34 (6.28)
(*n* = 223)	Delayed post-test	16.81 (5.89)	Delayed post-test	9.33 (4.35)

As can be seen in these two tables, both the adult and young learners generally performed better on the items with the Korean options. This result is deemed natural in view of the fact that the Korean options would have been more familiar to the participants than the English options, and consequently they scored better on the items with the Korean options. Still, their performance on the items with the English options was not too low compared to that on the items with the Korean options, suggesting that the MC items with the English options were properly designed at the current levels of the participants in the present study.

Regarding the reliability of the test, the values for Cronbach's α as a measure of the internal consistency of the MC tests for the adult and young learners are respectively presented in Table 4.8 and 4.9.

Table 4.8 Adult learners: Reliability of the MC tests

	Subsection and total	Cronbach's α	Number of items
Immediate post-test	Items with *Korean* options	.767	32
	Items with *English* options	.835	32
	Total	.886	64
Delayed post-test	Items with *Korean* options	.787	32
	Items with *English* options	.831	32
	Total	.891	64

Table 4.9 Young learners: Reliability of the MC tests

	Subsection and total	Cronbach's α	Number of items
Immediate post-test	Items with *Korean* options	.897	28
	Items with *English* options	.853	28
	Total	.912	56
Delayed post-test	Items with *Korean* options	.838	28
	Items with *English* options	.698	28
	Total	.852	56

As can be seen in Table 4.8, Cronbach's α for the MC test for the adult learners was very high, .886 for the immediate post-test and .891 for the delayed test. Similarly, Table 4.9 shows that the same value for the MC test for the young learners was also high, .912 for the immediate post-test and .852 for the delayed test. Thus, the MC tests for the two age groups were generally found to be stable and consistent. A relatively low value was found for the items with English options in the delayed post-test for the young learners (.698). In view of the fact that the value for the same set of MC items in the immediate post-test was acceptably high (.853), this low value might be attributed to the young learners' random guessing (rather than low reliability for these items).

In brief, no serious concerns regarding the validity or reliability of the instrument were revealed in the preliminary analysis of the MC tests.

4.4 Effects of Focus on Form Instruction

As stated in the Methodology chapter, the present study did not involve a traditional control group due to the nature of the research context in focus (i.e. authentic EFL classrooms in which Focus on Form (FonF) for lexical items, in one way or another, is a naturally occurring phenomenon), and consequently every participant was provided either form-focused CS or form-focused EO instruction of vocabulary during the instructional period of the study. In this light, the present section examines the research question of "what patterns of progress across three time points did the two age groups of EFL learners make as a result of systematic FonF instruction for lexical items?" While repeated measures ANOVA would be the most powerful statistical test for the examination of this research question (with time of vocabulary assessment as a *within-group* variable), this test was not acceptable due to the non-normality of the distribution for the pre-test as reported in the preceding section. That is, the positively skewed distributions of the two age groups' scores on the pre-test did not meet the assumption of the parametric test, unlike the distributions for the post-tests of vocabulary which were generally normal[2] (see Appendix H).

Due to the reason mentioned above, Friedman's ANOVA, the non-parametric equivalent of the repeated measures ANOVA, was used in evaluating the hypothesis that there were significant changes in the participants' vocabulary knowledge across three testing points (i.e. pre-test, immediate post-test, and delayed post-test). Subsequently, as mentioned in the Methodology chapter, the Wilcoxon signed-rank test was used as a *post-hoc* test for comparing three pairs of tests at different points in time. A Bonferroni correction (α/number of comparison) was applied in examining the α value for each comparison. Effect size estimates (*r*) were also calculated, taking the *z* value obtained from the Wilcoxon test and dividing it by the square root of the number of observations.

The results of the statistical analyses of the VKS test and MC test are presented in section 4.4.1 and 4.4.2, respectively.

4.4.1 Effects of Focus on Form Instruction for Receptive Recall Knowledge

The descriptive statistics of the vocabulary pre-tests, immediate post-tests and delayed post-tests in the VKS format are presented in Table 4.10. It should be remembered that this battery of VKS tests aimed to measure the learners' receptive recall of the target words at different points in time. In the present study, the immediate post-test score indicated the amount of vocabulary acquisition, while the delayed post-test score, which was measured three weeks after the instructional period, was treated as the amount of vocabulary retention. Thus, these two types of tests will respectively be referred to as the acquisition and retention tests henceforth. The numbers presented in Table 4.10 indicate the observed mean scores, standard deviation, range of scores and maximum score for the two age groups for each VKS test.

Table 4.10 Descriptive statistics of pre-test, acquisition and retention tests in VKS format for both age groups

Group	Test	Mean (SD)	Range	Max
Adult Learners (n = 286)	Pre-test (VKS)	10.41 (7.18)	28	28
	Acquisition (VKS)	33.60 (13.95)	61	62
	Retention (VKS)	21.49 (10.28)	51	51
Young Learners (n = 443)	Pre-test (VKS)	1.67 (2.75)	15	15
	Acquisition (VKS)	13.58 (14.33)	56	56
	Retention (VKS)	6.11 (6.96)	30	30

In the case of the adult learners, there was a significant main effect from the

within-group variable, which means the participants' vocabulary scores on the pre-, acquisition and retention tests in the VKS format varied as a function of time of vocabulary assessment, (χ^2 (2) = 514.77, p < .001). As mentioned above, Wilcoxon tests were further performed as *post-hoc* tests, with the application of a Bonferroni correction. The results revealed that the adult learners' scores on the acquisition test (*Mdn* = 35.00) were significantly higher than the pre-test (*Mdn* = 10.00) (z = -14.634, p < .001, r = -.61). This result indicated that the adult learners made significant vocabulary gains in terms of receptive recall after they received the FonF instruction. Despite some attrition of this knowledge between the acquisition and retention tests (*Mdn* = 35.00 and 21.00, respectively for each test), (z = -13.426, p < .001, r = -.56), the adult learners retained significantly more receptive recall knowledge of the target vocabulary three weeks after the instruction than they had before the instructional period, (z = -14.508, p < .001, r = -.61). These results indicated that there was a significant effect for FonF instruction of vocabulary in terms of the acquisition and retention of receptive-recall knowledge for the adult learners.

In the case of the young learners, there was also a significant main effect from the *within-group* variable, which means the young learners' mean scores on the pre-, acquisition and retention tests in the VKS format varied as a function of time of vocabulary assessment, χ^2 (2) = 601.60, p < .001. Contrasts revealed that the young learners' scores on the acquisition test (*Mdn* = 8.00) were higher than those on the pre-test (*Mdn* = 0.00), (z = -16.710, p < .001, r = -.56), indicating a significant amount of vocabulary acquisition in terms of receptive recall knowledge. Although there was also a significant amount of attrition of receptive recall knowledge (z = -15.055, p < .001, r = -.51), the young learners' scores on the retention test (*Mdn* = 3.00) were still higher than the scores on the pre-test, (z = -15.594, p < .001, r = -.52), demonstrating that they

retained a significant amount of receptive recall knowledge of the target vocabulary. In brief, there was a significant main effect for FonF instruction for the young learners on the acquisition and retention of receptive-recall knowledge.

4.4.2 Effects of Focus on Form Instruction for Receptive Recognition Knowledge

The descriptive statistics of the immediate post-tests and delayed post-tests in the MC format are presented in Table 4.11. Readers should remember that a battery of MC tests measured the learners' receptive recognition of the target vocabulary. As with the VKS tests, the immediate post-test score indicated the amount of vocabulary acquisition, whereas the delayed post-test score was considered to be the amount of vocabulary retention. The scores presented in Table 4.11 indicate the observed mean scores, standard deviation, range of scores and maximum scores for the two age groups for each MC test.

Table 4.11 Descriptive statistics of acquisition and retention tests in MC format for both age groups

Group	Test	Mean (SD)	Range	Max
Adult Learners (n = 286)	Acquisition (MC)	46.13 (9.54)	43	63
	Retention (MC)	39.69 (10.24)	51	60
Young Learners (n = 443)	Acquisition (MC)	28.23 (11.14)	46	55
	Retention (MC)	23.65 (8.79)	44	52

As in the case of the VKS tests, Friedman's ANOVA and the Wilcoxon signed-rank test were used with the MC tests, with time of vocabulary assessment (pre-test, acquisition test and retention test) as a *within-group variable*. It should be remembered that the pre-test of vocabulary in the VKS format served as a pre-test in this ANOVA

procedure with the MC tests, since the pre-test of vocabulary in the MC format was not administered (see section 3.3.6.2 for details).

As in the case of the VKS tests, there was also a significant main effect from the *within-group* variable of the MC tests, which means the adult learners' vocabulary scores on the pre-, acquisition and retention tests significantly changed over time, (χ^2 (2) = 517.88, $p < .001$). The first contrast revealed that the adult learners' scores on the acquisition test (*Mdn* = 48.00) were higher than on the pre-test (*Mdn* = 10.00), (z = -14.662, $p < .001$, r = -.61), thus indicating that they made significant gains in terms of receptive recognition knowledge of the target vocabulary after receiving the FonF instruction. In addition, despite a significant amount of attrition between the two post-test sessions (z = -13.227, $p < .001$, r = -.55), they retained a significant amount of receptive recognition knowledge of the target vocabulary, as demonstrated by the contrast between their scores on the retention test (*Mdn* = 40.00) and pre-test (*Mdn* = 10.00), (z = -14.663, $p < .001$, r = -.61). Thus, there was a statistically significant effect for FonF instruction on the acquisition and retention of receptive-recognition knowledge for the adult learners.

In the case of the young learners, the *within-group* test indicated that there was a significant time effect, (χ^2 (2) = 737.89, $p < .001$); in other words, the two groups' scores changed significantly before and after the instructional period. The results of subsequent Wilcoxon tests showed that the young learners' scores on the acquisition test (*Mdn* = 27.00) were significantly higher than the pre-test (*Mdn* = 0.00), (z = -18.240, $p < .001$, r = -.61), indicating a significant amount of vocabulary acquisition in terms of receptive recognition knowledge. Despite some attrition of this knowledge between the acquisition and retention tests (*Mdn* = 27.00 and 22.00, respectively for each test) (z = -13.003, $p < .001$, r = -.44), the young learners retained significantly more receptive recognition

knowledge of the target vocabulary three weeks after the instruction than they had before the instructional period, (z = -18.243, p < .001, r = -.61). Thus, there was a statistically significant effect for FonF instruction on the young learners' acquisition and retention of receptive-recognition knowledge of the target vocabulary.

In summary, the results of the Friedman's ANOVAs and follow-up Wilcoxon tests showed that the adult and young learners made significant progress with vocabulary acquisition and retention after receiving FonF instruction of vocabulary, despite some attrition of knowledge between the two post-test sessions. This progress with vocabulary gains by the two age groups was observed in both types of knowledge in focus, namely receptive-recall and receptive-recognition knowledge.

Before turning to the next section, we need to briefly deal with the question of "even if there was the effect of *time* (i.e. learners acquired and retained the knowledge of the target vocabulary after the instructional period), how can we be sure that this result reflects learning patterns of both EO and CS groups?" In other words, it is possible that only one group made significant gains and that the effect of "time" may have disguised non-significant gains of the other group. In order to see whether this was the case with our dataset, the same statistical analyses were carried out separately with each instructional group (EO and CS group). The results of these analyses showed that both the EO and CS groups made significant progress with vocabulary acquisition and retention after receiving lexical FonF instruction, and thus the effect of "time" is indeed applicable to both instructional groups.

4.5 Adult Learners: Effects of Different Instructional Types on Vocabulary Acquisition and Retention

Having observed the effect of FonF instruction, the next stage of data analysis was to weigh the relative effects of the two instructional types (i.e. English-only instruction and

teacher code-switching) on the vocabulary acquisition and retention of the two age groups of EFL learners. The results of these data analyses for the adult and young learners are respectively reported in section 4.5 and 4.6, which in turn are concerned with the second and third research questions stated in section 3.2.

4.5.1 Adult Learners: Self-reported Development of Target Vocabulary

In section 3.3.6.3, it was mentioned that the VKS adapted in the present study consists of three scales, through which the test taker is asked to self-evaluate their current knowledge level of the target word, from unknown (Category I), partially known (Category II) to receptive recall knowledge (Category III). Also, section 3.3.7 stated that, while Category I and II are given no point, this information on their self-reported word knowledge would later be used in the analysis of the degree of target vocabulary knowledge between the Code-switching (CS) and English-only (EO) groups. It is the aim of this section to report the patterns of change in knowledge of the target vocabulary items, as self-reported by the adult learners. It should be noted that, even if a test taker opted for Category III and provided the meaning of the target vocabulary, only the correct answer was counted as receptive recall knowledge (Category III). Wrong answers were subsequently downgraded to partially known (Category II). The same procedure was adopted for the corresponding part (section 4.6.1) for the young learners

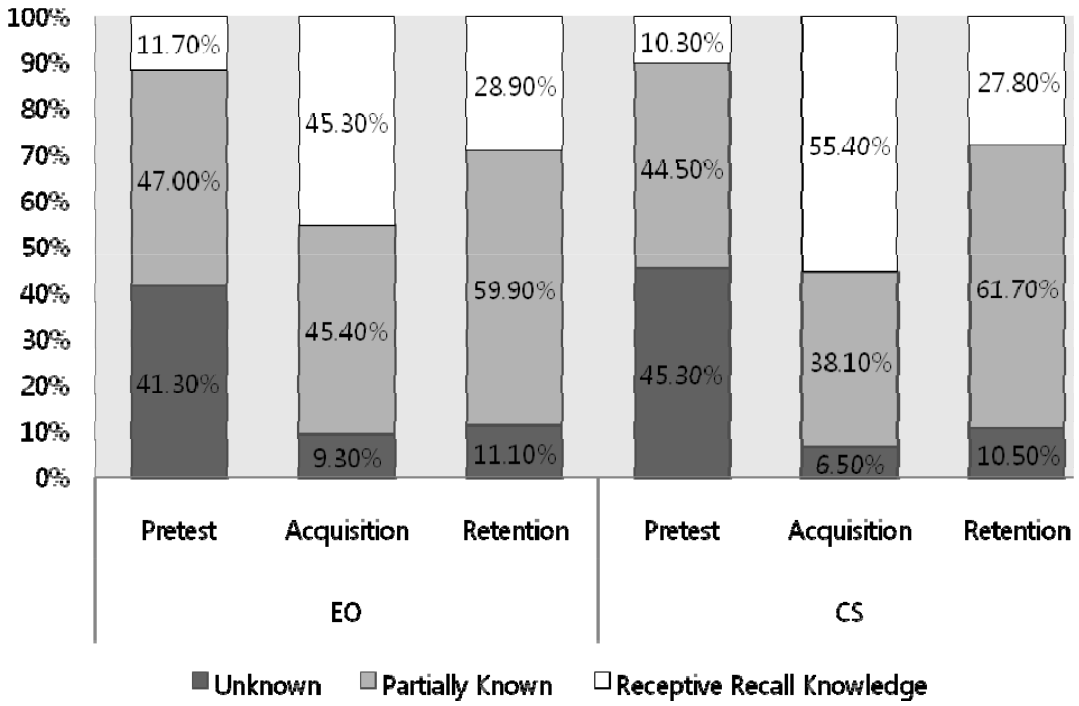


Figure 4.1 Adult learners: Self-reported development of target vocabulary

As can be shown in Figure 4.1, the two groups generally demonstrated similar patterns of change in lexical knowledge, with approximately 90% of the target vocabulary being initially unknown or partially known by both the EO and CS groups. On the other hand, about 10% of the vocabulary was known by the two groups in terms of receptive recall knowledge at the pre-test. After the instructional period, the percentage of receptive recall knowledge for the CS group increased to 55.4%, whereas that for the EO group increased to 45.3% on the acquisition test. However, on the retention test, the percentage of receptive recall knowledge for the two groups decreased to a similar point, with approximately 28% of the target vocabulary being recalled by the EO and CS groups. This loss of receptive recall knowledge, in turn, was reflected in some increase in partially known words, from 45.4% on the acquisition test to 59.9% on the retention test for the EO group and from 38.1% on the acquisition test to 61.7% on the retention test for the CS group. In brief, the overall trend of word gain and loss was

similar for the EO and CS groups, except for a slightly higher increase in receptive recall knowledge for the CS group on the acquisition test.

4.5.2 Adult Learners: Comparative Effectiveness of Instructional Types

The descriptive statistics for the EO and CS groups in the adult-learners category for each set of VKS tests and MC tests are respectively presented in Table 4.12 and 4.13. As noted in section 4.4.1 and 4.4.2, the battery of VKS tests and MC tests respectively aimed to measure the learners' receptive-recall and receptive-recognition knowledge of the target vocabulary at different points in time.

Table 4.12 Adult learners: Descriptive statistics of pre-test, acquisition and retention tests in VKS format for the two groups

Group	Test	Mean (SD)	Range	Max (Theoretical Max: 64)
EO (n = 144)	Pre-test (VKS)	11.02 (6.72)	28	28
	Acquisition (VKS)	30.58 (12.40)	54	55
	Retention (VKS)	21.83 (9.37)	39	41
CS (n = 142)	Pre-test (VKS)	9.78 (7.58)	28	28
	Acquisition (VKS)	36.65 (14.78)	58	62
	Retention (VKS)	21.14 (11.14)	51	51

Table 4.13 Adult learners: Descriptive statistics of acquisition and retention tests in MC format for the two groups

Group	Test	Mean (SD)	Range	Max (Theoretical Max: 64)
EO (n = 144)	Acquisition (MC)	44.70 (8.95)	42	62
	Retention (MC)	38.91 (10.16)	49	58
CS (n = 142)	Acquisition (MC)	47.57 (9.92)	43	63
	Retention (MC)	40.49 (10.28)	44	60

As mentioned in section 3.3.9 in the Methodology chapter, the statistical analysis for the research question of "what is the effect of different instructional types on the vocabulary acquisition and retention of adult freshmen learners?" employed an ANCOVA procedure, with instructional type (English-only and Code-switching) as a *between-group* variable, the score of the pre-test of vocabulary as a *covariate*, and each vocabulary test administered at different points in time as a *dependent variable*.

Prior to the use of ANCOVA, the assumption of homogeneity of regression slopes was checked with the covariate, which was the score of the vocabulary pre-test. This was to ensure that the *between-group* variable was independent of the covariate to be used in the statistical analysis, which is an important assumption to be met for the ANCOVA procedure. For example, if the overall relationship between the pre-test score (covariate) and the vocabulary score after the instructional period (dependent variable) differs between the EO and CS groups, the assumption of homogeneity of regression slopes is consequently not tenable. To test this assumption, ANCOVA with the covariate and two dependent variables (the VKS scores on the acquisition and retention tests) were run respectively by using a customized model in the SPSS. In doing so, the interactions between each covariate and a fixed factor (instructional type) were inspected (i.e

*condition*covariate* column in the SPSS output). The results showed that the interactions were not significant ($p > .05$), indicating that the assumption of homogeneity of regression slopes had not been violated.

The other assumptions which need to be met for the use of ANCOVA were "normally distributed data" and "homogeneity of variance." In terms of normality, the two groups' scores on the VKS post-tests were normally distributed and approximately symmetrical. As for the homogeneity of variance, the results of Levene's test indicated that the variances of the two groups were equal for the retention VKS test ($p = .063$), but not for the acquisition VKS test ($p = .034$). However, when dividing the variances of the two groups, the resulting value was less than 2 (1.42); thus, the difference in variance between the two groups on the acquisition VKS test was not of serious concern (Field, 2005).

A one-way ANCOVA indicated that there was a strong relationship between the covariate and the VKS tests, F (1, 283) = 285.58, $p < .01$ for the acquisition test and F (1, 283) = 316.16, $p < .01$ for the retention test. There was also a significant effect for instructional type on the acquisition VKS scores, F (1, 283) = 45.81, $p < .01$, partial η^2 = .139. In contrast, there was no significant effect for instructional type on the retention VKS scores after controlling for the vocabulary pre-test scores, F (1, 283) = .523, $p > .05$, partial $\eta^2 = .002$. These results demonstrated that the effect of the instructional type on receptive recall of vocabulary was short-term. In other words, for the adult learners, the CS instruction was more effective for vocabulary acquisition in terms of receptive recall than the EO instruction, but not for vocabulary retention. Figure 4.2, which illustrates the performance of the two groups in the adult-learners category on the battery of VKS tests over time, further confirms that the CS group scored higher than the EO group on the acquisition test, whereas the two groups were very similar in their scores on the retention

test.

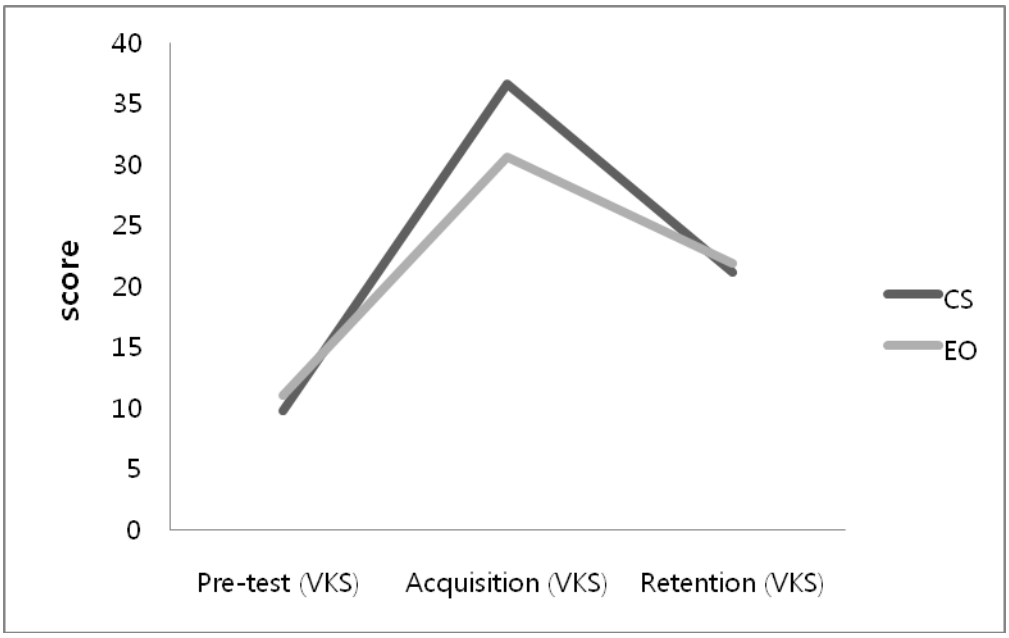


Figure 4.2 Adult learners: VKS vocabulary scores over time

The same statistical procedure was employed with a battery of MC tests. It should be mentioned again that the pre-test of vocabulary in the VKS format also served as a covariate in the ANCOVA with the MC test scores, as the pre-test of vocabulary in the MC format was not administered. ANCOVA with the covariate and two dependent variables (the acquisition and retention MC test scores) were run respectively by using a customized model in the SPSS to test the assumption of homogeneity of regression slopes. The results showed that the assumption of homogeneity of regression slopes had not been violated ($p > .05$). In addition, the two groups' scores on these MC tests were normally distributed, and Levene's test showed that there was no significant difference in variances between the two groups ($p = .257$ for the acquisition test and $p = .905$ for the retention test).

A one-way ANCOVA demonstrated that there was a strong relationship between

the covariate and two MC tests, F (1, 283) = 195.60, $p < .01$ for the acquisition test and F (1, 283) = 248.10, $p < .01$ for the retention test. Most importantly, there was a significant effect for instructional type on the acquisition MC scores, F (1, 283) = 20.52, $p < .01$, partial $\eta^2 = .068$. There was also a significant effect for instructional type on the retention MC scores after controlling for the vocabulary pre-test score, F (1, 283) = 9.85, $p < .01$, partial $\eta^2 = .034$. Although this effect size is rather small, it is noteworthy that the effect of the instructional type on receptive recognition of vocabulary was long-term and not just temporary. To put it another way, the CS instruction yielded more vocabulary acquisition and retention for the adult learners in terms of receptive recognition than the EO instruction. Figure 4.3 graphically presents the performance of the two groups on the battery of MC tests over time, showing that the adult CS group performed better than its EO counterpart on both the acquisition and retention MC tests.

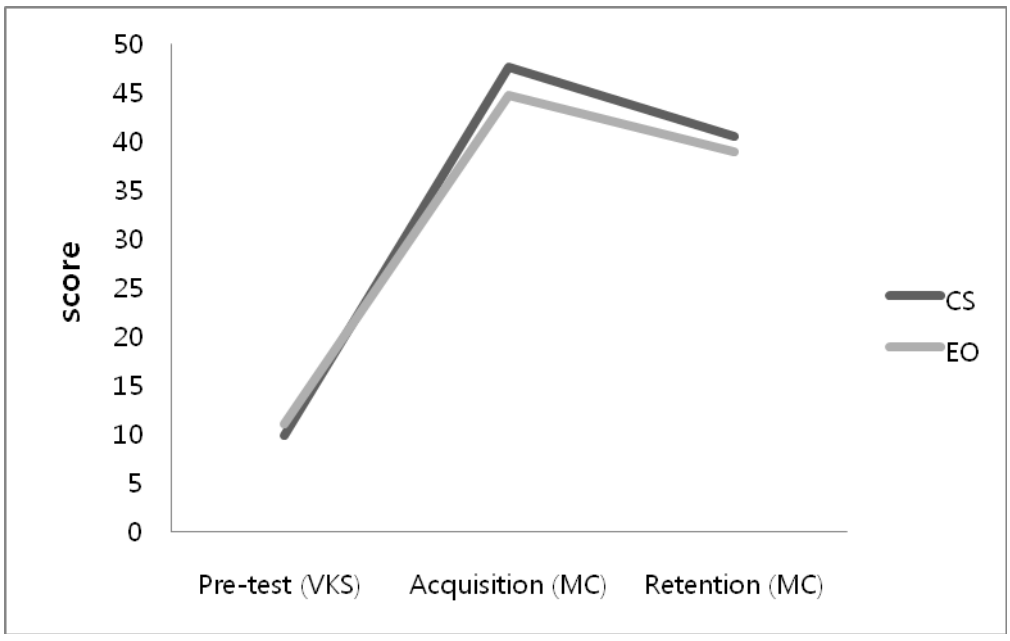


Figure 4.3 Adult learners: MC vocabulary scores over time

4.6 Young Learners: Effects of Different Instructional Types on Vocabulary Acquisition and Retention

The overall structure of this section is identical to the previous section (Section 4.5), which was concerned with the results of the vocabulary tests for the adult learners. In the present section, the research question of "what is the effect of different instructional types on the vocabulary acquisition and retention of young learners?" is dealt with, using the same statistical procedures employed in the previous section with the adult learners.

4.6.1 Young Learners: Self-reported Development of Target Vocabulary

As in the case of the adult learners, the present section begins by reporting the patterns of change in vocabulary knowledge, as self-reported by the young learners. Figure 4.4 illustrates an overall picture of the vocabulary knowledge for the English-only (EO) and Code-switching (CS) groups across three testing points.

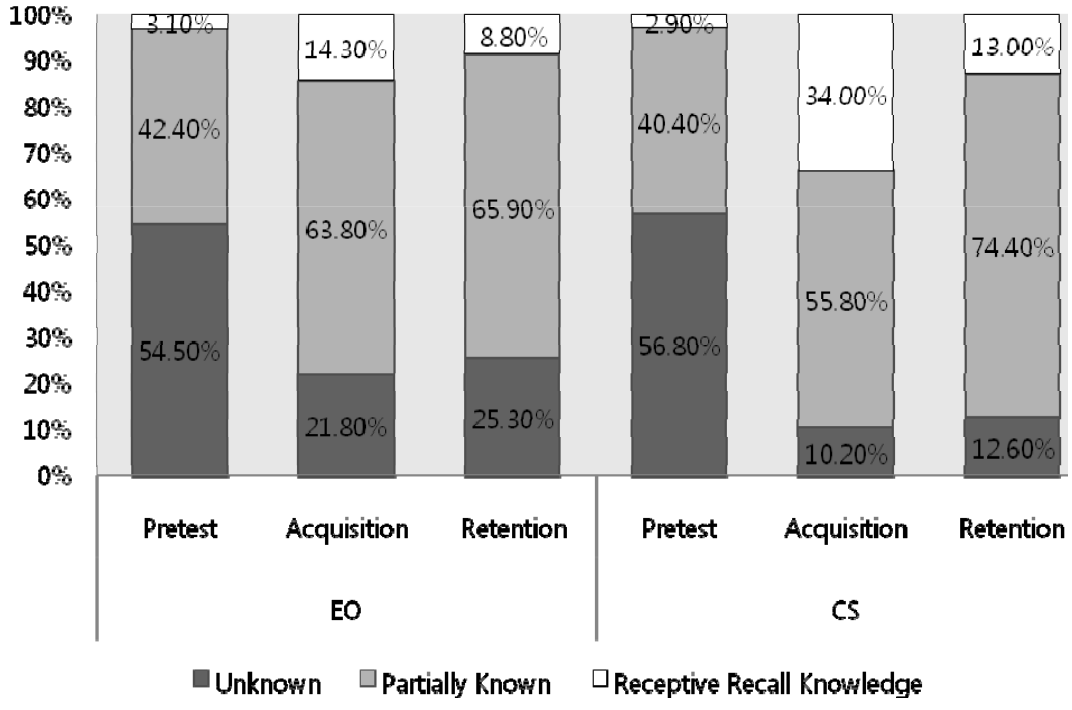


Figure 4.4 Young learners: Self-reported development of target vocabulary

Figure 4.4 illustrates that the percentage of unknown or partially known vocabulary was very high for both the EO and CS groups, with approximately 55% and 40% of the target vocabulary items respectively being unknown and partially known. After the instructional period, the percentage of receptive recall knowledge of the target vocabulary for the CS group increased from 2.9% on the pre-test to 34.0% on the acquisition test, whereas there was only a gain of 11.2% for the EO group, with 14.3% of the vocabulary items being receptively recalled on the same test. For the CS group, the percentage of receptive recall knowledge decreased from 34.0% on the acquisition test to 13.0% on the retention test, with a loss of 21% in receptive recall knowledge. This loss resulted in an increase in partially known words, from 55.8% on the acquisition test to 74.4% on the retention test. For the EO group, there was a slight loss of 5.5% in receptive recall knowledge, which was, in turn, reflected in a small increase in partially known words, from 63.8% on the acquisition test to 65.9% on the retention test. In brief, the CS condition resulted in a higher percentage of partially known vocabulary and receptively known vocabulary than the EO condition three weeks after the instructional period had ended.

4.6.2 Young Learners: Comparative Effectiveness of Instructional Types

The descriptive statistics for the EO and CS groups in the young-learners category for each set of VKS tests and MC tests are respectively presented in Table 4.14 and 4.15.

Table 4.14 Young learners: Descriptive statistics of pre-test, acquisition and retention tests in VKS format for the two groups

Group	Test	Mean (SD)	Range	Max (Theoretical Max: 56)
EO (n = 220)	Pre-test (VKS)	1.75 (2.77)	15	15
	Acquisition (VKS)	8.03 (9.79)	45	45
	Retention (VKS)	4.93 (6.18)	28	28
CS (n = 223)	Pre-test (VKS)	1.60 (2.72)	15	15
	Acquisition (VKS)	19.06 (15.92)	56	56
	Retention (VKS)	7.28 (7.47)	30	30

Table 4.15 Young learners: Descriptive statistics of acquisition and retention tests in MC format for the two groups

Group	Test	Mean (SD)	Range	Max (Theoretical Max: 56)
EO (n = 220)	Acquisition (MC)	24.02 (9.97)	44	53
	Retention (MC)	21.12 (7.92)	40	48
CS (n = 223)	Acquisition (MC)	32.38 (10.67)	44	55
	Retention (MC)	26.15 (8.90)	44	52

As in the case of the adult learners, there were statistical assumptions to be examined prior to running the ANCOVA. To begin with, the assumption of homogeneity of regression slopes was checked with the covariate (see section 4.5.2 for the details of this statistical procedure), and the results showed that the interactions between the scores on the pre-test of vocabulary and the *between-group* variable (the instructional type) on both the acquisition and retention VKS tests were not significant ($p > .05$), indicating that the assumption of homogeneity of regression slopes had not been violated.

On the other hand, the two groups' scores on the acquisition and retention VKS

tests were rather positively skewed, which means that their scores were clustered toward the low end of the scale. Furthermore, the Levene's tests showed that there were significant differences in variances between the two groups ($p < .01$ for the VKS acquisition test and $p < .01$ for the retention test), although the latter did not pose a serious problem of unequal variance, with the dividing values of larger variance and smaller variance being less than 2 (1.46) (Field, 2005). In brief, the assumptions regarding the normality and homogeneity of variance were somewhat violated for the VKS dataset for the young learners.

While these violations seem to be absolute signs for the use of non-parametric tests, it should be noted that there are a few characteristics of the present experimental design which suggest not abandoning the use of a parametric test (i.e. ANCOVA in this case). According to Sani and Todman (2006), while the violations of the normality and homogeneity of variance are important criteria in considering the use of non-parametric tests, they also note that the matter of violations to these assumptions may be more serious when 1) the sample size is small (e.g. less than 20 per group), 2) the group size per condition is unequal, and 3) the shapes of non-normal distribution of the groups differ from each other. None of these are applicable to the quasi-experimental design of the present study. That is, the sample size per group in the current design was more than 100 and nearly equal between the two groups ($n = 220$ and 223 for the two groups). Furthermore, the shapes of the non-normal distribution of the two young-learner groups were similar to each other in the case of the VKS tests (i.e. both positively skewed). Of course, this is by no means to say that the parametric tests can safely be used in the face of some of the violations mentioned above. Rather, the part of this section related to the VKS tests will present the results of both a parametric test (i.e. the ANCOVA procedure with instructional type as a *between-group* variable and the pre-test of vocabulary score

as a *covariate*) and a non-parametric test (i.e. the Mann-Whitney test, comparing the performances of the EO and CS groups in the young-learners category on the VKS tests based on their ranks), using the same dataset. If the results of the two tests are equivalent, the results of the ANCOVA (i.e. the parametric test) will be read with more credibility and reliability despite some violation of the assumptions pointed out above.

As for the parametric test, a one-way ANCOVA indicated that there was a strong and positive relationship between the covariate and both VKS tests, F (1, 440) = 260.01, $p < .01$ for the acquisition test and F (1, 440) = 686.03, $p < .01$ for the retention test. Furthermore, there was a significant effect for instructional type on the acquisition VKS score after controlling for the effect of the vocabulary pre-test score, F (1, 440) = 132.04, $p < .01$, partial $\eta^2 = .231$. A significant effect for instructional type was also found on the retention VKS score after controlling for the vocabulary pre-test score, F (1, 440) = 41.93, $p < .01$, partial $\eta^2 = .087$. The results of the Mann-Whitney test (the non-parametric test) corroborated those of the ANCOVA in the sense that there were significant differences between the EO and CS groups for the acquisition VKS test (U = 13652.50, $p < .01$, r = -.39) as well as the retention VKS test (U = 20020.50, $p < .01$, r = -.16), with the medians of the CS group on these tests (*Mdn* = 15.00 for the acquisition test and *Mdn* = 5.00 for the retention test) being higher than those of the EO group (*Mdn* = 4.00 for the acquisition test and *Mdn* = 3.00 for the retention test). In summary, for the young learners the CS instruction yielded more vocabulary acquisition and retention in terms of receptive recall than the EO instruction did.

Figure 4.5 illustrates the performance of the two groups in the young-learners category on the battery of VKS tests over time, with the EO and CS groups being very similar in terms of their scores on the pre-test, but the CS group scoring higher on both acquisition and retention VKS tests than the EO group.

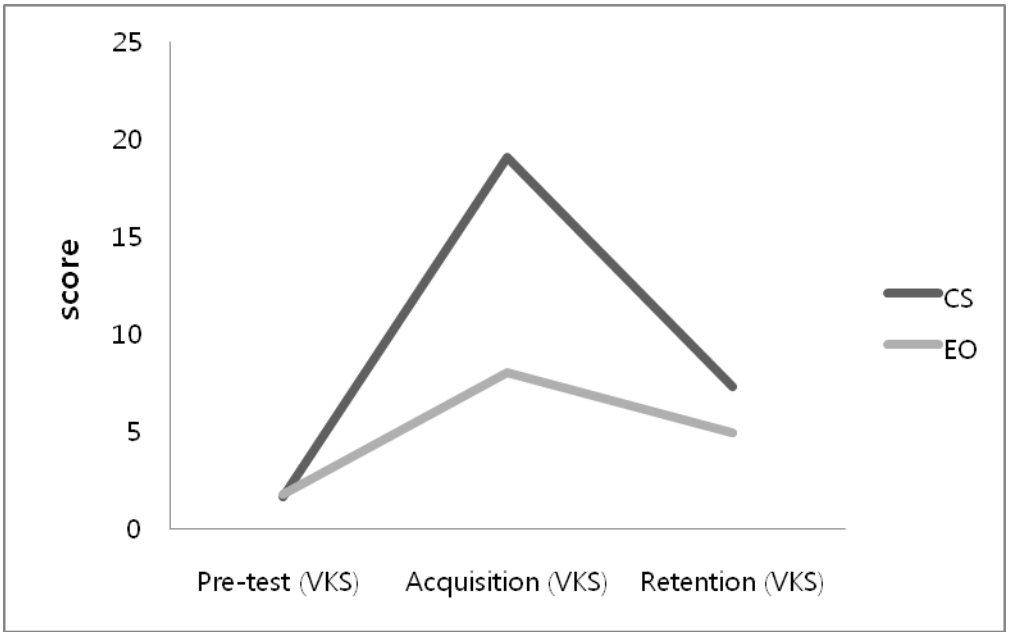


Figure 4.5 Young learners: VKS vocabulary scores over time

ANCOVA procedures with the covariate and two dependent variables (acquisition and retention MC test scores) were run respectively to test the assumption of homogeneity of regression slopes, and the results of the interaction between the covariate and the *between-group* variable showed that the assumption had not been violated ($p > .05$). In terms of normality, the two groups' scores on the MC post-tests were by and large normally distributed. As for the homogeneity of variance, the results of Levene's test indicated that the two groups' variances were equal for the acquisition MC test ($p = .234$), but not for the retention MC test ($p = .044$). However, when dividing the variances of the two groups, the resulting value was less than 2 (1.26); thus, the difference in variance between the two groups on this test was not a serious concern (Field, 2005). As the several assumptions were met, a parametric test (i.e. ANCOVA) was used with the MC post-tests.

As in the case of the VKS tests, ANCOVA demonstrated a strong relationship between the covariate and the two MC tests, F (1, 440) = 297.78, $p < .01$ for the

acquisition test and F (1, 440) = 278.26, $p < .01$ for the retention test. There was also a significant effect for instructional type on the young learners' performance on the MC tests while controlling for the effect of the pre-test score, F (1, 440) = 132.02, $p < .01$, partial $\eta^2 = .231$ for the acquisition test and F (1, 440) = 71.66, $p < .01$, partial $\eta^2 = .140$ for the retention test. Hence, the CS instruction resulted in more vocabulary acquisition and retention in terms of receptive recognition compared to the EO instruction. Figure 4.6, a line-graph of the MC tests, confirms the above results, with the CS group scoring higher than the EO group on the two MC post-tests.

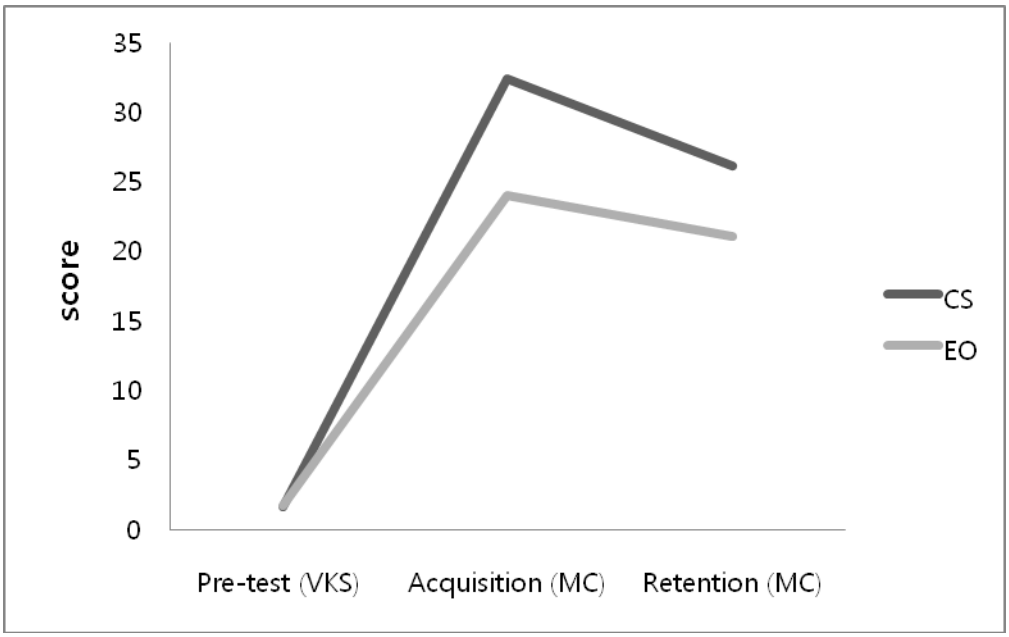


Figure 4.6 Young learners: MC vocabulary scores over time

4.7 Relative Effects of Instructional Type for the Adult and Young Learners

Having discussed the statistical results of the vocabulary tests for the two age groups separately, the next part of this chapter draws on the results of both the adult and young learners together, examining the research question of "are there any differential effects of

instructional type on vocabulary acquisition and retention between the adult and young learners?" It was mentioned in the Methodology chapter that this research question should not be seen as an attempt to compare the two age groups in a direct manner or to further carry out another inferential statistics analysis. Rather, this comparison aims to provide pedagogical implications regarding teachers' use of Code-switching (CS) for L2 teaching practitioners concerned with the education of adult and young learners.

As a criterion for this comparison, partial η^2 (eta squared) was selected as it is an informative and objective value which "can allow comparisons…across a range of different studies with different sample sizes" (Mackey and Gass, 2005, p. 283). Although we are not comparing different studies here but rather two subsets of a single study (one with adult learners and the other with young learners), partial η^2 will also do justice to this comparison.

Table 4.16 summarizes the respective effect size of instructional type on the two different types of knowledge for both age groups. These values are the same ones generated through the one-way ANCOVA in section 4.5.2 and 4.6.2.

Table 4.16 Respective effect size of instructional type for the adult and young learners

	Receptive Recall		Receptive Recognition	
	Acquisition	Retention	Acquisition	Retention
Adult Learners	.139**	.002	.068**	.034**
Young Learners	.231**	.087**	.231**	.140**

** $p < .01$

Using Cohen's (1988) guideline on the magnitude of the effect size (.01 =

small; .06 = medium; .138 = large), Table 4.16 shows that instructional type had a large effect on the young learners for the acquisition of receptive recall (partial $\eta^2 = .231$), receptive recognition (partial $\eta^2 = .231$) and the retention of receptive recognition (partial $\eta^2 = .140$). It also had a medium effect for the retention of receptive recall (partial $\eta^2 = .087$). These results sharply contrast with those of the adult learners. That is, instructional type had a large effect on the adult learners only for the acquisition of receptive recall (partial $\eta^2 = .139$), whereas it had a medium effect on the acquisition of receptive recognition (partial $\eta^2 = .068$) and a small effect on the retention of receptive recognition (partial $\eta^2 = .034$). Indeed, Table 4.16 shows that the ANCOVA for the retention of receptive recall did not even reach statistical significance in the case of the adult learners (see section 4.5.2). Therefore, on average, the effect sizes of the instructional types were much larger for the young learners than the adult learners, implying that teacher CS had a more positive effect on the vocabulary learning of the young learners than that of the adult learners regardless of the type of knowledge and time of assessment. This finding fits in well with the hypotheses (or predictions) generated in section 2.5.2 in light of the Revised Hierarchical Model (Kroll and Stewart, 1994) and Cummins' Interdependence Hypothesis (1980b), which point to the limited L2 proficiency of young learners and a potentially more positive value of teacher CS for their L2 learning. Also, it supports the prediction made from the "learning expertise and strategy" literature that the young learners with limited L2 strategies may be able to cope with L2-only instruction in L2 learning less effectively than their adult counterparts.

Given the consistent pattern of higher effect sizes for the young learners over the adult learners, the two most noticeable differences in effect size between the two age groups were found in the acquisition of receptive recognition knowledge and the

retention of receptive recall knowledge. As with the retention of receptive recall knowledge, although the effect size for the young learners in this area of knowledge was smaller than that in other areas (partial $\eta^2 = .087$), it is noteworthy that the effect size for the adult learners in the same area was trivial. As stated above, this was the only area which was not statistically significant at the .05 level in ANCOVA. This indicates that the relative effects of the two instructional types on this area for the adult learners were not discernible.

On the other hand, the acquisition of receptive recognition knowledge, another area which showed a noticeable difference, demonstrated the largest divergence in effect size between the two age groups (partial $\eta^2 = .068$ for the adult learners and partial $\eta^2 = .231$ for the young learners). This result demonstrates that there were significantly different effects for EO instruction and CS on the acquisition of receptive recognition of vocabulary for the adult and young learners.

A similar pattern between the two age groups was also found with the relative magnitude of effect size due to instructional type for different areas of knowledge. That is, the strength of the effect sizes for the different types of vocabulary knowledge was, in descending order: the acquisition of receptive recall, the acquisition of receptive recognition, the retention of receptive recognition and the retention of receptive recall for both adult and young learners. This result indicates that the relative effect of teacher CS and EO instruction is more evident in the acquisition of vocabulary than in the retention of vocabulary, with teacher CS generally leading to greater acquisition of knowledge.

4.8 Effects of Instructional Type and English Proficiency

Up to this point, none of the statistical analyses were concerned with the general English proficiency test, except for its role in the preliminary analysis to ensure that the English-

only (EO) and Code-switching (CS) groups were comparable with each other at the outset of the study in terms of their English proficiency. However, it is reasonable to assume that learners' English proficiency would have had some bearing on their vocabulary learning in the context of the present study. In other words, instructional type (i.e. EO instruction and teacher CS) might not have acted in isolation. It follows then that the participants' performance on the English proficiency test, which was of high reliability and properly designed for our target population (see section 3.3.6.1 and 4.2.1), may have accounted for a significant amount of variance in the learning outcome, vocabulary learning in the case of the present study.

To this end, a multiple regression analysis was carried out as a *post-hoc* approach to investigate whether the score on the general English proficiency test (TOSEL) was predictive of, or significantly related to the score of each post-test of vocabulary. However, the main purpose of using the multiple regression analysis was to investigate the research question, "is instructional type still a significant predictor of vocabulary acquisition and retention, for both age groups, while controlling for the effect of English proficiency?" If instructional type were found to be still significant after controlling for the effect of English proficiency, an argument for the positive effect of CS would become more tenable (although the multiple regression analysis in itself cannot prove the *effect* of an independent variable).

While the participants' score on the basic vocabulary test (their score on the group of distractors in the baseline vocabulary test, see section 4.2.2) could have also been considered as a potential predictor to account for the variance in the learning outcome, this variable was excluded from the multiple regression analyses for the two following reasons. First, the distractor words included in the baseline vocabulary test were not systematically pooled from any official word-lists (e.g. the academic

vocabulary list), but were a group of relatively common words, most of which were expected to be known to the participants at the outset of the study. Second, the number of the distractor words was rather small (n = 20 for the adult learners and n = 12 for the young learners) and thus they could not serve as an independent and reliable test of vocabulary. Hence, although the participants' score on the basic vocabulary test might explain some amount of the variance in the criterion variable, this result might not be a reliable one.

In total, four multiple regression analyses were carried out for each age group, respectively with each vocabulary post-test (VKS acquisition test, MC acquisition test, VKS retention test, MC retention test). The predictors were English proficiency test score and instructional type (i.e. English-only instruction and code-switching), as mentioned above.

4.8.1 Preliminary Analyses

Following the guidelines of Field (2005), several assumptions were checked as part of the preliminary analyses, before moving on to the stage of data interpretation. First, the Durbin-Watson statistic was checked for the assumption of independent errors. The values all ranged between 1.39 and 2.01, and thus the assumption was met for regression methods. Then, the VIF values from the coefficients tables in the SPSS output were scrutinized in order to see whether the assumption of multicollinearity was tenable for our dataset. All the values were in the range of 1.005 and 1.01, indicating no multicollinearity in our data. Next, the graphs of ZRESID (the standardized residuals) plotted against ZPRED (the standardized predicted values of the dependent variable based on the model) and histograms of the residuals were checked to see whether there was heteroscedasticity or the non-normality of residuals in the data. Overall, the points in

the plots of standardized residuals against standardized predicted values were randomly dispersed, and the histograms of residuals generally had the shape of approximate normal-distribution (bell-shaped curve) except for the cases of the VKS acquisition and retention tests for the young learners. That is, in the graphs of ZRESID plotted against ZPRED for these tests, the data showed a rather restricted range on the bottom-left side of the graph, indicating that the assumption of homoscedasticity was broken. This result was more or less an expected one, in view of the violations of assumptions inherent in these datasets (see section 4.6.2 for details). Hence, the results of the regression models with these two tests for the young learners may be read with some caution.

4.8.2 Relative Importance of Instructional Type and English Proficiency in Vocabulary Acquisition and Retention of the Adult and Young Learners

In this section, the results of the multiple regression analyses will be presented, with a focus on examining the relationship between the predictors mentioned above and learning outcome (i.e. vocabulary learning). Due to the lack of space, a summary of the regression analyses and reports will be provided, with a focus on the relative importance of English proficiency and instructional type as predictor variables in accounting for the amount of the vocabulary learning between adult and young learners (see Appendix I for the full report of each regression model).

Table 4.17 summarizes the beta (β) values – standardized regression coefficients – for instructional type and English proficiency for all dependent variables (i.e. post-tests of vocabulary). These values serve as the criterion measure for the magnitude of importance for each variable (or predictor). An asterisk attached to a beta value indicates the significance of the *t*-test associated with that particular predictor, which in turn indicates whether the predictor made a significant contribution to the regression model.

Table 4.17 Beta values for instructional type and English proficiency for both age groups

		Receptive Recall		Receptive Recognition	
		Acquisition	Retention	Acquisition	Retention
Adult	Instructional type	.27**	.01	.20**	.12*
Learners	English proficiency	.70**	.56**	.70**	.63**
Young	Instructional type	.40**	.19**	.40**	.31**
Learners	English proficiency	.62**	.72**	.68**	.65**

Note * $p < .01$ **$p < .001$.

As can be seen from Table 4.17, English proficiency contributed significantly in accounting for the amount of the variance in the criterion variables, in the case of both the adult and young learners, with its beta values ranging from $\beta = .56$ to $\beta = .72$. Not only was it a significant predictor in all the regression models for both age groups (when instructional type was statistically controlled), but also it consistently had a higher degree of importance in the models than instructional type. In addition, it had fairly comparable degrees of importance for the adult and young learners, regardless of the time of assessment and the different types of the tests. In sum, this result indicates that the Korean EFL learners' vocabulary acquisition and retention in this quasi-experimental study was significantly and positively related to their English proficiency, with no large difference being found between the two age groups in terms of the strength of the relationship between English proficiency and the set of post-tests.

More importantly, instructional type was still a significant predictor while holding constant the effect of English proficiency (except for the acquisition of receptive recall for the adult learners). The positive beta values for instructional type indicate that the Code-switching (CS) group scored higher on the post-tests of vocabulary than its

English-only (EO) counterpart. The relative magnitude of the beta values for instructional type for the two age groups generally mirrored that of the effect sizes for instructional type generated through the ANCOVA procedures in section 4.5.2 and 4.6.2. The beta values for instructional type were larger for the young learners (ranging from β = .19 to β = .40) than for the adult learners (ranging from β = .01 to β = .27), suggesting that the CS group in the young-learners category performed better than its EO counterpart to a larger extent than the CS group in the adult-learners category did. Also, instructional type was not significantly related to the adult learners' retention of recall knowledge when English proficiency was statistically controlled, as can be seen in Table 4.17 (β = .01, p > .05), indicating that there was no significant difference between the adult CS and EO groups on this knowledge (which corresponded to the result of the ANCOVA in section 4.5.2.). For both the adult and young learners, instructional type was more strongly related to the scores of the acquisition tests than to those of the retention tests.

The two predictors (i.e. instructional type and English proficiency test), combined together, explained a significant percentage of the variance in the scores of the post-tests of vocabulary for the adult learners. The results of the regression analyses revealed that the amount of variance explained for the retention tests (31.1% for the VKS and 39.6% for the MC) was slightly lower than that for the acquisition tests (53.7% for the VKS and 50.8% for the MC). It appears that this result may be due to the fact that the retention tests might have been further influenced by other memory-related or external factors which have not been identified. On average, the two predictors accounted for 43.8% of the variance in the four criterion (dependent) variables.

Likewise, the two predictors explained a significant percentage of the variance in the scores of the post-tests of vocabulary for young learners. As in the case of the

adult learners, the amount of variance explained by the two predictors for the retention tests (54.7% for the VKS and 49.8% for the MC) was slightly lower than that for the acquisition tests (53.5% for the VKS and 59.8% for the MC). Still, the two predictors together accounted for 54.5 % of the variance in the four criterion (dependent) variables on average, which was approximately 10% higher than for the adult learners (43.8%).

4.9 Relationship between Word Variables and Vocabulary Learning

So far we have examined the following independent variables and their relationships with the adult and young learners' vocabulary acquisition and retention: instructional type and general English proficiency. In this section, another *post-hoc* analysis for the relationships between word-related variables and the two age groups' vocabulary gains will be presented, with an overarching research question of "are there relationships between intrinsic word properties and the gains for each target word?" As mentioned in section 3.3.9, a multiple regression method was used to examine these relationships, with the word-related variables being independent variables and the mean gain for each target word[3] (i.e. the average of the test scores across the participants for each word) being the dependent variable; thus, each word, not each participant, was the unit of analysis here.

The working hypotheses based on previous research concerning these word-related variables were as follows (see section 2.4.2.1 for the relevant literature):

1) The words with smaller numbers of letters will be better acquired and retained than those with larger numbers of letters,

2) The high imageability words (more concrete words) will be better acquired and retained than the low imageability words (more abstract words),

3) Nouns will be better acquired and retained than non-nouns,

4) Single words will be better acquired and retained than lexical strings.

Before the multiple regression methods were performed, target words which were already known by more than 20% of the total participants at the outset of the study (as measured by the pre-test of vocabulary) were excluded in these analyses.

4.9.1 Preliminary Analyses

Several assumptions were checked as part of preliminary analyses, prior to the data interpretation. First, the Durbin-Watson statistic was checked for the assumption of independent errors. All the values ranged between 1.2 and 2.2, and thus the assumption was generally met for regression methods. Then, the VIF values from the coefficients tables in the SPSS output were scrutinized in order to see whether the assumption of multicollinearity was tenable for our dataset. All the values were in the range of 1.4 to 1.8, indicating no serious multicollinearity in our data. Next, the graphs of ZRESID plotted against ZPRED and histograms of the residuals were checked to see whether there was heteroscedasticity or the non-normality of residuals in the data. Overall, the points in the plots of standardized residuals against standardized predicted values were randomly dispersed, and the histograms of residuals generally had the shape of normal-distribution.

4.9.2 Word Analysis for the VKS Acquisition Tests

Table 4.18 and 4.19, respectively concerning the adult and young learners, present both Pearson correlations between the word-related variables and the mean gain for each word on the VKS acquisition test, and the results of multiple regression models with the word-related variables as predictors. In the first column in Table 4.18 (and for all other tables in this section), r, B, and β respectively indicate *Pearson correlation*, *unstandardized regression coefficients* and *standardized regression coefficients*. Here, the correlation

between the dummy coded variables (i.e. *word class* and *single words - lexical string*) and mean gain for each word is indeed a *point-biserial* correlation (r_{pb}), which is a specialized correlation between dichotomous and continuous variables (Urdan, 2005). While the SPSS does not have a menu for the computation for the *point-biserial* correlation, Weinberg and Abramowitz (2002) suggest that "the Pearson will give the identical numerical result as the point biserial correlation coefficient" (p. 141). For this reason, the Pearson's correlation coefficient was also used for the correlations between these dummy coded variables and the mean gain for each word.

Table 4.18 Adult learners: Word analysis for the VKS acquisition test

	r	*B*	*SE B*	*β*
Constant	N/A	.37	.09	
Word length	-.19	-.004	.01	-.07
Concreteness of words	.45**	.03	.02	.40*
Word class	.27*	.03	.05	.11
Single words - lexical string	-.08	.03	.05	.13

Note adjusted $R^2 = .14$* $n = 44$ words. * $p < .05$ ** $p < .01$

Table 4.19 Young learners: Word analysis for the VKS acquisition test

	r	*B*	*SE B*	*β*
Constant	N/A	.12	.06	
Word length	.03	-.002	.01	-.01
Concreteness of words	.31*	.03	.01	.36*
Word class	.13	.01	.04	.03
Single words - lexical string	.15	.07	.04	.28

Note adjusted $R^2 = .08$ $n = 53$ words. * $p < .05$

As can be seen from Table 4.18 and 4.19, the concreteness of words was

significantly and positively correlated to the the mean gain for each word for both the adult and young learners (r = .45 and .31, respectively). That is, the high imageability words (more concrete words) were better recalled on the acquisition test than the low imageability words (less concrete words). In the case of the adult learners, word class was also positively but weakly correlated to the mean gain for each word (r_{pb} = .27), although this effect disappeared while controlling for the effects of the other word-related variables in the multiple regression model. In view of the coding scheme for word class (noun = 1, non-noun = 0), a positive sign for the point-biserial coefficient indicates that high values of mean gain were associated with the entity with the higher value in the coding scheme (here, nouns); thus, nouns were better recalled on the acquisition test than non-nouns for the adult learners. However, this interpretation should be read with some caution because of the low magnitude of the coefficient. Such an effect was not found for the young learners. In the case of the adult learners, a significant model emerged for the VKS acquisition test: F (4, 39) = 2.68, $p < .05$, with the model explaining 14% of the variance in the criterion variable (i.e. mean gain for each word), when errors associated with the predictor variables were adjusted. On the other hand, the regression model for the young learners did not reach statistical significance at the .05 level (p = .08).

4.9.3 Word Analysis for the MC Acquisition Tests

Table 4.20 and 4.21, respectively concerning the adult and young learners, show both Pearson correlations between the word-related variables and the mean gain for each word on the MC acquisition test, and the results of multiple regression models with the word-related variables as predictors.

Table 4.20 Adult learners: Word analysis for the MC acquisition test

	r	*B*	*SE B*	*β*
Constant	N/A	.52	.11	
Word length	-.02	.01	.01	.19
Concreteness of words	.30*	.03	.02	.30
Word class	.23	.01	.06	.05
Single words - lexical string	-.18	-.05	.06	-.16

Note adjusted R^2 = .04 n = 44 words. * p < .05

Table 4.21 Young learners: Word analysis for the MC acquisition test

	r	*B*	*SE B*	*β*
Constant	N/A	.38	.09	
Word length	-.10	.00	.01	.06
Concreteness of words	.28*	.03	.02	.29
Word class	.13	-.03	.05	-.08
Single words - lexical string	-.18	-.06	.06	-.17

Note adjusted R^2 = .02 n = 53 words. * p < .05

With regard to the MC acquisition test, the concreteness of words was again significantly and positively related to the mean gain for each word for both the adult and young learners (r = .30 and .28, respectively). In other words, the high imageability words (more concrete words) were better recognized on the acquisition test than the low imageability words (less concrete words). However, the concreteness of words was not significantly correlated to the mean gain for each word when the other word-related variables were statistically controlled. On the other hand, the other word-related variables did not produce any significant correlations with the mean gains for each word on the MC acquisition test. The regression model with the four predictors did not reach statistical significance at the .05 level in the case of both the adult and young learners.

In summary, there was some tendency for the high imageability words to be better recalled and recognized than the low imageability words by both the adult and young learners on the acquisition tests. This tendency was slightly more evident in the VKS test than in the MC test. However, the four word-related variables as predictors did not account for a substantial portion of the variances of the mean gains for each word on the acquisition tests. Only the multiple regression model with the VKS acquisition test scores for the adult learners was statistically significant, accounting for 14% of the variance in the criterion variable. To sum up, only the hypothesis regarding the concreteness of words was confirmed.

4.9.4 Word Analysis for the VKS Retention Tests

Table 4.22 and 4.23, respectively concerning the adult and young learners, present both Pearson correlations between the word-related variables and the mean gain for each word on the VKS retention test, and the results of multiple regression models with the word-related variables as predictors.

Table 4.22 Adult learners: Word analysis for the VKS retention test

	r	*B*	*SE B*	*β*
Constant	N/A	.16	.10	
Word length	-.13	-.01	.01	-.11
Concreteness of words	.30*	.03	.02	.35
Word class	.04	-.02	.05	-.07
Single words - lexical string	.07	.05	.05	.21

Note adjusted $R^2 = .04$ $n = 44$ words. * $p < .05$

Table 4.23 Young learners: Word analysis for the VKS retention test

	r	*B*	*SE B*	*β*
Constant	N/A	-.001	.05	
Word length	-.03	-.01	.01	-.17
Concreteness of words	.32**	.03	.01	.41*
Word class	.07	-.01	.03	-.06
Single words - lexical string	.17	.08	.04	.35*

Note adjusted R^2 = .12* n = 53 words. * p < .05 ** p < .01

As can be seen from Table 4.22 and 4.23, the concreteness of words was significantly and positively associated with the mean gain for each word for both the adult and young learners (r = .30 and .32, respectively). In the case of the adult learners, however, the concreteness of words was not significantly related to the mean gains for each word on the VKS retention test while holding constant for the effects of the other word-related variables. The regression model for the adult learners did not reach statistical significance at the .05 level.

On the other hand, the regression model for the young learners was significant: F (4,48) = 2.82, p < .05. The four predictors together accounted for 12% of the total variance, when errors associated with the predictor variables were adjusted (adjusted R^2 = .12). Among these variables, *concreteness of words* and *single word - lexical string* were statistically significant predictors for the mean gain for each word on the VKS retention test (β = .41 and .35 respectively), while controlling for the effects of the other variables. A rather unexpected result was found for the *single word-lexical string* variable. In view of the coding scheme for this variable (single word = 0, lexical string = 1), the positive sign of the point-biserial coefficient indicates that the high values of mean gain for each word were associated with lexical strings, which were coded as the higher number in the coding scheme. That is, lexical strings were better recalled on the

retention test than single words by the young learners. Indeed, the overall percentage of the lexical strings recalled (.12) was, on average, slightly higher than that of the single words (.09). This result was even more interesting in that this variable was not significantly correlated with the mean gain for each word on the VKS acquisition test, indicating that the effect of this variable on the recall of vocabulary for the young learners was only long-term.

4.9.5 Word Analysis for the MC Retention Tests

Table 4.24 and 4.25, respectively concerning the adult and young learners, show both Pearson correlations between the word-related variables and the mean gain for each word on the MC retention test, and the results of multiple regression models with the word-related variables as predictors.

Table 4.24 Adult learners: Word analysis for the MC retention test

	r	*B*	*SE B*	*β*
Constant	N/A	.34	.14	
Word length	.06	.01	.01	.18
Concreteness of words	.28*	.03	.02	.28
Word class	.25	.06	.07	.16
Single words - lexical string	-.03	.01	.07	.03

Note adjusted $R^2 = .04$ $n = 44$ words. * $p < .05$

Table 4.25 Young learners: Word analysis for the MC retention test

	r	*B*	*SE B*	*β*
Constant	N/A	.31	.08	
Word length	-.16	-.001	.01	-.02
Concreteness of words	.30*	.04	.02	.35*
Word class	.08	-.05	.05	-.19
Single words - lexical string	-.21	-.06	.06	-.18

Note adjusted $R^2 = .06$ $n = 53$ words. * $p < .05$

As with the MC retention test, a result similar to the other tests was found. Table 4.24 and 4.25 show that there was a significant correlation between the concreteness of words and the mean gain for each word ($r = .28$ for the adult learners and $r = .30$ for the young learners), although the strength of the correlation was rather weak. It was further found that in the case of the adult learners, the effect of the concreteness of words was cancelled out when the other variables were statistically controlled. The regression models for both the adult and young learners did not reach statistical significance at the .05 level, indicating that the four word-related predictor variables did not explain a significant portion of the variance in the criterion variable.

To sum up, as in the case of the acquisition tests, there was a significant and positive relationship between the concreteness of words and the mean gain for each word for both the adult and young learners on the retention tests. However, the four word-related variables as predictors again did not account for a substantial portion of the variances of the retention test scores. Only the multiple regression model with the VKS retention test scores for the young learners was statistically significant, accounting for 12% of the variability in the criterion variable.

4.10 Comparative Effectiveness of Instructional Types on the Learning of Abstract and Concrete Words

The previous section reported a significant relationship between the concreteness and the mean gain for each word. Having indentified this relationship, it was further hypothesized that there would be some differential effects of teacher Code-switching (CS) and English-only (EO) instruction on the two age groups' learning of words that vary in terms of concreteness. The question here is; does teacher CS bring about more positive outcomes on more abstract (or concrete) words than EO instruction, or vice versa? Also, are there any differential effects of teacher CS on the learning of abstract (or concrete) words for the adult and young learners?

In order to test these questions, the following statistical procedures were carried out: first, the target words which were known by less than 20% of the total participants on the pre-test were selected for the present analysis, as in the case of the *post-hoc* analyses for the relationships between word-related variables and the mean gain for each word (section 4.9). Second, the selected target words were further divided into more abstract words and more concrete words, according to the mean ratings of twelve native speakers of English in terms of the imageability of each target word (see section 3.3.5.1 for details). The target words with a mean rating over 5.0 and those with a mean rating below 3.0 were categorized as concrete and abstract words, respectively. Lastly, the performances of the CS and EO groups on the respective sets of abstract and concrete words were compared using independent *t*-tests in terms of their mean scores; thus, unlike the other parts in section 4.9, each participant, rather than each word, was the unit of analysis here. An effect size (r) was also calculated for each comparison.

Table 4.26 summarizes each adult-learner group's mean scores on the respective set of target words (i.e. abstract or concrete) across four post-tests of vocabulary. A

Bonferroni adjustment was made for the set of post-tests of vocabulary (n = 4), dividing the target p value (.05) by the number of comparisons (independent t-tests in each section) to be made.

Table 4.26 Adult learners: Descriptive statistics of each set of the target words

	Test	Group	Mean	SD
Abstract words (n = 20)	VKS Acquisition	EO	9.06	3.71
		CS	11.37	4.61
	MC Acquisition	EO	12.36	3.27
		CS	13.61	3.67
	VKS Retention	EO	3.52	2.48
		CS	3.88	3.30
	MC Retention	EO	9.79	3.32
		CS	10.59	3.48
Concrete words (n = 7)	VKS Acquisition	EO	3.65	1.73
		CS	4.35	1.63
	MC Acquisition	EO	5.15	1.52
		CS	5.41	1.32
	VKS Retention	EO	2.09	1.38
		CS	1.84	1.31
	MC Retention	EO	4.56	1.58
		CS	4.62	1.56

With regard to the abstract words, the mean of the CS group was significantly higher than that of the EO group on the VKS acquisition test (t (270) = - 4.67, p = 0.001, r = .27) as well as on the MC acquisition test (t (284) = - 3.03, p = 0.003, r = .18). On the other hand, the two groups' means were not significantly different from each other on both retention tests, t (262) = - 1.04, p = 0.29 for the VKS test and t (284) = - 1.99, p = 0.048 for the MC test. Note that the p-value for the MC retention test is higher than the Bonferroni corrected p-value, .0125. In brief, so far as the abstract words are concerned, the CS yielded a significantly higher amount of vocabulary gains for the adult learners

than the EO instruction, only in the short-term.

Slightly different results were found for the concrete words. Except for the VKS acquisition test, there was no significant difference in the means between the EO and CS groups, t (284) = - 1.56, p = 0.12 for the MC acquisition test, t (284) = 1.59, p = 0.11 for the VKS retention test, and t (284) = - .35, p = 0.73 for the MC retention test. The mean of the CS group on the concrete words was higher than that of the EO group on the VKS acquisition test, t (284) = - 3.52, p = 0.001, r = .20. It is interesting to note from Table 4.26 that the mean of the EO group on the retention VKS test (M = 2.09) is indeed higher than that of the CS group (M = 1.84). Although the number of the target words was rather small (n = 7), it appears that the effects of the two types of instruction were generally not different in terms of vocabulary learning of the concrete words.

On the other hand, Table 4.27 summarizes each young-learner group's mean score on the respective sets of target words (i.e. abstract or concrete) across four post-tests of vocabulary.

Table 4.27 Young learners: Descriptive statistics of each set of the target words

	Test	Group	Mean	SD
Abstract words (n = 13)	VKS Acquisition	EO	1.06	1.87
		CS	3.55	3.68
	MC Acquisition	EO	4.87	2.65
		CS	6.93	2.71
	VKS Retention	EO	.21	.58
		CS	.60	1.03
	MC Retention	EO	3.45	1.69
		CS	4.30	2.10
Concrete words (n = 14)	VKS Acquisition	EO	2.00	2.58
		CS	5.36	4.28
	MC Acquisition	EO	6.54	2.84
		CS	9.01	2.72
	VKS Retention	EO	1.26	1.59
		CS	2.04	2.10
	MC Retention	EO	5.92	2.43
		CS	7.49	2.50

As for the abstract words, the means of the CS group were significantly higher than those of the EO group, regardless of the different types of post-tests; the results of the independent *t*-tests showed that the CS group performed significantly better than the EO group on the VKS acquisition test (t (331) = - 9.01, p = 0.001, r = .44), MC acquisition test (t (441) = - 8.07, p = 0.001, r = .36), VKS retention test (t (352) = - 4.88, p = 0.001, r = .25), and MC retention test (t (425) = - 4.67, p = 0.001, r = .22). It can be seen from the above effect sizes (r) that instructional type had a larger effect for the young learners than for the adult learners, in terms of learning the abstract words at the time of the acquisition test.

Similar results were found with the set of concrete words. With regard to the acquisition tests, the means of the CS group were on average significantly higher than those of the EO group on the VKS test (t (365) = - 10.03, p = 0.001, r = .46), and the MC test (t (441) = - 9.33, p = 0.001, r = .41). Likewise, the CS group performed significantly

better than the EO group on both the VKS retention test (t (413) = - 4.42, p = 0.001, r = .21) and MC retention test (t (441) = - 6.71, p = 0.001, r = .30).

In summary, the superiority of CS instruction over EO instruction was consistently found for both sets of concrete and abstract target words across all post-tests of vocabulary, conforming to the other findings regarding the significant effect of the instructional type for the young learners (section 4.6.2).

4.11 Summary

The present chapter began with the results of the general English proficiency test and baseline test of vocabulary to determine whether the Code-switching (CS) and English-only (EO) groups in both age categories were comparable with each other at the outset of the study. This was an important assumption to be met since a randomized control was not part of the naturally occurring design of this quasi-experimental study. It was found that the two groups showed almost identical performance on the English proficiency test and baseline test of vocabulary, enabling us to be fairly confident that the participants in the two groups were homogenous in terms of their level of English proficiency and vocabulary knowledge.

The major findings from this chapter are as follows:

- Both age groups made progress on vocabulary acquisition and retention when they were presented with the systematic Focus on Form (FonF) instruction of vocabulary centred on reading texts.
- CS instruction generally led to a higher amount of vocabulary gain than EO instruction for the adult and young learners (but also leading to a higher degree of attrition in terms of retention of receptive recall knowledge).
- However, some differential effects of instructional type were found for the two

age groups, with the CS instruction being far more effective for the young learners in both the acquisition and retention of vocabulary knowledge.

- Instructional type was still a significant predictor for the two age groups' vocabulary learning while holding constant the effect of English proficiency. Also, English proficiency had strong and positive relationships with the adult and young learners' vocabulary gains (to a similar degree for two age groups).
- *The concreteness of the words* was the only word-related factor affecting the learners' vocabulary gains.
- There were some differential effects of instructional type on the learning of words that vary in terms of their concreteness for the adult and young learners, with the young learners benefiting to a greater degree from teacher CS than the adult learners.

Having seen the major findings of the chapter, the result of each bullet point will be elaborated further below in view of the research questions stated in section 3.2.

The first research question investigated the effect of FonF instruction on the adult and young learners' vocabulary acquisition and retention, examining the effects of form-focused EO and CS instruction, without distinguishing the two. The results showed that both adult and young learners made significant gains in terms of receptive-recall and receptive-recognition knowledge of the target vocabulary after receiving FonF instruction. Furthermore, they still retained a significant amount of these two types of knowledge of the target vocabulary three weeks after the instructional period ended.

Having observed the effect of FonF instruction of vocabulary, the second research question investigated the relative effect of EO and CS instruction on the vocabulary acquisition and retention of the adult freshman EFL learners. The results showed that, while controlling for the learners' initial knowledge of the target vocabulary,

the effect of the instructional type on receptive recall knowledge was short-term, which means that teacher CS yielded better results only for the acquisition of receptive recall, but not for the retention of the same knowledge, in comparison to the EO instruction. On the other hand, the effect of the instructional type on receptive recognition of the target vocabulary for the adult learners was found to be immediate as well as long-term, indicating that the CS instruction yielded more vocabulary acquisition and retention for the adult learners in terms of receptive recognition than the EO instruction.

Subsequently, the third research question examined the relative effect of EO and CS instruction on the vocabulary acquisition and retention of the young EFL learners. In the case of the young learners, the effect of the instructional type on receptive recall of vocabulary was short-term as well as long-term after controlling for the pre-test score, indicating that the CS instruction yielded more vocabulary acquisition and retention in terms of receptive recall than the EO instruction did. Similarly, immediate and long-term effects of instructional type on receptive recognition were also found, meaning that, for the young learners, the CS instruction resulted in more vocabulary acquisition and retention in terms of receptive recognition compared to the EO instruction.

With regard to the fourth research question which explored differential effects of instructional type on the vocabulary gains between the adult and young learners, an examination of the effect sizes of the instructional types for the two age groups revealed the superior effectiveness of CS instruction over EO instruction for the young learners. Although the CS instruction also yielded significantly more vocabulary gains than the EO instruction for the adult learners except for the acquisition of receptive-recall, the CS instruction proved to be far more effective for the young learners in both the acquisition and retention of vocabulary knowledge. In other words, there was indeed a differential effect due to teacher CS on the vocabulary learning between the two age groups. On the

other hand, a similar pattern between the two age groups was also found. That is, the relative effect of teacher CS and EO instruction was more evident in the acquisition of vocabulary than in the retention of vocabulary, with CS instruction generally yielding greater acquisition of knowledge of the target vocabulary.

As for the fifth research question concerning the effect of English proficiency, it was found that instructional type, as hypothesized, was still a significant predictor after controlling for the effect of English proficiency, with the only exception being the adult learners' retention of receptive-recall knowledge. It was additionally found that English proficiency had strong and positive relationships with the adult and young learners' vocabulary gains, regardless of the time of assessment and the type of knowledge being tested. The multiple regression analyses further revealed that instructional type and English proficiency, combined together, accounted for approximately half of the amount of the variance in the dependent variables (i.e. vocabulary gains) in the case of both the adult and young learners.

The sixth research question addressed in this quasi-experimental study was concerned with the relationships between word-related variables and the mean gain for each target word. In general, four word-related variables as predictors (i.e. word length, the concreteness of the word, word class, whether the target word is a single word or a lexical string) did not account for a substantial portion of the variances in the mean gains for each word on the post-tests. Indeed, the concreteness of the words was the only word-related variable consistently associated with the mean gain for each word, regardless of the time of assessment and the type of knowledge being tested, in the case of both the adult and young learners. Therefore, only the second working hypothesis in the beginning of section 4.9 (i.e. high imageability words will be better acquired and retained than low imageability words) was confirmed, whereas the other hypotheses

concerning the length of words, word class, and single word-lexical string variable were by and large not empirically supported.

Lastly, there were some differential effects of instructional type on the learning of abstract and concrete words between the adult and young learners. For the young learners, the CS instruction proved to be more effective than the EO instruction in the learning of both abstract and concrete words. The superiority of the CS instruction over the EO instruction for the young learners was long-term. In contrast, the relative effects of CS and EO instruction on the learning of abstract and concrete words for the adult learners were less obvious. As for the abstract words, the effect of instructional type was short-term, indicating that the CS instruction yielded better learning outcomes than the EO instruction only on the acquisition test. On the other hand, the CS and EO groups generally did not show significant differences when it came to the learning of the concrete words (except on the VKS acquisition test), suggesting that EO instruction allowed the adult learners to make vocabulary gains that were comparable to those made through teacher CS.

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[1] Median

[2] However, the exceptions were the VKS post-tests for the young learners, which were rather positively skewed. See section 4.6 for details.

[3] See Appendix J for tables of the mean gains for each word on the four post-tests of vocabulary.

Chapter 5 Results: EFL Learners' Attitudes towards Teacher Code-switching

5.1 Introduction

As mentioned in Chapter 1, the present study also examined the attitudinal disposition of Korean EFL learners towards teacher code-switching (CS) and other related aspects of English language teaching including 1) different types of English teachers, 2) English teachers' language use and 3) their vocabulary teaching practices in EFL classrooms. Chapter 3 presented the research methodology employed for this investigation, and delineated the procedures as to the development and administration of the participant questionnaire as well as the process of undertaking interviews with a subset of the total participants. This chapter presents the results obtained from these research instruments, including the quantitative analysis of the participant questionnaire in chorus with the verbal data obtained from the follow-up interviews.

In understanding the relationships between teacher CS and these aspects of English language teaching, the following points should be remembered throughout this chapter:

- Teacher CS is generally an exclusive teaching device of non-native speaker (or bilingual) English teachers (NNSETs). According to observations from the pilot study, it is one of the most distinguishing differences between native speaker English teachers (NSETs) and NNSETs in terms of their teaching practices.
- NSETs are generally believed to guarantee maximal L2 input (given that they do not have knowledge of learners' L1), whereas NNSETs are expected to use CS to some extent for various pedagogical purposes (e.g. classroom management, teaching language items).

- NSETs and NNSETs can both serve as a human dictionary in that they can provide the meaning of L2 vocabulary. The difference between the two types of teachers lies in the *type of lexical information*; while NSETs can only provide L2-based meanings (equivalent to non-CS resources or monolingual dictionary entries), NNSETs can provide both L1-based (equivalent to CS resources or bilingual dictionary entries) and L2-based meanings of L2 vocabulary by virtue of their knowledge of the target language and learners' L1.
- In view of the findings that a considerable amount of meaning negotiation is triggered by lexical items (Ellis, 1999) and teacher CS is lexically oriented on many occasions (Eldridge, 1996), "vocabulary" appears to be the language area which stands at the heart of the theoretical discussions of teacher CS.

Thus, it should be noted that these aspects are inevitably linked to each other, all centring around the issue of the teacher CS for vocabulary teaching. In an attempt to investigate this issue, the differences between adult and young EFL learners in their attitudes towards the aforementioned aspects of English language teaching will also be examined, as this aspect of research has not been sufficiently addressed in the field of SLA. It is one of the aims of the present thesis to contribute this knowledge to the model of teacher CS (section 1.2.3).

Most of the quantitative analyses in this chapter were based on Likert-scale statements, which asked the participants to indicate the degree to which they agreed with certain attitudinal statements. Independent *t*-tests were performed in order to compare the responses given by the adult and young learners on these attitudinal statements. A Bonferroni adjustment was made for the set of attitudinal statements in each section, dividing the target *p* value (.05) by the number of comparisons (independent *t*-tests in

each section) to be made. The follow-up interview data will also be quoted verbatim, where relevant. All interview transcripts were translated into English by the researcher. The comments in brackets, which are given in order to enhance readers' comprehension of the interview transcripts, are also the researcher's. A sequence of dots in the transcript indicates a pause, and *italics* indicate emphasis used by the speaker.

5.2 Learners' Attitudes towards NSETs and NNSETs

Table 5.1 presents the results of the adult and young EFL learners' attitudes towards NSETs and NNSETs. The numbers presented in Table 5.1 indicate the percentages of the two age groups' responses to each attitudinal statement. Table 5.1 and all the following tables also report the percentage of responses "agree" and "strongly agree" combined as well as "disagree" and "strongly disagree" combined.

Table 5.1 Learners' attitudes towards NSETs and NNSETs

		Strongly disagree		%		Strongly agree
Statement	Group	1	2	3	4	5
In general I would prefer a native speaker as an English teacher.	Adult (*n* = 309)	1.9	18.4	35.9	31.1	12.6
		20.3		35.9	43.7	
	Young (*n* = 449)	7.6	13.6	42.5	24.3	12.0
		21.2		42.5	36.3	
I wish I had only non-native teachers of English.	Adult (*n* = 308)	25.6	47.4	21.1	4.2	1.6
		73.0		21.1	5.8	
	Young (*n* = 448)	23.0	31.9	30.6	10.5	4.0
		54.9		30.6	14.5	
In general, a non-native teacher predicts learners' (potential) difficulties well.	Adult (*n* = 308)	2.3	10.7	33.8	41.6	11.7
		13.0		33.8	53.3	
	Young (*n* = 448)	6.0	12.9	45.5	25.9	9.6
		18.9		45.5	35.5	
A native speaker teaches speaking skills/conversation more effectively.	Adult (*n* = 308)	1.9	13.6	37.3	35.1	12.0
		15.5		37.3	47.1	
	Young (*n* = 449)	3.3	12.0	62.6	15.1	6.9
		15.3		62.6	22.0	
In general, a native speaker teacher is more interesting.	Adult (*n* = 308)	2.6	17.5	44.2	27.9	7.8
		20.1		44.2	35.7	
	Young (*n* = 446)	6.1	18.8	49.1	18.2	7.8
		24.9		49.1	26.0	

As might be expected, there were some differences in the learners' attitudes towards NSETs and NNSETs between the two age groups. To the statement *In general I would prefer a native speaker as an English teacher*, the adult learners showed slightly more positive responses (43.7%) than the young learners (36.3%), although the difference between the two groups did not reach significance (M = 3.34, SD = .98 for the adult learners and M = 3.20, SD = 1.06 for the young learners, t = 1.89, df = 756, p > .01). On the other hand, both age groups were more or less negative about the idea of having only NNSETs, with 73% of the adult learners and 54.9% of the young learners disagreeing with this idea. The adult learners were significantly more negative than the young learners (M = 2.09, SD = .88 for the adult learners and M = 2.41, SD = 1.07 for the young learners, t = -4.46, df = 730, p < .01).

As for the reasons for preferring NSETs to NNSETs as English teachers, two interviewees pointed to the differences between the two types of teachers as follows:

> AL5 (adult learner interviewee no. 5): When I take English lessons from Korean English teachers … I feel like I am *learning* English, so English and the teacher [NNSET] seem to be separate … but when native speaker teachers teach English, it feels more natural, as English is the language they use in their lives … so there's the difference [between NSETs and NNSETs].

> AL11: The advantage of taking English lessons from native speaker teachers would be … we can get enough English [input]. And native speaker teachers themselves are part of another culture … so we can learn that culture at the same time [as learning that language]…on the other hand…in the case of the Korean teachers…there are certain limitations because they are not native speakers of

English…

I (interviewer): In terms of what?

AL11: In terms of a range of words … and expressions they use when they speak English.

These two interviewees with some negative views on the NNSETs claimed that the learning milieu is more conducive to the acquisition of cultural aspects of English and that English is less perceived as a school subject in NSETs' classrooms than in NNSETs' classrooms, stating the nativeness of NSETs as one of their strongest advantages in teaching English. On the other hand, from these interviewees' perspectives, NNSETs were more or less handicapped because of their non-native identity and non-native-like performance when speaking English. In addition, as can be expected, there was general consensus among the interviewees that pronunciation was another area where NNSETs were more disadvantaged than NSETs, again due to the fact that they are non-natives (see also section 5.5.4).

On the other hand, concerning the statement *A native speaker teaches speaking skills/conversation more effectively,* approximately half of the adult learners (47.1%) agreed with this idea, whereas only 22% of the young learners did. The young learners' low percentage of agreement, and high percentage of neutral responses (62.6%) for this statement may be due to the fact that their English classrooms had not focused on speaking skills yet, and thus the young learners might not have had any particular opinion on this statement. There was a significant difference in the mean of the responses on the Likert scale between the two age groups (M = 3.42, SD = .94 for the adult learners and M = 3.10, SD = .82 for the young learners, t = 4.75, df = 601, $p < .01$). Still, the percentage of the adult learners who agreed with this statement was lower than expected,

as the idea that NSETs teach speaking skills better than NNSETs permeates the field of English teaching today.

On this issue, one of the interviewees (YL2) revealed why NSETs might not be able to teach English conversation effectively to the students with a low level of English proficiency:

> YL2 (young learner interviewee no. 2): As for the native speaker teachers … their weak point would be that we cannot communicate very well with them … and when we have a question [about lesson content], we have to ask the question in English … [and when we cannot do that] sometimes our questions remain unanswered…
>
> I: Can you give me an example?
>
> YL2: For example, I do not know how to say "what is the meaning of that word?" in English.

YL2 further indicated that he and his classmates occasionally get bogged down when expressing their ideas in English due to their low level of English proficiency, which in turn could lead to communication problems between NSETs and their students. This idea was not exclusive to YL2, with about half of the interviewees (both adult and young learners) making similar points, suggesting that communication problems are somewhat chronic in NSETs' English lessons wherein teacher CS is usually not a possible option. On the contrary, the rest of the interviewees blamed NNSETs for generally being less communicative and fluent (in the domain of speaking skills) than their native counterparts, again possibly due to their status as non-native speakers of English. These learners also viewed NSET's lessons as more conducive to learning

communicative aspects of English than NNSETs'.

While the interviewees had conflicting views on the idea that NSETs teach conversation and speaking skills better than NNSETs, one of the adult interviewees (AL2) who had experience with a greater number of NSETs than the others suggested the following:

> AL2: It depends on the quality of the teachers in my opinion. Some native speaker teachers are very good at teaching English conversation and speaking … but others are not that good ... I have learnt from both … so it's hard for me to say whether native speaker teachers are always good at teaching conversation.
>
> I: Could you tell me more specifically why you thought that some native speaker teachers were not very good at teaching conversation…?
>
> AL2: They lack teaching skills … I mean ... skills of teaching conversation effectively to students with a *low level* of English proficiency.

Thus, according to AL2, there is some variation among NSETs in terms of their teaching skills and teaching quality. This view, while only articulated by this interviewee, somewhat corresponds to the results for the attitudinal statement "The only thing that matters is how they teach. It does not matter what the teacher's native language is" in the *Miscellaneous statements* section (section 5.4), with which a majority of the adult and young learners agreed or strongly agreed.

With regard to the attitudinal statement that NNSETs predict students' difficulties in English learning, about 53% of the adult learners showed positive responses, whereas about 45% of the young learners remained neutral. Regarding the young learners' neutral responses to this statement, it might be the case that they had not

thought deeply about this issue before (or that the maturity of the concepts in the statement was too great for them), consequently not agreeing or disagreeing with the statement. In the follow-up interviews, it was found that the young learners indeed had some positive views on this opinion after a certain degree of discussion and reflection. There was a significant difference between the two groups (M = 3.50, SD = .92 for the adult learners and M = 3.20, SD = .99 for the young learners, t = 4.17, df = 754, $p < .01$). The adult learners' positive attitude towards this statement was also found in the follow-up interviews, as shown by the following:

> AL2: Korean teachers share our perspective … they usually know in advance which parts of the lessons will pose some difficulty for us … so for example, when their students seem to get lost … they [NNSETs] can analyze the source of problem very quickly and help students get back on track.

According to AL2, Korean teachers are more perceptive of learning difficulties, more able to identify and overcome difficult areas than their native counterparts, presumably due to the fact that they might have experienced similar difficulties during their own English learning experiences.

Although not directly connected to this attitudinal statement, many interviewees linked the strength of NNSETs to their ability to use Korean in teaching English, which facilitates learners' comprehension of lesson content. Two interviewees made the following comments on this issue:

AL8: Korean teachers can switch to Korean from English to explain something…when students do not follow [their lectures] at all… on the other hand …

native speaker teachers do not know Korean … so in such a case … they usually go on [without trying to explain].

YL4: When we take English lessons from Korean teachers … they can translate difficult things [words or expressions] into Korean … so it is easier for us to understand them [compared to when they take lessons from native speaker teachers].

As another strength of NNSETs, one of the adult interviewees pointed to their ability to help learners verbalize English sentences which they cannot formulate with their current English proficiency, implying the teachers' *scaffolding* help:

> AL10: One time … I wanted to come up with this complicated English sentence during a communicative task … but I couldn't. So I asked her (his NNSET) to translate the Korean sentence into an English one and used it [while doing the task].

In brief, the interviewees attributed the strength of the NNSETs to their ability to use Korean in English teaching. That is, NNSETs can assist learners via scaffolding (e.g. helping them formulate syntactically demanding English sentences beyond their current proficiency), be more responsive to learners' questions, and analyze learners' learning difficulties more efficiently by virtue of the L1 they share with the learners, whereas NSETs are not equipped with such attributes. A further advantage of teachers' knowledge of the learners' L1 will be considered in the section dealing with functions of teacher code-switching (section 5.3.2).

For the idea that a NSET is generally more interesting, a considerable percentage

of both adult and young learners did not show any clear positive or negative responses, with 44.2% of the adult learners and 49.1% of the young learners remaining neutral about this opinion. There was no significant difference between the two groups (M = 3.21, SD = .91 for the adult learners and M = 3.03, SD = .96 for the young learners, t = 2.56, df = 752, $p > .01$). While this idea did not emerge frequently in the follow-up interviews, one of the adult learners pointed out the fact that NSETs generally might be in charge of teaching more interesting skills than NNSETs are in certain English learning institutions:

> AL4: Native speaker teachers usually teach speaking and communication … they employ a lot of interesting activities … games or something like that.
>
> I: How about Korean English teachers?
>
> AL4: In middle and high schools … they generally teach English grammar and reading … boring stuff [laugh].

AL4's comment seems to imply that it might be the type of target skills (e.g. speaking, reading and grammar) which make English lessons interesting or not, rather than the type of teachers themselves (i.e. NSETs or NNSETs). Unfortunately, the questionnaire item above was not detailed enough to empirically validate this idea nor were there other verbal data available apart from AL4's.

To summarize, there were some subtle differences between the adult and young learners in terms of their attitudes towards NSETs and NNSETs. In general, the adult learners showed slightly more positive attitudes (or tolerance) towards NSETs than the young learners did, with approximately half of them believing that the NSETs could teach speaking skills and conversation more effectively than NNSETs. The adult learners

also appear to recognize to a greater extent that the NNSETs can predict students' learning difficulties than the young learners did. In addition, it was further found in the follow-up interviews that the strengths of the NNSETs are often associated with their ability to use learners' L1 (i.e. Korean) in English teaching, which serves many pedagogical purposes. Both age groups, on the other hand, generally did not concur with the idea that native speakers are more interesting teachers than their non-native counterparts, nor did they show a non-negligible preference for NSETs.

5.3 Learners' Attitudes towards English Teachers' Language Use

5.3.1 Learners' Attitudes towards English-only Instruction

The next construct concerned English teachers' language use. In the present and following sections, the results of the learners' attitudes towards English-only (EO) instruction and teacher code-switching (CS) will be presented. Table 5.2 presents the results of the adult and young EFL learners' attitudes towards EO instruction.

Table 5.2 Learners' attitudes towards English-only instruction

		Strongly disagree		%		Strongly agree
Statement	Group	1	2	3	4	5
Teachers should use only English in English classrooms.	Adult (*n* = 309)	6.8	34.0	32.7	23.3	3.2
		40.8		32.7	26.5	
	Young (*n* = 449)	23.6	40.8	23.2	11.6	.9
		64.4		23.2	12.5	
Teachers should use English and Korean to an equal extent.	Adult (*n* = 309)	4.5	27.8	42.4	21.4	3.9
		32.3		42.4	25.3	
	Young (*n* = 448)	2.5	12.9	35.0	35.9	13.6
		15.4		35.0	49.5	
I prefer English-only instruction because it gives me more opportunity to be exposed to English.	Adult (*n* = 309)	3.2	8.1	27.5	45.3	15.9
		11.3		27.5	61.2	
	Young (*n* = 449)	10.5	29.6	36.3	17.8	5.8
		40.1		36.3	23.6	
English-only instruction would work better for advanced level students.	Adult (*n* = 309)	2.9	25.2	17.2	43.0	11.7
		28.1		17.2	54.7	
	Young (*n* = 449)	4.7	18.0	25.8	34.3	17.1
		22.7		25.8	51.4	
I believe that, regardless of how much English students choose to use, the instructor should use English at all times in the classroom.	Adult (*n* = 309)	11.0	45.3	33.3	9.1	1.3
		56.3		33.3	10.4	
	Young (*n* = 449)	23.4	34.7	28.7	10.0	3.1
		58.1		28.7	13.1	

To begin with, the mean of the responses on the idea of EO instruction in English classrooms between the two age groups reached statistical significance (M = 2.82, SD = .97 for the adult learners and M = 2.25, SD = .97 for the young learners, t = 7.90, df = 756, $p < .01$). To be more specific, the young learners disagreed to a larger extent with the idea of EO instruction (64.4%) than the adult learners did (40.8%). In contrast, only 26.5% of the adult learners and 12.5% of the young learners preferred teachers' exclusive use of English. It is interesting to note that less than 1% of the young learners strongly agreed with this statement. In contrast, regarding the statement *Teachers should use English and Korean to an equal extent*, the young learners showed more positive responses (49.5%) than the adult learners (25.3%), showing that only a minority of the adult learners are content with the idea of equal amounts of L1 and L2 use on the part of their teachers. The mean of the responses on the Likert scale of the adult learners (M = 2.92, SD = .91) was lower in terms of statistical significance (t = -7.71, df = 687, $p < .01$) than that of the young learners, (M = 3.45, SD = .96). Thus, based on the results for these two statements, it seems that the adult learners in the present study preferred a higher ratio of English to Korean use, whereas the young learners in general agreed with or remained neutral about the idea of being exposed to equal amounts of Korean and English.

As one of the negative reactions towards EO instruction, YL5 elaborated on the difficulty in keeping up with EO instruction as follows:

I: Is it difficult for you to understand English-only instruction?

YL5: Hmm … English-only instruction itself is not too difficult... The difficulty arises… when we have to keep following English-only speech without any pause.

I: Without any pause?

YL5: Yeah … I mean, by the time I comprehended the teacher's [her NSET's] preceding sentence … he is already moving on to subsequent sentences. For some sentences, I need more time to process them [sentences spoken in English] in my mind … [when such sentences keep coming while I am processing preceding sentences] I fail to follow the English-only speech.

I: I see … then does that mean you are kind of *translating* English-only speech into Korean in your mind …?

YL5: Not all of the speech … it depends on the sentences [that they speak in English].

It seems that YL5's response concerned a large cognitive load on the part of the young learners (and for some adult learners as well) in following an EO speech stream, implying the relatively limited amount of linguistic knowledge of young learners. This made sense in that most of the young EFL learners in the study had not yet developed enough competence to communicate in English without causing some degree of cognitive overload. In other words, understanding an English speech stream operated in a non-automatic way for them. When asked if there were any moment in which she could not understand EO instruction, another young learner, YL8, in line with YL5, also indicated the difficulty in processing lengthy EO speech as follows:

YL8: When he (YL8's NSET) says a long sentence… and when he speaks too fast.

While EO instruction itself seems to be cognitively demanding for some learners, there was general consensus among the interviewees that the difficulty in processing EO

instruction occurs on a lexical level rather than on a syntactic or phonological level. That is, when any previously unknown English word is included in EO speech (and when the explanation of this particular unknown word does not follow afterwards), the learners of both age groups often perceive great difficulty in learning English or even worse start to get lost following lessons from that point onwards. A typical response was as follows:

> YL3: You know there are occasions [when you process English-only instruction] that you cannot translate the sentence because of a single unknown word included in that sentence…sometimes it's the point where I start to get lost.

With lexical items being major sources of the difficulties associated with EO instruction, some interviewees pointed out that their teachers' subsequent attempts to explain such lexical items in English were not always successful, leaving learners with lingering comprehension problems. It was further found that these interviewees were all worried about not being able to understand every single word in EO instruction, consequently showing some negative reactions against such instruction.

On the other hand, the other interviewees (YL1 and AL5) showed rather different beliefs about EO instruction, with the view that grasping a general idea encoded in EO instruction is sufficient enough:

> YL1: I haven't had much problem with English-only instruction.
>
> I: Then … do you grasp much of it [English-only instruction]?
>
> YL1: Yes. I may not be able to understand every single word [in English-only instruction], I think I grasp what he [her NSET] is trying to say.

AL5: When I listen to English-only instruction, I try to listen to as it is … like when I listen to Korean. It didn't work very well in the beginning. But as you keep trying, it starts to work.

I: You mean regardless of your English proficiency?

AL5: Regardless of my English proficiency. From my point of view, we do not comprehend English-only instruction on its own because we think it is *awkward* … and because we don't try hard enough.

I: Then … if you try really hard…can you understand English-only instruction without difficulties?

AL5: Then … I usually grasp much of it …at least I get the feeling of what it means vaguely… and I believe that other students are also capable of understanding English-only instruction, if they try very hard. I think it is a matter of attitude.

As we can see from the above excerpts, YL1 and AL5 generally felt comfortable with EO instruction, and were satisfied with the fact that they were able to interpret the general meaning encoded in EO speech. In other words, as long as they got the main idea, not being able to understand some parts of English speech was acceptable to them.

Another positive view of EO instruction came from AL7, who showed a strong belief throughout the interview that English-only instruction is an essential part of good English lessons:

AL7: English-only instruction makes me feel like … I am actually taking English lessons ... it helps me to have a feeling about what the English language is like.

In later analyses, it was further found that these three interviewees, who embraced the idea of EO instruction and steeped themselves in learning English, were among the highest scorers on the post-tests of vocabulary after the instructional treatment. They were more confident in taking EO lessons than others. In addition, as confirmed by their respective English teachers, YL1, AL5, and AL7 were the most articulate learners (as well as most able learners) in their respective classrooms, contributing significantly to the various parts of their English lessons. Furthermore, it was revealed during the interview sessions that these learners' motivation to learn English was integrative by nature, with the ultimate goal of learning English being to make friends with native speakers of English. AL5 further mentioned that he was always looking for any opportunity to speak English outside the classroom. It seemed that their positive attitudes towards EO instruction, their integrative motivation, and their learning outcome were interrelated to some extent, at least for these three students.

With regard to the statement *I prefer English-only instruction because it gives me more opportunity to be exposed to English*, the mean of the responses on the Likert scale given by the adult learners ($M = 3.62$, $SD = .95$) was higher in terms of statistical significance ($t = 11.24$, $df = 756$, $p < .01$) than that of the young learners ($M = 2.79$, $SD = 1.04$). Approximately 62% of the adult learners agreed with this statement, whereas only about 24% of the young learners did. It seemed that the adult learners were more aware of the importance of being exposed to English input than the young learners, presumably through additional years of learning experience.

The learners were by and large more positive towards the opinion that EO instruction would be more suitable for advanced learners, with 54.7% of the adult learners and 51.4% of the young learners agreeing with this opinion. There was no significant difference in the mean of the responses between the adult and young learners

(M = 3.35, SD = 1.07 for the adult learners and M = 3.41, SD = 1.11 for the young learners, t = -.734, df = 756, p > .01). Again, as was suggested above, a majority of the English learners sampled in the study, ranging from "beginner" level to "intermediate" proficiency, still seemed to be overwhelmed by EO instruction which is rather cognitively demanding, and believed that this type of instruction would not yet work effectively for them.

One of the adult interviewees, AL9, believed that EO instruction could result in less communicative English lessons, especially when the target learners are not fluent or confident enough to speak in English, saying that:

> AL9: I think when a teacher uses only English in teaching English … students become less communicative. Should I say that [English-only instruction] dampens the classroom atmosphere?
>
> I: Why do you think that happens?
>
> AL9: Well…that's because the students [in her class] are not very confident in speaking English … and consequently some try to avoid communicating in English [when they are not allowed to use Korean at all].

AL9's comment points to the paradox that EO instruction, which is deemed to be one of the most essential components of communicatively oriented English lessons, could inadvertently render English lessons to be less communicative by depriving learners of their most important communicative device (i.e. their L1). Indeed, AL9's point corresponded to other interviewees' statements that EO lessons frequently result in communication problems between the teacher and students, which usually pertain more to NSETs' classes. This issue will be revisited in section 5.3.2.

Lastly, the learners were largely negative about the statement *I believe that, regardless of how much English students choose to use, the instructor should use English at all times in the classroom*. For this statement, only 10.4% of the adult learners and 13.1% of the young learners agreed, indicating their preference for at least some degree of teacher CS. On the other hand, more than half of the adult and young learners disagreed with this statement (56.3% and 58.1%, respectively). The response pattern for this statement was similar to the statement *Teachers should use only English in English classrooms*, as can be expected. There was no significant difference in the mean of the responses on the Likert scale between the two groups (M = 2.44, SD = .85 for the adult learners and M = 2.35, SD = 1.04 for the young learners, t = 1.389, df = 733, p > .01).

In brief, both adult and young learners by and large do not appear to be in favour of EO instruction, believing that this type of instruction may be more appropriate for advanced level learners. However, the adult learners had more positive attitudes towards English instruction and recognized the importance of English input in their learning to a greater extent than the young learners, presumably due to a larger amount of learning experience.

5.3.2 Learners' Beliefs about Functions of Teacher Code-switching

The next set of statements asked about the learners' attitudes towards teacher code-switching (CS). These statements concerned the idea of teachers engaging in CS in English classrooms and a variety of functions that teacher CS serves therein. It should be noted that teacher CS, a somewhat intricate term, was rephrased in Korean as "a brief use of Korean" or "using Korean in the middle of English" when addressed to the participants in the questionnaire and follow-up interviews. Table 5.3 summarizes the two age groups' responses to these statements.

Table 5.3 Learners' beliefs about functions of teachers' code-switching

		Strongly disagree		%		Strongly agree
Statement	Group	1	2	3	4	5
Teachers should switch to Korean on certain occasions because it is more effective than the use of English in helping me understand what is being taught.	Adult (*n* = 309)	1.0	5.8	24.6	53.7	14.9
		6.8		24.6	68.6	
	Young (*n* = 448)	1.6	5.8	26.1	43.8	22.8
		7.4		26.1	66.6	
I believe that teachers should switch to Korean to discuss tests, assignments or other administrative information.	Adult (*n* = 310)	1.6	7.4	25.2	41.3	24.5
		9.0		25.2	65.8	
	Young (*n* = 412)	3.4	6.6	31.6	29.9	28.6
		10.0		31.6	58.5	
Teachers should switch to Korean on certain occasions because it makes me feel more comfortable.	Adult (*n* = 309)	2.6	10.7	27.8	44.3	14.6
		13.3		27.8	58.9	
	Young (*n* = 449)	2.9	7.6	31.2	42.8	15.6
		10.5		31.2	58.4	
Teachers should switch to Korean on certain occasions because it helps the teacher and us to avoid communication breakdowns.	Adult (*n* = 310)	1.0	5.5	26.1	53.5	13.9
		6.5		26.1	67.4	
	Young (*n* = 445)	3.6	11.0	38.0	33.9	13.5
		14.6		38.0	47.4	
Teachers should switch to Korean on certain occasions because it saves time.	Adult (*n* = 308)	1.0	10.4	25.3	49.7	13.6
		11.4		25.3	63.3	
	Young (*n* = 448)	3.1	9.8	42.2	30.8	14.1
		12.9		42.2	44.9	

The learners' responses to the statements on teachers' use of CS were by and large positive, as can be seen from the percentage of the learners agreeing or strongly agreeing with each statement in Table 5.3. Among these statements, *Teachers should switch to Korean on certain occasions because it is more effective than the use of English in helping me understand what is being taught* and *I believe that teachers should switch to Korean to discuss tests, assignments or other administrative information* were largely answered in a similar way by both adult and young learners, with no significant difference between the two age groups (t = -.734 , df = 706, p > .01 for the former and t =.788 , df = 696, p > .01 for the letter). A majority of the adult and young learners (68.6% and 66.6%, respectively) indicated that they agree with the opinion that teacher CS enhances their understanding of lesson content. Similarly, 65.8% of the adult learners and 58.5% of the young learners showed a preference for class outlines and assessment details to be delivered in the L1.

The idea that teacher CS enhances learners' understanding of the lesson content also appeared during the follow-up interviews. AL3 and YL10 illustrated this point from their own experiences in English classrooms:

> AL3: You know Korean teachers can switch to Korean…whenever students have difficulty [in understanding English-only explanations]…I think it [teacher CS] certainly helps in that kind of situation.

> YL10: Teacher Kim [an interviewees' NNSET] sometimes repeats in Korean what she has previously said in English …
>
> I: Why do you think that she repeats in Korean…?
>
> YL10: Maybe because some of my classmates do not understand [English] very

> clearly… [if the teacher does not repeat in Korean] my classmates would ask each other like "what did she just say?"…and [while they are doing that] they would not listen to what the teacher is saying.

In line with AL3 and YL10, some of the interviewees suggested that only a small proportion of their respective classmates would be able to comprehend their English lessons completely without being reliant on Korean explanations or written Korean input. However, they further added that individual learners in their classrooms varied to a great extent in terms of their level of English proficiency as well as need for teachers' use of Korean, which would make it difficult for their teachers to make decisions as to the appropriate amount of Korean use.

Another important function of teacher CS was that of classroom management, such as "managing administrative matters," "discussing forthcoming tests and assignments" and so on. AL6 made the following comment on this matter:

> AL6: Examinations! I really hope that our teacher [NSET] gives instructions about homework and assessment details in Korean. What happens at the end of each class is … the classmates talk with each other about the forthcoming assignments or other important assessment details.

Although not included in the questionnaire, two interviewees (AL4 and YL2) suggested the idea that instructions for classroom activities should be delivered in Korean, as the following quotations illustrate:

> AL4: Other than anything else … I think that instructions for the classroom

activity should be given in Korean … or at least English instructions should be immediately followed by the same instructions in Korean. If the initial instructions in English were not clear … many of the students easily get lost while moving along throughout the activity.

I: Is there any difficulty in understanding English-only instruction?

YL2: Yes.

I: When would that be…?

YL2: When we do some games or something like that…

I: Games?

YL2: Yes…when the teacher explains in English how to do games… it is difficult to understand what we are supposed to do.

Unfortunately, it was not made clear during the interviews exactly why the learners had great difficulty in understanding English-only (EO) instruction for classroom activities, tests or assignments. However, it could be postulated that this difficulty was caused by some of the unfamiliar English words or phrases included in the instructions, which are not usually taught in any explicit manner in English lessons.

In addition to the two statements regarding teacher CS above, a considerable number of the adult and young learners (58.9% and 58.4% respectively) agreed that their teachers' use of Korean makes them feel comfortable in English classrooms, indicating that teacher CS might also be concerned with the affective domain of language learning. No significant difference was found between the two age groups (M = 3.58, SD = .95 for the adult learners and M = 3.61, SD =.94 for the young learners, t = -.427, df = 756, p > .01). In the follow-up interviews, one of the young learners made the following

comments on this issue:

> YL3: I cannot pin down why … maybe it's because I can ask a question more comfortably in Korean. If English teachers speak Korean … then I can ask teachers a question in Korean when I have some doubts about the lesson content.

In addition to YL3's response, some of the other interviewees linked their feelings of comfort to the fact that they could fix a communication problem in English by virtue of the knowledge of Korean that the teacher and students share, which otherwise is not feasible in an EO class. Indeed, 67.4% of the adult learners and 47.4% of the young learners agreed with the opinion that teachers' Korean use would help the students and teacher avoid communication breakdowns. There was a significant difference in the mean of the responses on the Likert scale between the adult and young learners on these statements (M = 3.74, SD = .80 for the adult learners and M = 3.43, SD = .98 for the young learners, $t = 4.81$, $df = 733$, $p < .01$).

AL3, on the other hand, stated that NSETs' CS can reduce the tension between the NSET and students, if NSETs are willing to embarrass themselves by speaking clumsy Korean:

> AL3: You know it is always enjoyable to hear native speakers teachers speak in Korean, which sounds clumsy. It sometimes "livens up" the classroom atmosphere.

Her point was that NSETs' use of Korean could fulfil a humorous function which in turn would create a more relaxing classroom atmosphere by lowering learners'

affective filters. That is, learners might feel less threatened by their NSET when they recognize their teacher not as an authority figure but as a person who also struggles with learning an L2, which in this case is Korean. In fact, this function of CS is more applicable to NSETs than to NNSETs (as NNSETs' Korean use generally serves other pedagogical functions), and may only be relevant in EFL contexts in which learners share the same L1.

In brief, the results of the quantitative analysis for the questionnaire items above and the interviews indicated the learners' preference for teacher CS in order to achieve the functions of delivering classroom management information, enhancing understanding of lesson content, and reducing to some degree the anxiety associated with learning English.

To the question of whether teacher CS could save time on certain occasions, 63.3% of the adult learners and 44.9% of the young learners agreed with this idea, with a significant difference in the mean of the responses on the Likert scale being found between the groups ($M = 3.65$, $SD = .88$ for the adult learners and $M = 3.43$, $SD = .96$ for the young learners, $t = 3.18$, $df = 754$, $p < .01$).

As for the idea that CS saves time, one of the adult learners indicated a clear advantage of using some degree of Korean over EO instruction:

> AL8: For example…teaching English words … everyone can understand Korean explanations … but English-only explanations are not necessarily the same … because English-only explanations of English words can contain some other difficult words … then it will lead to another explanation.

According to AL8, EO explanations are generally bound to lead to other

explanations, mostly because of the difficult vocabulary included therein, and thus are less time-efficient (compared to explanations in Korean). While this interviewee did not point to the important fact that the teachers' use of Korean would limit the amount of English input, it should also be noted that, from the learners' point of view, *incomprehensible* EO instruction could be perceived as being a more inefficient instructional type than as a precious source of input.

To sum up, both adult and young learners by and large showed high percentages of agreement with the various functions of teacher CS. In particular, approximately two-thirds of the learners in each age group agreed or strongly agreed with the idea that teacher CS enhances their understanding of the lesson content, which demonstrated the highest agreement proportion among all the items in this section. A similar, but slightly smaller proportion of the learners in both age groups agreed with the statement that teachers should use Korean to discuss tests, assignments or other administrative information, pointing to learners' need for teacher CS for communicative purposes. On the other hand, the idea that teachers' use of Korean helps avoid communication problems gained more agreement from the adult learners (about two-thirds of them) than from the young learners.

5.4 Miscellaneous Statements

The next set of statements consisted of miscellaneous statements, which were not directly concerned with different types of teachers or their language use. Table 5.4 summarizes the two age groups' responses to these statements.

Table 5.4 Miscellaneous statements

		Strongly disagree		%		Strongly agree
Statement	Group	1	2	3	4	5
The only thing that matters is how they teach. It does not matter what the teacher's native language is.	Adult (*n* = 308)	1.0	6.5	16.2	46.8	29.5
		7.5		16.2	76.3	
	Young (*n* = 447)	6.3	11.2	33.3	26.6	22.6
		17.5		33.3	49.2	
The more English students use in the classroom, the better they will be at communicating in English.	Adult (*n* = 309)	1.6	6.5	23.0	49.8	19.1
		8.1		23.0	68.9	
	Young (*n* = 445)	4.7	20.0	41.8	24.5	9.0
		24.7		41.8	33.5	
Students must use English a great deal in the classroom.	Adult (*n* = 308)	.6	7.5	25.3	48.7	17.9
		8.1		25.3	66.6	
	Young (*n* = 448)	8.9	27.9	36.6	19.2	7.4
		36.8		36.6	26.6	
Learning vocabulary is important for learning English.	Adult (n = 309)	.6	2.9	10.4	45.0	41.1
		3.5		10.4	86.1	
	Young (n = 449)	3.6	10.7	37.0	31.6	17.1
		14.3		37.0	48.7	

As for the idea that the teaching itself is more important than teachers' native language, more than three-quarters of the adult learners (76.3%) agreed, whereas about half of the young learners (49.2%) agreed or strongly agreed. The means of the responses on the Likert scale given by the adult and young learners for this statement were

significantly different (M = 3.97, SD = .90 for the adult learners and M = 3.48, SD = 1.14 for the young learners, t = 6.63, df = 740, p < .0125). The result of this statement appears to reflect some differences in the amount of learning experience between the two age groups, with the adult learners being aware of the importance of instructors' teaching skills and experience to a greater extent than the young learners.

In addition, the adult learners agreed more strongly with the statements *The more English students use in the classroom, the better they will be at communicating in English* and *Students must use English a great deal in the classroom* (68.9% for the former statement and 66.6% for the latter statement) than the young learners did (33.5% for the former statement and 26.6% for the latter statement). There was a significant difference between the means of the responses on the Likert scale between the two groups (t = 9.31, df = 752, p < .0125 for the former statement and t = 12.55, df = 733, p < .0125 for the latter statement). It seems that the young learners in the present study were rather at the beginning stages of learning English, and thus may not have yet realized the importance of using English in improving their competence. It is possible that most of them were still at the stage of grappling with comprehension matters. Two adult interviewees stressed the importance of using English in classrooms:

> AL1: I think … as much as we use English in English lessons, we will develop our English proficiency. And if we use too much Korean, we will learn English at a slower pace.
>
> I: Did you come up with this idea yourself?
>
> AL1: Yes. And it seems that my classmates whose English proficiency is relatively high also think like me.

AL5: I believe it is very important for students to use English to a great degree. They will get used to the English language only if they continuously use it. If they continuously use Korean, they will keep relying on their knowledge of Korean.

While these two interviewees stressed the importance of using English on the part of the learners, another interviewee (AL3), although recognizing the benefit of teachers' use of Korean, highlighted a potential risk associated with the excessive use of the L1 in interactions between the teacher and students triggered by teacher CS:

AL3: Teachers' use of Korean is definitely helpful for students … because it enhances their understanding of the lesson content …but…

I: Please go on.

AL3: I think it is not desirable when the students use Korean in accordance with their teachers' Korean use …then the teacher will again respond to the students in Korean, which may limit the amount of teachers' English [input].

I: Are you saying that students' Korean use will affect the amount of teachers' Korean use?

AL3: Yes.

To illustrate her point, AL3 gave an anecdote from her own experience during her high school years with a bilingual Korean teacher of English, who was initially determined to use only English in his English lessons. She remembered that his determination did not last very long, as the majority of her classmates expressed frustration at not being able to understand the English-only (EO) instruction,

subsequently requesting him to use some degree of Korean. As a result, he and his students increasingly started to communicate in Korean in his English lessons as the semester went on. According to AL3, her bilingual teacher's failure to maintain EO instruction was mainly due to her classmates' intemperate use of Korean (e.g. in asking questions), which led to a higher degree of teacher CS.

This kind of response was not exclusive to AL3, with more than half of the adult interviewees raising similar issues when the researcher prompted them to talk about the effect of teachers' and students' English (or Korean) use on their subsequent language use. For example, AL7 commented on this issue as follows:

> I: Do you think that the amount of teachers' English use has some effect on your English use in English lessons?
> AL7: Yes … even though it [speaking in English] is difficult in the beginning … when the teacher keeps using English in the lessons… we get to use English too …although we will make some grammar errors.

These responses together revealed that the adult learners were concerned with the use of English by their teachers as well as by themselves, and believed that there are some associations between teachers' and learners' language uses. On the other hand, such comments did not occur in the follow-up interviews with the young learners.

A striking difference between the two groups was also revealed in the opinion that it is important to learn vocabulary in learning English. While 86.1% of the adult learners indicated that they agreed with this statement, a substantially lower percentage of the young learners (48.7%) did. The means of the responses on the Likert scale given by the adult and young learners for this statement were significantly different (M = 4.23,

SD = .80 for the adult learners and *M* = 3.48, *SD* = 1.01 for the young learners, *t* = 11.36, *df* = 742, *p* < .0125). The higher proportion of agreement on the part of the adult learners, again, may be attributed to the fact that they had a higher amount of learning experience, through which they recognize themselves the importance of vocabulary in English learning. An alternative explanation for this result would be that the adult learners, unlike the young learners, have faced more complex texts (or discourses) or challenging academic tasks which generally require sophisticated knowledge of L2 vocabulary, which in turn raised heightened awareness of the importance of vocabulary for them.

In sum, the adult learners agreed to a greater extent with the opinion that they should use English a lot in English classrooms than the young learners did. The interview data further revealed that the adult learners were largely aware of some relationships between teachers' and learners' English (or Korean) use, and of some pitfalls of using CS too much in teacher-learner interaction. Furthermore, a majority of the adult learners (more than three-quarters) firmly believed that vocabulary is important in learning English and that the quality of teaching is more important than the nativeness of English teachers, whereas only half of the young learners agreed with these ideas.

5.5 Learners' Preference for Vocabulary Teaching

Another set of Likert-scale statements concerned learners' preferences for English-only (EO) or Code-switching (CS) instruction in learning vocabulary and possible reasons for such preferences. As stated in the Methodology chapter, the Likert-scale statements in this investigation were generated through open-ended questionnaire items in the preliminary questionnaire administered during the pilot study. It was also mentioned that the rationale for this approach was the paucity of previous research directed at investigating this issue.

The present section will first report some of the preliminary findings (i.e. vocabulary related ones) based on the analysis of the questionnaire data from the pilot study. Then it will present the results of the data analyses of the questionnaire administered during the main study. The participants' responses from the follow-up interviews will also be quoted verbatim where relevant.

5.5.1 Findings of the Pilot Study

The first vocabulary-related question in the preliminary questionnaire was "What are you going to do when you find a new word during the reading task?" There were four options available to the participants, including "use bilingual dictionary," "use monolingual dictionary," "make a guess at the meaning of the word," and "ignore the word." The purpose of this question was to get a rough idea of the learners' preferences for vocabulary strategies when they encounter unknown L2 (English) words. Table 5.5 shows the mean and response percentages for each option.

Table 5.5 Percentage of responses for the question *What are you going to do when you find a new word during the reading task?*

Question	Group	Options			
		Use English-English dictionary	Use English-Korean dictionary	Make a guess	Ignore the word
What are you going to do when you find a new word during the reading task?	Adult (n = 66)	1.9	72.8	19.0	5.7
	Young (n = 119)	3.1	51.6	22.7	19.5

As can be seen in Table 5.5, a clear trend was found in this result, with both

adult and young learners showing an overwhelming preference for an English-Korean dictionary to other strategies when encountering a new word in the reading text. Approximately 73% and 52% of the adult and young learners, respectively, opted for the use of a bilingual dictionary when encountering an unknown English word, which corresponded to previous findings in the lexicography literature (e.g. Ma, 2009; Baxter, 1980). *Making a guess* was also a popular option for the learners (19% for the adult learners and 22.7% for the young learners), although it was not clear whether the participants in the pilot study had been previously trained in using the strategy of inferring the meaning of unknown words from contextual information. On the other hand, it was further found that approximately 20% of the young learners simply ignore the new word during the reading, whereas only 6% of the adult learners do so. This result may be explained by the other finding in the previous section that a considerable number of the adult learners believed that learning vocabulary is an essential part of learning English, and thus they are not likely to pass over a new vocabulary item, when it appears in their learning process. The use of an English-English dictionary (i.e. a monolingual dictionary) was the least favourite option for both age groups, illustrating the difficulty of using monolingual dictionaries. Regarding the use of monolingual English dictionaries, the following comment was elicited by more than half of the interviewees (both adult and young learners):

> YL8: English-English dictionaries are difficult to use.
>
> I: Why is it so?
>
> YL8: Hmm … the English definition of the unknown word I initially look up usually contains another unknown word … then I have to look up that word as well.

While YL8 and many others alluded to the problem of *circularity* when using monolingual dictionaries (see section 2.4.3.4 for the discussion of circularity), AL10 pointed out the time-efficiency factor in using English-English dictionaries as the following quotation illustrates:

> AL10: I intuitively feel that an English-English dictionary is a better option than an English-Korean dictionary for extending my vocabulary and learning English … but it takes much more time to learn the meaning of words with an English-English dictionary.

In addition to the time-efficiency factor, another adult learner (AL8) touched upon the unsatisfactory feeling resulting from the use of English-English dictionaries based on her previous experience of using such monolingual dictionaries:

> AL8: I mean, I do not feel like I'm learning English words until I look up the Korean definition of those words. When I look up the English definitions of unknown words … I can understand what they mean vaguely … but still Korean definitions work much better.

Indeed, most of the interviewees, both adult and young learners, mentioned that they either previously had heard about the advantages of using English-English dictionaries from external sources (e.g. the media or their English teacher) or they intuitively felt that it was simply a better choice for learning English. However, they also conceded that English-English dictionaries might be less time-efficient and comprehensible than their counterparts, English-Korean dictionaries, especially for

beginner learners. Overall, there was general consensus among the interviewees that English-English dictionaries might be more suitable for advanced learners of English. In view of the learners' overwhelming preference for L1-based meanings of L2 vocabulary items in terms of written input, what are their preferences for the meanings of L2 vocabulary items in terms of oral input – teachers' oral explanation of L2 vocabulary?

Another question addressed this issue, asking the learners which language they want their teacher to use when teaching vocabulary. As can be seen in Table 5.6, both adult and young learners showed an overwhelming preference for the use of both languages (82.3% of the adult learners and 84.4% of the young learners) over English-only instruction. Approximately 10% of the adult learners and young learners in the pilot study preferred English-only instruction as a medium for vocabulary teaching.

Table 5.6 Percentage of responses to the question *Which language do you want your teacher to use when he or she teaches vocabulary?*

Question	Group	Options		
		Use English-only	Use English and Korean (code-switching)	It doesn't matter
Which language do you want your teacher to use when he or she teaches vocabulary?	Adult (n = 66)	12.6	82.3	5.1
	Young (n = 119)	9.4	84.4	6.3

As can be seen from the results of the above two questions, the adult and young learners in the pilot study largely preferred Korean-based meanings to English-based meanings of English vocabulary, in terms of both dictionary entries (i.e. the written input) and their teachers' oral explanations. The similar patterns for these two questions,

respectively concerning the written dictionary and teacher are not surprising, in view of the fact that an L2 teacher can function like an L2 dictionary in providing the meaning of L2 vocabulary, but with some extra advantages (see also section 2.4.4.2); thus, the two questions deal with the same issue, only with different modalities (i.e. written and oral). This result further implies that the learners would generally prefer NNSETs' vocabulary explanations to NSETs' since using two languages in teaching English vocabulary through oral input would generally be a feasible teaching technique exclusive to bilingual NNSETs.

The question above regarding teachers' vocabulary instruction in the preliminary questionnaire was followed by the open-ended question, "why do you prefer English-only instruction (or the use of Korean)?" As stated in the Methodology chapter, the learners' high frequency responses to this question were further coded into the set of attitudinal statements, and were included in the questionnaire developed for the main study. The following sections will present the findings regarding these attitudinal statements regarding learners' reasons for their preferences for English-only or code-switching instruction when learning vocabulary.

5.5.2 Reasons for the Preference for English-only in Vocabulary Learning

Table 5.7 summarizes the list of learners' reasons for preferring English-only (EO) instruction in learning vocabulary and summarizes the two age groups' responses to these statements.

Table 5.7 The reasons for preferring English-only instruction in vocabulary learning

		Strongly disagree		%		Strongly agree
Statement	Group	1	2	3	4	5
… because my memory will last longer.	Adult (*n* = 309)	4.2	30.4	46.0	15.2	4.2
		34.6		46.0	19.4	
	Young (*n* = 442)	19.5	31.7	33.7	9.5	5.7
		51.2		33.7	15.2	
...because it is more effective in understanding words.	Adult (*n* = 309)	2.6	23.9	41.4	26.2	5.8
		26.5		41.4	32.0	
	Young (*n* = 442)	16.1	33.0	34.8	10.4	5.7
		49.1		34.8	16.1	
...because learning new words through their definitions will help us learn other words in the definitions.	Adult (*n* = 308)	1.3	11.0	31.8	43.5	12.3
		12.3		31.8	55.8	
	Young (*n* = 442)	11.5	19.0	43.0	19.7	6.8
		30.5		43.0	26.5	
...because Korean explanations of target words will demotivate students.	Adult (*n* = 309)	10.4	43.0	31.1	12.3	3.2
		53.4		31.1	15.5	
	Young (*n* = 442)	28.1	32.6	30.3	6.6	2.5
		60.7		30.3	9.1	
If understandable, I prefer English-only instruction (to Korean explanations) when it comes to vocabulary learning.	Adult (*n* = 308)	1.3	9.4	19.5	36.7	33.1
		10.7		19.5	69.8	
	Young (*n* = 442)	10.4	15.2	36.9	20.6	17.0
		25.6		36.9	37.6	

Overall, a rather complicated picture was painted by these results for the learners' attitudes towards EO instruction of vocabulary. While the young learners by and large disagreed with or remained neutral to these statements to a great extent, the adult learners showed different patterns of responses towards each statement. It is possible that a relatively high percentage of neutral responses by the young learners to these statements might be in part due to the maturity of the concepts in the attitudinal statements.

To the statements *I prefer English-only instruction because my memory will last longer* and *I prefer English-only instruction because it is more effective in understanding words*, a considerable number of the adult learners remained neutral (46% for the former statement and 41% for the latter statement), with a slightly lower percentage of the learners agreeing with the statements (19.4% for the former statement and 32.0% for the latter statement). The young learners disagreed to a larger extent with these statements, with the former and latter statements being respectively disagreed with by 51.2% and 49.1% of the learners. As for the statement regarding the effect of EO instruction on memory, there was a significant difference in the means of the responses to the Likert scale statements between the adult learners ($M = 2.85$, $SD = .88$) and the young learners ($M = 2.50$, $SD = 1.08$), $t = 4.82$, $df = 732$, $p < .01$. Similarly, the mean of the responses of the young learners to the Likert scale statement regarding the effect of EO instruction on comprehension of words ($M = 2.57$, $SD = 1.06$) was lower in terms of statistical significance ($t = 7.22$, $df = 716$, $p < .01$) than that displayed by the adult learners ($M = 3.09$, $SD = .91$). In brief, only a small percentage of the adult and young learners believed that EO instruction would help them comprehend or retain English vocabulary in an effective way.

One of the adult interviewees, AL12, suggested that EO instruction of unknown

English vocabulary could only be as sophisticated as learners' proficiency level of English, implying that it is bound to be limited in terms of its comprehensiveness and depth in lower level English lessons. She gave an example of this situation as follows:

> AL12: So let's say we are about to learn the new English word "candy". With English-only instruction, we might be able to learn that candy is sweet and delicious by nature, but that would be all. The more sophisticated explanation of "candy" might be incomprehensible to us.

Elaborating on this point, she further suggested that if the teacher gave the Korean equivalent of *candy* (사탕) instead of the English explanation of the same word, not only would the students be able to understand without any confusion what the English word *candy* meant, but also they would be able to immediately retrieve other aspects of the word *candy* (e.g. its word class) by virtue of their knowledge of its Korean equivalent. Therefore, from AL12's perspective, the Korean explanation was more time-efficient and effective than an EO explanation in terms of vocabulary learning, especially for low proficiency level learners.

Although the questionnaire data generally showed a rather low percentage of agreement with the statement that EO instruction would enhance English vocabulary learning and most interviewees' responses on the same issue corroborated this result, an advantage to this type of vocabulary instruction was reported by one of the students with a high level of English proficiency (AL7):

> AL7: I think English-only instruction of English words makes us think really hard about the meanings of those words …

I: Then do you believe that thinking hard helps you learn or makes it difficult to learn those words…

AL7: I think it helps me keep those words in my memory.

It seems that AL7's comment was related to Laufer and Hulstijn's Involvement Load Hypothesis (2001); the more cognitive processing you go through, the more likely it is that intake will occur (or the higher the amount of learning that will be brought about). The other interviewees with a high degree of proficiency also made similar comments during the interview, although these comments were largely based on mere speculation, rather than their personal experiences.

The adult learners were more or less positive about the idea that learning new words through their definitions would help them learn other words in the definitions. Approximately 56% of the adult learners agreed with this statement, whereas only 27% of the young learners did. The percentage of the young learners who showed neutral responses to this questionnaire item was rather high (43.0%), which might be due to the maturity of the concept as mentioned above or the fact that a majority of the learners had not thought about this idea before. There was a significant difference in the means of the responses on the Likert scale between the two groups for this statement (M = 3.55, SD = .89 for the adult learners and M = 2.91, SD = 1.06 for the young learners, t = 8.61, df = 748, $p < .01$). This result is interesting, as many learners in the follow-up interviews highlighted the problem of EO instruction as including difficult words or phrases on some occasions, but the learners also believed that they could learn these difficult words or phrases through this type of instruction. That is, EO instruction of certain English words could open another path to learning new vocabulary.

Concerning the statement that Korean explanation of vocabulary would

demotivate learners, 60.7% of the young learners and 53.4 % of the adult learners disagreed, with the difference in the means of the responses on the Likert scale between the two groups being significant ($M = 2.55$, $SD = .95$ for the adult learners and $M = 2.23$, $SD = 1.01$ for the young learners, $t = 4.41$, $df = 749$, $p < .01$). Although the issue of the relation between teachers' use of CS and learners' motivation did not emerge during the follow-up interviews, some of the interviewees made comments such as the following:

> AL4: As long as they [NNSETs] use Korean for teaching purposes … I think it will be alright. I think it really becomes a problem … when they [NNSETs] do not try to use English much … as in the case of the English classes for our parent's generation.

AL4 drew something of a line between "appropriate" and "too much" in terms of the amount of teachers' use of Korean, implying the possibility that too much use of teacher CS might be perceived as problematic for some learners.

Most interestingly, about 70% of the adult learners agreed with the statement *If understandable, I prefer English-only instruction when it comes to vocabulary learning*, while only 37.6% of the young learners agreed. This difference in the means of the responses on the Likert scale between the two groups reached statistical significance ($M = 3.91$, $SD = 1.01$ for the adult learners and $M = 3.19$, $SD = 1.19$ for the young learners, $t = 8.97$, $df = 721$, $p < .01$).

This result exhibited the most noticeable difference between the adult and young learners in terms of their attitudes towards EO instruction of vocabulary. That is, when it comes to vocabulary learning, a majority of the adult learners were willing to learn through EO input, as long as it was comprehensible. On the other hand, most young

learners were rather reluctant to learn English words through EO instruction.

Lastly, for the descriptive question in section 2 in the questionnaire "When your English teacher gives you an English-only definition (what a word means by using other English words), what do you do?" 52.1% of the adult and 61.6% of the young respondents selected the option "translate the meaning of the word into Korean." On the other hand, 29.6% of the adult and 19.9% of the young learners stated that they try to understand the EO explanation as it is. The rest of the respondents (18.3% of the adult learners and 17.7% of the young learners) opted for "it depends on the type or difficulty of words." This result is generally in line with those for the other attitudinal statements in this and the preceding section, with the adult learners showing a relatively higher degree of intention to utilize their English language system (rather than their Korean system) in processing English input than the young learners. Still, the general trend showed that more than half of the learners of both age groups relied on their Korean lexical system in processing EO instruction of English vocabulary.

The results of the questionnaire items regarding the EO instruction in vocabulary learning generally showed that both the adult and young learners did not strongly agree with the ideas that this type of instruction would help them comprehend or retain English vocabulary. On the other hand, the adult learners saw the value of such instruction as opening another path to learning new English vocabulary (as EO instruction itself might contain some unknown vocabulary). Most interestingly, it was found that comprehensibility was the strong determinant of the adult learners' preference for EO instruction in vocabulary learning, with approximately 70 percent of the learners agreeing with the statement "*If understandable, I prefer English-only instruction.*" Such a high ratio of agreement was not mirrored out within the set of young learners' responses.

5.5.3 Reasons for the Preference for Code-switching in Vocabulary Learning

Table 5.8 shows the list of learners' reasons for the preference for teacher code-switching (or using both languages) in vocabulary learning, and the two age groups' responses to these statements.

Table 5.8 Reasons for preferring both languages in vocabulary learning

		Strongly disagree		%		Strongly agree
Statement	Group	1	2	3	4	5
…because English-only explanations are not easy to understand on certain occasions.	Adult (*n* = 308)	1.9	10.1	27.3	45.1	15.6
		12.0		27.3	60.7	
	Young (*n* = 442)	3.8	11.5	31.2	33.3	20.1
		15.3		31.2	53.4	
...because using both languages will result in better understanding.	Adult (*n* = 308)	.6	7.8	26.6	53.9	11.0
		8.4		26.6	64.9	
	Young (*n* = 441)	1.6	7.7	27.4	42.9	20.4
		9.3		27.4	63.3	
...because it would be best if the teacher provided Korean equivalents and examples of English sentences involving the new word.	Adult (*n* = 308)	.3	10.7	35.1	39.0	14.9
		11.0		35.1	53.9	
	Young (*n* = 441)	3.6	5.7	36.7	34.0	20.0
		9.3		36.7	54.0	
...because Korean explanations are more cost/time-effective than English-only explanations.	Adult (*n* = 307)	4.6	17.9	38.4	32.2	6.8
		22.5		38.4	39.0	
	Young (*n* = 442)	4.5	12.9	43.7	26.9	12.0
		17.4		43.7	38.9	

It was revealed that the majority of learners (64.9% of the adult learners and 63.3% of the young learners) believed that using both languages would result in better understanding of English vocabulary. There was no significant difference in the means of the responses on the Likert scale between the adult (M = 3.67, SD = .80) and young learners (M = 3.73, SD = .93), t = -.932, df = 714, p > .0125. Indeed, less than 10% of the total number of learners disagreed with this idea. Not surprisingly, a similar pattern of responses by the two age groups was found for the statement that English-only (EO) explanations of English vocabulary are not comprehensible on certain occasions, with 60.7% of the adult learners and 53.4% of the young learners agreeing with this statement. No significant difference between the groups was found (M = 3.62, SD = .93 for the adult learners and M = 3.54, SD = 1.06 for the young learners, t = 1.1, df = 708, p > .0125).

In the follow-up interviews, it was further found that both age groups of learners had experienced great difficulty in learning lexical strings (e.g. phrasal verbs and idioms) through EO instruction:

> YL4: For example, *a piece of cake* we learnt last time ... I thought it meant *small cake* at first [laugh]. But it turned out that it is an expression for *a very easy thing* … I experience difficulty when my native speaker teacher tries to explain something like this.

> I: (showing the list of target words to YL8) Any words difficult for you to learn?
> YL8: (reading through the list) These ones (pointing to the multi-words *under-construction* and *out of his mind*) … I think these ones were very difficult to learn in English.

When the researcher and one of the adult interviewees (AL12) went through the target words they learnt during the course of the quasi-experimental part of the present study, the adult learner highlighted the advantage of CS as follows:

> AL12: Yeah, these words *far-flung* and *out of hand* … I think it is better to learn their meaning in Korean than in English …
>
> I: Why so?
>
> AL12: Well … the meaning of each word [in these kinds of multi-words] sometimes does not necessarily contribute to the whole meaning [of the multi-words]. In such a case, I think a Korean explanation regarding how these words together make up the meaning of a new word [multi-word] would work better for students' understanding than the English explanation.

AL12 further based this difficulty in understanding multi-words on the fact that their teachers did not provide enough example sentences containing these words, other than the one in their reading text. In accordance with this comment, it was further found that 53.9% of the adult learners and 54.0% of the young learners preferred to have Korean equivalents of English words followed by examples of English sentences containing those words; this result indicates that about half of the learners see the role of English input in assisting them in understanding the use of words in context. Only about 10% of the learners disagreed with this idea, with no significant difference in the means of the responses between the two groups, (M = 3.57, SD = .88 for the adult learners and M = 3.61, SD = .99 for the young learners, t = -.50, df = 747, p > .0125). Thus, it seems that this method of teaching vocabulary, which involves explanation of the meanings of words in the L1 and providing some contextual information in the L2 (whether it is

written or spoken), effectively caters to the learners' needs.

While English words were believed to be more efficiently taught in Korean, the learners were not convinced of the opinion that teachers' Korean explanations are more time-effective than EO explanations, with approximately 40% of the learners remaining rather neutral on this idea. There was no significant difference in the means of the responses between the two groups (M = 3.19, SD = .96 for the adult learners and M = 3.29, SD = .99 for the young learners, t = -1.39, df = 747, p > .0125). This result was an unexpected one, considering the fact that many interviewees referred to the problem of circularity concerning the English definitions in English-English dictionaries. Perhaps, it was the case that time-efficiency was not the main reason why the learners preferred CS; rather it seems that the learners put a greater emphasis on a better understanding of vocabulary over the time-efficiency of instruction.

It seems clear from the set of the above questionnaire items that the adult and young learners show a big and clear preference for a bilingual approach to vocabulary instruction over a monolingual approach. A majority of them believed that EO instruction is not comprehensible on some occasions, and that understanding the meaning of the target word through their L1 (i.e. Korean) and experiencing it in contexts would be the best way to learn that word. However, they were not convinced that Korean explanations might be more time-efficient than EO explanations.

5.5.4 Learners' Preferences for Vocabulary Teaching Techniques

The last set of questionnaire items aimed to investigate learners' preferences for vocabulary teaching techniques. The overarching research question in this investigation was "how do Korean EFL learners want their English teachers to teach vocabulary?" As in the case of the attitudinal statements developed in the investigation of the learners'

reasons for preferring English-only (EO) instruction/Code-switching (CS) in vocabulary learning, the statements concerning the learners' preferences for vocabulary teaching techniques were also developed based on the results of the preliminary questionnaire administered during the pilot study. Among a variety of answers given by the participants, six techniques of teaching vocabulary which displayed the highest frequency were selected, and respectively coded into each attitudinal statement in the questionnaire for the main study. These techniques included 1) providing English definitions/synonyms of English words, 2) providing Korean equivalents/explanations of English words, 3) providing an example sentence containing English words, 4) using visual aids, 5) making students guess the meaning of words first, and giving them the meaning of words and 6) teaching how to pronounce words. In the questionnaire, the statements concerning each technique were phrased in similar ways: "When my teacher teaches an unknown English word in the text, I want him or her to _____." The results of the quantitative analysis on these statements are presented in Table 5.9.

Table 5.9 Learners' preferences for vocabulary teaching techniques

		Strongly disagree		%		Strongly agree
Statement	Group	1	2	3	4	5
I want my teacher to provide English synonyms/definitions of English words.	Adult (*n* = 307)	.3	4.2	24.1	53.7	17.6
		4.5		24.1	71.3	
	Young (*n* = 442)	5.0	12.9	48.0	24.4	9.7
		17.9		48.0	34.1	
I want my teacher to provide Korean equivalents or explanations of English words.	Adult (*n* = 307)	2.0	17.3	36.5	35.5	8.8
		19.3		36.5	44.3	
	Young (*n* = 442)	2.9	7.7	40.5	34.2	14.7
		10.6		40.5	48.9	
I want my teacher to provide an example sentence containing English words.	Adult (*n* = 307)	0.0	5.2	24.4	58.6	11.7
		5.2		24.4	70.3	
	Young (*n* = 442)	4.3	11.5	44.3	30.8	9.0
		15.8		44.3	39.8	
I want my teacher to use visual aids when he or she teaches English words.	Adult (*n* = 307)	2.3	13.7	38.8	34.5	10.7
		16.0		38.8	45.2	
	Young (*n* = 440)	2.0	8.2	34.3	35.7	19.8
		10.2		34.3	55.5	
I want my teacher to make students guess the meaning of English words first, and then teach the meaning of the words.	Adult (*n* = 307)	.7	17.3	35.8	37.8	8.5
		18.0		35.8	46.3	
	Young (*n* = 442)	5.4	10.9	41.2	24.9	17.6
		16.3		41.2	42.5	
I want my teacher to teach us how to pronounce English words.	Adult (*n* = 307)	1.0	2.6	19.2	45.9	31.3
		3.6		19.2	77.2	
	Young (*n* = 442)	3.4	5.0	29.9	31.9	29.9
		8.4		29.9	61.8	

As can be expected from other findings in this chapter, differences were found in

terms of the learners' preferences for English definitions/synonyms. That is, while 71.3% of the adult learners agreed with the statement *I want my teacher to provide English synonyms/definitions of English words*, only 34.1% of the young learners did so. This difference in the mean of the responses between the two groups reached statistical significance (M = 3.84, SD = .77 for the adult learners and M = 3.21, SD = .96 for the young learners, t = 9.95, df = 732, p < .0083). Not surprisingly, the overall pattern of the responses of the two age groups for this statement was very similar to the pattern for the statement *If understandable, I prefer English-only instruction when it comes to vocabulary learning* (section 5.5.2). Furthermore, a similar pattern and figures were also obtained for the statement *I want my teacher to provide an example sentence containing English words*, with 70.3% of the adult learners and 39.8% of the young learners agreeing or strongly agreeing with this statement. While there was a significant difference in the means of the responses on the Likert scale between the two groups (M = 3.77, SD = .72 for the adult learners and M = 3.29, SD = .94 for the young learners, t = 7.95, df = 739, p < .0083), it is interesting to note that only 5.2% of the adult learners disagreed with this technique of vocabulary teaching.

On the other hand, 48.9% of the young learners and 44.3% of the adult learners opted for Korean equivalents and explanations as a favoured vocabulary teaching technique; thus, the technique of providing L1-based meaning was preferred more by the young learners than the adult learners, with the mean of the Likert scale responses for the young learners being not significantly higher than that of the adult learners at the the Bonferroni corrected p-value (M = 3.32, SD = .93 for the adult learners and M = 3.50, SD = .94 for the young learners t = -2.61, df = 747, p > .0083). In brief, somewhat different patterns were found between the adult and young learners in terms of their preferences for L1 and L2 input in learning vocabulary.

With regard to visual aids, the young learners showed a stronger preference for this technique of teaching vocabulary. While approximately 56% of the young learners favoured the idea of using visual aids in vocabulary teaching, only 45% of the adult learners did. The means of the responses between the two groups on this statement were significantly different (M = 3.38, SD = .93 for the adult learners and M = 3.63, SD = .96 for the young learners, t = -3.58, df = 745, p < .0083). The technique of *making students guess the meaning of English words* turned out to one of the less favoured techniques, with only 46.3% of the adult learners and 42.5% of the young learners being in agreement with the idea of using such a technique. This result may be due either to learners' unfamiliarity with the vocabulary strategy of inferring the meanings of words or their previous experiences of making wrong inferences. It is also possible that the learners misinterpreted the term "guess" with some negative connotations, although guessing is indeed part of vocabulary acquisition. Lastly, another reason for Korean students' distaste for guessing the meaning of words from context may be a cultural one; that is, many Korean learners do not like to "stick their necks out" in their classrooms, being afraid of making mistakes in front of their peers. There was no significant difference in the means of the responses on the Likert scale between the two groups (M = 3.36 SD = .89 for the adult learners and M = 3.38, SD = 1.07 for the young learners, t = -.322, df = 723, p > .0083).

Interestingly, the most favoured technique among all concerned pronunciation of English vocabulary, with 77.2% of the adult learners and 61.8% of the young learners agreeing with the use of this technique. The mean of the responses of the adult learners for this technique (M = 3.36 SD = .89) was higher in terms of statistical significance (t = 3.52, df = 730, p < .0083) than of those given by the young learners on the same technique (M = 3.36 SD = .89). At a glance, this result may look bizarre, and one might

wonder "how is it possible to teach vocabulary without teaching pronunciation?" In fact, the follow-up interviews revealed that pronunciation of English words was not systematically taught in Korean English lessons, at least in our participants' English classrooms. The following quotation illustrates this situation:

> YL9: Our teacher [the interviewee's NNSET at the school] does not deal with pronunciation of English words too much… She just says the word two or three times … and teaches us the meaning of the word.

Although it was not revealed during the interviews why the Korean EFL learners eagerly wanted their teachers to teach the pronunciation of English words, it could be postulated that the learners intuitively felt that learning how to pronounce unknown words would be the first important step in the process of acquiring those words. Regarding the learners' preferences for the learning of pronunciation of English words, it was additionally found that the learners did not prefer that the instruction of English pronunciation be delivered by Korean teachers:

> YL10: Korean teachers explain English grammar and vocabulary very well … but when it comes to teaching English pronunciation … they are not native speakers but Koreans like us … so I don't think we can learn [English pronunciation] very well from them.

> AL3: Korean teachers of English do not have native-like pronunciation of English … so I guess we would not benefit too much from them [in terms of English pronunciation].

In brief, the adult learners preferred a variety of vocabulary teaching techniques in the following order: to teach pronunciation of English words, to provide an English synonym/definition of English words, to provide an example sentence containing English words, to make students guess the meaning of English words, to provide visual aids and lastly to provide a Korean equivalent. For the young learners, the order of the preference for the teaching techniques was as follows: to teach pronunciation of English words, to provide visual aids, to provide a Korean equivalent, to make students guess the meaning of English words, to provide an example sentence containing English words, and to provide an English synonym/definition of English words. It is noteworthy that a noticeable difference was found in this order between the adult learners and young learners. That is, while providing the Korean equivalent of English words was the third most favoured technique of the young learners, it was the least favoured technique of the adult learners. On the other hand, providing an English synonym/definition of English words, which was the second favourite option for the adult learners, was indeed the least favourite technique for the young learners. Also noteworthy is that, except for *to teach how to pronounce English words*, the adult learners appear to prefer more sophisticated techniques such as learning through English definitions and learning target words in contexts, whereas the young learners seem to rely on more basic methods such as learning through visual aids and L1 equivalents.

5.6 Summary

This chapter has reported the findings from the participant questionnaire, directed at investigating Korean EFL learners' attitudes towards different types of English teachers, English-only (EO) instruction/teacher code-switching (CS), and vocabulary teaching practices. The interview data with a subset of the participants were also included to

provide more in-depth and open responses on the same issues, which were not obtainable through the implementation of the questionnaire. The major findings from this chapter are as follows:

- There are subtle differences between the adult and young learners in terms of their attitudes towards native speaker English teachers (NSETs) and non-native speaker English teachers (NNSETs), with the adult learners showing slightly more positive views on some of NSETs' characteristics.
- Both age groups are generally not in favour of EO instruction, with the young learners showing slightly more negative attitudes.
- Both age groups have positive attitudes towards teacher CS and its pedagogical functions.
- The adult learners generally appear to be more reflective learners than the young learners, presumably through their longer experience of learning English.
- Both age groups have more positive attitudes towards using the two languages in teaching vocabulary than EO instruction.
- The two age groups differ in their preferences for vocabulary teaching techniques.

Having seen the major findings, the result of each bullet point will be elaborated further below.

As for the NSETs and NNSETs, the adult learners showed slightly more positive attitudes towards NSETs than the young learners, particularly in their teaching of speaking and conversation skills. The proportion of the adult learners who wish to have only NSETs as their English teachers was also higher than that of the young learners. At

the same time, the adult learners also recognized, to a greater extent, the strength of NNSETs as being more sensitive to students' learning difficulties than the young learners. It was further found that the NNSETs' strengths are often linked to their ability to use learners' native language, which serves several pedagogical purposes. Thus, CS was one of the most distinguishing differences between the two types of teachers in terms of their teaching practices. Lastly, the Korean EFL learners do not seem to strongly agree with the idea that NSETs are more interesting than NNSETs.

Regarding teachers' language use, the EFL learners, in particular the young learners, generally did not favour EO instruction, but rather preferred to have at least some degree of teacher L1 in English lessons. The explanation for this result seems to lie in the fact that NSETs' instruction (i.e. EO instruction) is somewhat overwhelming and cognitively demanding for the young learners in the present study, in view of their limited English proficiency. This difficulty in taking EO instruction expressed by the learners was largely associated with lexical items, which frequently triggers comprehension problems on the part of learners. Based on the results of the questionnaire, it appears that the adult learners would prefer to have the higher ratio of English to Korean in terms of teachers' language in English lessons than the young learners. The results of the participant questionnaire and follow-up interviews further showed that the learners agreed to a large extent with the opinion that teacher CS enhances learners' understanding of the contents of lessons and that it delivers classroom management information (e.g. giving instructions about classroom activities, discussing class outlines) more effectively than EO instruction.

While a majority of the EFL learners of the two age groups did not reject the idea of teachers' use of CS, there were exceptional cases. Through the follow-up interviews, it was found that some learners whose English proficiency was higher than

others preferred EO instruction to having teachers' CS and had integrative motivation in learning English. Though there was a lack of empirical evidence, it seemed that the learners' proficiency, attitudes towards EO instruction, and integrative motivation were interrelated with each other, at least for these learners.

The adult learners generally seem to be more aware of the importance of English input, the role of English vocabulary and using English in classrooms to develop their English proficiency than the young learners; they were more responsible for their own learning than the young learners. It seems that these differences between the two age groups were due to the adult learners' additional experience in learning English. In addition, a higher percentage of the adult learners, compared with young learners, believed that the quality of teaching is more important than teachers' native language.

The results of the questionnaire items regarding the instruction in vocabulary learning showed that both age groups saw the value of using both languages, which would yield better vocabulary learning. This result corresponded to those of the learners' preference for bilingual dictionaries for the meaning of English vocabulary, implying that the learners generally favoured the CS resource over the non-CS resource in terms of their vocabulary learning. The follow-up interview further confirmed the learners' preference for the CS resource, both in the oral (i.e. teacher CS) and written (i.e. dictionary entries) formats, which are more learner-oriented from students' point of view.

The two age groups also believed that understanding the meanings of the target words through their Korean equivalents and revisiting them in sentence contexts would be the best way to learn English words. The learners did not strongly agree with the idea that EO instruction would help them comprehend or retain English vocabulary. While it was found that this result may be attributed to the fact that EO instruction is not comprehensible on some occasions for the learners, it was also revealed that the adult

learners were willing to try out EO instruction for vocabulary learning as long as it is comprehensible. The adult learners also saw the value of such instruction as opening another path to learning new English vocabulary (as EO instruction itself might contain some unknown vocabulary).

The two age groups differ significantly from each other in their preferences for vocabulary teaching techniques, except for the most favoured technique being *to teach how to pronounce English words* for both the adult and young learners. In general, the adult learners showed their preference for more advanced techniques such as learning through English synonym/definition and experiencing target words in sentence contexts. On the other hand, the young learners were keen on more basic level techniques such as learning through visual aids and Korean equivalents.

Chapter 6 Discussion

6.1 Introduction

The present study had two central goals. One was to evaluate the effectiveness of two different instructional approaches (i.e. English-only and Code-switching instruction) with regards to vocabulary learning in the context of meaning-oriented reading comprehension lessons. This investigation intended to maximize its ecological validity, with the aim of providing pedagogical implications that are applicable to intact English classrooms in a Korean context. The other goal was to explore Korean EFL learners' attitudes towards teacher code-switching (CS) and other related aspects of English language teaching. In addition, the study included the added dimension of the age of learners, considering the differential effects of these two instructional approaches on adult and young learners as well as their respective attitudes towards teacher CS and other relevant issues. In this light, a relatively large-scale study with two age groups (497 young and 320 adult Korean EFL learners) was implemented, including four instructional sessions, six post-test sessions, and the administration of the participant questionnaire/follow-up interviews with a subset of the participants.

In this chapter, the research findings presented in the previous two Results chapters will be discussed in light of the theories as well as the hypotheses presented in Chapter 2. It will also present the discussions regarding the weaknesses in the design, where relevant. The structure of this discussion will largely correspond to the order of the research questions delineated in section 3.2 in the Methodology chapter.

6.2 Lexical Form-focused Instruction

Before leaping into a discussion of the main research questions, this chapter will begin by reminding readers of the type of vocabulary instruction contextualized in the present

study, and then it will consider its pedagogical value in relation to current research findings.

The vocabulary instruction investigated in the present study was oral in nature – teachers' explanation of L2 vocabulary (Nation, 2001). It occurred systematically in that the sampled teachers used a pre-determined set of target words drawn from target reading texts prior to the lessons, and was also unplanned in that learners were occasionally raising questions related to non-target words included in reading materials, which reflected perceived problems on the part of learners in comprehending the general meaning of the text. It was mentioned in section 2.4.4.1 that this kind of vocabulary instruction may be construed as what Laufer has termed lexical *Focus on Form* (Laufer, 2005), which involves the integration of supplementary intentional vocabulary teaching into meaning-focused activities, achieving the dual aims of meaning comprehension and vocabulary acquisition within the same activity.

The research context of the present study was intact EFL classrooms in which this lexical *Focus on Form* (FonF), either through English-only (EO) instruction or switching to Korean (i.e. learners' L1), was a naturally occurring phenomenon. The aim of the first research question was to examine the effects of systematic lexical FonF on the adult and young learners' vocabulary learning. Analyses of learners' vocabulary development before and after the instructional period showed that both adult and young learners made significant gains in terms of receptive-recall and receptive-recognition knowledge of the target vocabulary after receiving this FonF instruction. Despite some attrition of knowledge, they still retained a significant amount of these two types of knowledge of the target vocabulary three weeks after the instructional period had ended. In view of the fact that the target words involved in the present study were not reviewed after the instructional period, some degree of attrition of vocabulary knowledge on the

delayed post-tests seems to be inevitable.

A theoretical explanation for this positive effect of lexical FonF instruction comes from the psycholinguistic domain. This explanation is as follows; lexical FonF is conducive to promoting learners' noticing (Alcón, 2007), which in turn is deemed to be a prerequisite for learning novel L2 items (Schmidt, 2001). Thus, given that the teachers' lexical FonF approach successfully predisposes learners to attend to target lexical items, it will increase the likelihood of subsequent learning of those items.

On the other hand, the above discussion regarding the lexical FonF raises a methodological weakness of the present study. That is, due to the lack of a third group in the research design, which would have received non-CS or non-EO forms of lexical FonF, we cannot be sure whether the observed learning outcomes are due to the effect of FonF or due to that of CS (or EO instruction). While the inclusion of this third group would have helped to answer the above question, the researcher was not able to sample a condition (or environment) where another type of lexical FonF (other than CS and EO instruction) was a naturally occurring phenomenon.

6.3 Effects of Different Instructional Types on Vocabulary Learning

The previous section discussed the effect of lexical FonF instruction on the two age groups' vocabulary learning, thus looking at the effect of the two instructional types without distinguishing between the two. However, as mentioned throughout the thesis, the primary goal of this study was to evaluate the relative effects of teacher code-switching (CS), compared to the exclusive use of English, on the vocabulary learning of two age groups of Korean EFL learners. The second and third research questions respectively dealt with the adult and young learners' vocabulary acquisition through these two types of instruction.

As for these research questions, the findings of the present study generally point towards the superiority of teacher CS over English-only (EO) instruction in terms of adult and young learners' vocabulary acquisition and retention. These findings of the present study generally correspond to the outcomes of previous studies examining the effects of L1 input on L2 vocabulary learning in the written context (e.g. Ramachandran and Rahim, 2004; Laufer and Shmueli, 1997; Prince, 1996; Oskarsson, 1975), in which providing L1 equivalents of L2 words has proven more beneficial for learners' vocabulary gains than providing L2-based input.

The reason for the superiority of L1-based input over L2-based input in the present study as well as these other studies appears to be in the cognitive domain. As Laufer and Shmueli (1997) contended, L1-based input is likely to draw "maximum attention" to the new L2 vocabulary by virtue of its familiarity to learners, unlike L2-based input which might be less familiar to learners. Furthermore, given that a new L2 word is likely to be accessed via its L1 equivalent (Kroll and Stewart, 1994) and further mapped "onto pre-existing conceptual meanings or onto L1 translation equivalents as approximations" (N. Ellis, 1997, p. 134), it may be the case that learning vocabulary through L1-based meanings is a more natural or learner-oriented route of learning than doing so through L2-based meanings. Furthermore, given the limited attention resources at learners' disposal (Barcroft, 2002; VanPatten, 1990), L1-based input, which is much more familiar to learners than L2-based input, is likely to lighten learners' cognitive load, and consequently allows the limited resources to be targeted more at new lexical items.

Then, the research evidence from the present study and previous works on this issue would encourage SLA theorists to re-examine the value of using learners' L1 in L2 teaching, which has been deemed to be a pedagogically incorrect strategy, mainly due to its conflicting nature with "principles of communicative language teaching or

comprehensible input" (Jiang, 2004b, p. 426). The re-examination of teachers' use of the L1 will then put us in the "optimal position" on the idea of L1 use (Macaro, 2005; Cook, 2005; Butzkamm, 2003; Auerbach, 1993; Atkinson, 1987), and allow us to move forward from the "maximal L2 position," which is conceptually elusive and a-theoretical by nature (Macaro, 2009). Furthermore, the findings of the present study, which involves an oral context, further inform L2 pedagogy regarding teachers' oral explanation of L2 vocabulary, suggesting that L2 teachers may search for judicious ways to incorporate the L1 in their L2 vocabulary teaching. The pedagogical implications of the present study regarding teacher CS will be revisited in sections 6.5.4 and 6.6.2.

On the other hand, the results of the present study appear to contrast to some extent with some of the previous studies on the same issue (Tian, 2009; Meng, 2005), wherein no significant difference between teacher CS and EO instruction was found in the *long term*. The most reasonable explanation for this incongruity of findings seems to lie in the differences in the research designs. As discussed in 2.3.5.3 and 3.3.1, these two previous studies were more experimental by nature than the present study. As a result, the EO condition in these studies might have been likely to have involved a lower degree of distraction due to its experimental nature compared to the present study, and consequently it would have been easier for the sampled teacher to communicate the meanings of target vocabulary items in the EO version, resulting in outcomes comparable to the CS instruction. Another point worth mentioning is that intact L2 classrooms (like the ones involved in the present study) consist of a group of learners showing a large variability in terms of their L2 proficiency levels and other individual differences, which in turn would make it difficult for L2 teachers to cater to the needs of their learners (i.e. providing comprehensible explanations of L2 vocabulary) without using any L1. In brief, the native speaker teachers involved in the present study might

have done a less successful job in teaching L2 vocabulary than the sampled bilingual teachers in the previous studies did in the EO condition, which may account for the differences in the findings mentioned above between the present and previous studies.

The findings of the present study also offer important implications in terms of the value of bilingual L2 teachers. In the realm of L2 vocabulary pedagogy in particular, little work has been done with regards to how effective the respective teaching practices of native L2 and bilingual L2 teachers are, and what they can provide to their learners at the moment of teaching unknown L2 vocabulary, with the only exception being the model of "teacher as dictionary and dictionary designer" (Macaro et al., 2009). This model proposes that bilingual teachers are at a further advantage compared to their native counterparts in providing explanations of L2 vocabulary, as they can provide a more diverse range of information about L2 vocabulary by virtue of having additional knowledge of the L1. Furthermore, bilingual teachers "can make a reference to cultural schemata as represented by the concept-lexeme mapping in both languages" (Macaro et al., 2009, p. 131). The present study provides evidence in favour of the above model, demonstrating that bilingual teachers, as opposed to native ones, are generally more beneficial to adult and young EFL learners' vocabulary gains, all other things (e.g. teaching materials, an allotted amount of time for giving lessons, teaching context) being equal. Therefore, as Medgyes (2001) rightly points out, the ability to use learners' L1 should be perceived as a strength of bilingual teachers, although switching to the L1 may need to be done judiciously, "at their discretion" (p. 439). That is, bilingual teachers should still adhere to the underlying principles of the communicative approach (e.g. promoting L2 communication and providing a sufficient amount of L2 input), and prevent their CS from turning into an unbridled use of learners' L1. Furthermore, bilingual teachers need to be equipped with a very good knowledge of the target

language as well as the L1 to more effectively perform the role of "dictionary and dictionary designer" than monolingual teachers.

6.4 Differential Effects of Teacher Code-switching on Adult and Young Learners

As mentioned in various parts of this thesis, this study includes the added dimension of considering the *differential* effects of teacher Code-switching (CS) between adult and young learners – 19- and 12-year old EFL students in Korea. It should be remembered that the purpose of having two age groups in this study is to investigate whether the age of the learners is a factor that should be considered in the general debate on L1 use in Communicative Language Teaching (CLT) classrooms, rather than to directly compare their respective L2 learning processes. The main thrust of this investigation, in other words, was to ascertain the effectiveness of teacher CS (or English-only instruction) for two age groups which differed from each other in many respects (e.g. English proficiency and years of learning English). If there were differential effects of these two types of instruction between these two age groups, such findings would call for a reconsideration of pedagogical decisions regarding L2-only instruction, which has been seen as the best type of instruction regardless of learners' ages or levels of L2 proficiency. It was the central focus of the present study to determine the legitimacy of this prevailing belief in the field. In this light, the present section will discuss the research findings for the fourth research question, which concerned the differential effects of teacher CS on the vocabulary learning of two age groups.

As discussed in the previous section, CS instruction generally led to a higher amount of vocabulary learning than English-only (EO) instruction for both the adult and young learners in this study. However, an inspection of the effect sizes further showed that the CS instruction proved to be far more effective for the young learners in both the

acquisition and retention of English vocabulary. Thus, the study indeed found a differential effect due to teacher CS on the vocabulary learning between the two age groups, with the young learners benefiting to a greater degree from teacher CS than the adult learners. In particular, when it comes to the retention of vocabulary knowledge, the effects of EO and CS instruction for the adult learners were statistically not discernable or weakly distinguishable, respectively in terms of receptive recall and receptive recognition.

The results of the present study are generally in accord with those of previous dictionary and glossing studies (Kim, 2009; Miyasako, 2002; Knight, 1994), together pointing towards a possible interaction between the effects of L1 input and learners' proficiency level. That is, less proficient learners would be likely to benefit from L1 input in the comprehension and learning of L2 vocabulary to a greater extent than more proficient learners would. Then, how can we account for this phenomenon from a theoretical perspective? It should be remembered that section 2.5 tapped into various areas of SLA and education literature to glean possible predictions regarding the relative effects of L2-only and CS instruction between adult and young L2 learners. In what follows, we will look at the findings of the present study in light of these areas of SLA literature.

In view of the Revised Hierarchical Model (Kroll and Stewart, 1994) and Cummins' Interdependence Hypothesis (1980b), it was hypothesized that the young learners would benefit more from teacher CS than their adult counterparts, due to their limited L2 proficiency. The results of the study are consistent with this hypothesis, proposing that accessing the meaning of the L2 is likely to be facilitated via the L1, not least for less proficient learners. In the words of Kroll and Tokowicz (2005), this result supports the idea that "during early stages of L2 acquisition, the learner exploits the

existing word-to-concept connections in L1 to access meaning for new words in L2" (p. 546). Then, we could further postulate that, between L2-only and CS instruction, CS instruction would deliver more learner-oriented explanations of new L2 vocabulary for less proficient learners, consequently bringing more fruitful learning outcomes.

From an interactionist perspective (Long, 1996), the low performance of the young learner group in the EO condition may be attributed to their inability to effectively engage in lexically oriented meaning negotiation with their teachers in English. To be more specific, the young learners with limited L2 proficiency in the present study, who were generally not well equipped in terms of the linguistic resources at their disposal for meaning negotiation (Pica, 1996), were not able to take full advantage of L2-only instruction via meaning negotiation in the acquisition of L2 vocabulary.

Lastly, it was discussed in section 2.5.1.1 that the literature on learning expertise and learner strategies advances two rather different hypotheses regarding the effects of EO instruction and teacher CS for adult and young learners. The nub of the discussion therein was that, with an increase in years of schooling and learning experience, learners are equipped with a wider range of strategic options. Based on this idea, it could be further expected that the adult learners would make use of teacher CS more effectively than the young learners, in view of the fact that they are more analytical and strategic learners who could consciously draw on their L1 knowledge as a strategic resource in L2 learning. However, "being strategic" could simultaneously be construed as being able to "infer the meaning encoded in L2-only instruction," thereby leaving the door open for the prediction that EO instruction would be more beneficial for the adult learners than the young learners, who might not yet have developed a sufficient degree of strategic knowledge to deal with this kind of instruction.

The finding that the effect sizes of instructional type (i.e. EO and CS instruction)

were relatively smaller for the adult learners than for the young learners appears to fit in better with the latter hypothesis above, indicating that the EO group in the adult-learner category performed relatively better than the EO group in the young-learner category, in relation to their respective CS counterparts. In some regards, this latter prediction is in line with Kern (1994) and O'Malley and Chamot (1990) in that less proficient learners make use of translation proportionately more than high proficiency learners in L2 learning. These findings suggest then, that the adult learners in the present study might have been more able to deal with L2-only instruction without relying too much on translation, unlike the young learners who inevitably have to draw on their L1 knowledge during L2 learning processes. However, this discussion does not necessarily suggest that the adult learners would not benefit from teacher CS; rather, it suggests that they would be less disadvantaged by taking EO instruction in order to learn English vocabulary compared to the young learners.

To summarize, the results of the present study regarding the differential effects of teacher CS on adult and young EFL learners generally support the predictions of certain areas of SLA literature; the young learners with lower levels of English proficiency and learning experience are likely to benefit more from teacher CS than their adult counterparts. This suggests the need to take into account learners' ages and proficiency levels in the pedagogical decision-making process regarding teachers' use of the L1, with a gradual increase of L2 use (Lee, 2009), rather than using L2-only instruction for all age groups. This is potentially a more effective proposal for L2 teaching, at least in terms of vocabulary teaching. Furthermore, as will be discussed in section 6.6 in light of the findings of the participant questionnaire and interviews, this pedagogical proposal of a gradual increase of L2 use seems to be a learner-preferred one, an aspect of language learning which has been largely ignored in the area of L2 teaching

professions.

One methodological weakness in terms of the differential effects of teacher CS for two age groups is concerned with the possible confound between instructional type and their English proficiency (or size of vocabulary). That is, the adult learners in the present study had more language (or greater breadth of vocabulary) with which to understand the explanations in English than the young learners. To be more precise, it could have been the case that the explanations of target vocabulary given in English were within the adult learners' vocabulary range (and thus were likely to have been easily comprehensible to them). On the other hand, in the case of the young learners, those words within the explanations of target vocabulary may have been recently acquired for them and almost as difficult as the target vocabulary items themselves. This further implies that stronger effects of CS in comparison to EO instruction for the young learners may have been due to a bias in the research design (i.e. the EO group of young learners were disadvantaged to some degree due to their low level of English proficiency). However, it should also be pointed out that the target words for the young learners in the present study were generally high frequency words (compared to those for the adult learners), and consequently the English explanations of them would have required a relatively lower level of English proficiency (than those of the target words for the adult learners).

6.5 Other Factors Related to the Two Age Groups' Vocabulary Learning

The discussion up to this point has only concerned the effects of instructional type and age, leaving aside discussions of other learning factors. The present section will deal with the role of several factors related to L2 vocabulary learning (i.e. different types of vocabulary knowledge, English proficiency, and word-type), and concurrently discuss

the effects of instructional type and age in tandem with these factors, where relevant.

6.5.1 Two Types of Vocabulary Knowledge

In section 3.3.6.2 in the Methodology chapter, it was stated that more than one type of vocabulary measure was implemented in the present study, in order to examine the effect of instructional type (i.e. EO and CS instruction) on different levels of vocabulary learning – receptive recall and receptive recognition. It was further hypothesized that the learners would demonstrate a larger amount of receptive recognition knowledge of target vocabulary after the instructional period than receptive recall knowledge, as the latter requires a much deeper degree of mental processing.

Before discussing the results of the two types of vocabulary tests, it seems worthwhile to discuss the adult and young learners' answer patterns on the recall test (i.e. simplified VKS). Rather unexpectedly, although the learners were allowed to opt for either English- or Korean-based meanings, they mostly recalled their knowledge of the target vocabulary in Korean, on both the immediate and delayed post-tests. This result indicates that even the learners who received the meaning of vocabulary through EO instruction opted for Korean-based meanings. While the CS group opting for Korean-based meanings is not surprising at all (as they learnt the target vocabulary through teachers' explanations in Korean), the EO group's predominant choice of Korean-based meanings seems to offer two important pedagogical implications; as for the immediate post-tests, this result implies that the EO group activated their *L2 to L1 lexical links* to access and process the meaning of L2 vocabulary (Kroll and Stewart, 1994), despite the fact that they were provided L2-based meanings. Furthermore, the EO group's opting for L1 meanings in the delayed post-tests provides indirect evidence for the *internalization of the meanings of L2 vocabulary into their L1 system*, indicating that L1 lemma

information of the target words has been integrated (or imprinted) into their L2 lexical entries (Jiang, 2000). From a psycholinguistic perspective, this result is of great interest, providing some evidence for the structure of vocabulary representation in the bilingual lexicon. It may even merit a future study in and of itself, with the inclusion of more advanced L2 learners who may show different developmental patterns of L2 vocabulary.

As for the learners' performances on the two types of tests, it was found that the learners generally demonstrated a higher amount of receptive recognition than of receptive recall, both on the immediate and delayed post-tests, which is in accord with the hypothesis mentioned above. Similar results were reported in previous L2 vocabulary studies (e.g. Yoshii, 2006; Knight, 1994), in which the participants showed better performance on the "select-definition" type of tests (i.e. equivalent to the MC test) than the "supply-definition" type of tests (i.e. similar to the simplified VKS).

The effects of instructional type on different levels of vocabulary learning were more evident in the case of the adult learners. That is, while the CS instruction was demonstrated to be more effective than the EO instruction for the adult learners in terms of retention of receptive recognition (albeit with a small effect size), these two types of instruction did not produce any statistically significant difference in terms of retention of receptive recall. This finding indicates that, without the implementation of the MC test (i.e. the test of receptive recognition), this positive effect of teacher CS on the adult learners' vocabulary retention would not have been revealed. On the other hand, in the case of the young learners, the two different types of vocabulary tests revealed similar results in terms of the relative effects of EO and CS instruction.

6.5.2 General English Proficiency

A multiple regression analysis was carried out as a *post-hoc* approach to investigate the

fifth research question of whether instructional type was still a significant factor for the two age groups' vocabulary learning while controlling for the effect of English proficiency. Three major findings from this analysis are summarized below:

> 1) The two predictors (i.e. instructional type and English proficiency test), combined together, explained a significant percentage of the variance in the scores of the post-tests of vocabulary for the adult and young learners.
> 2) Instructional type was still a significant predictor while holding constant the effect of English proficiency, except for the retention of receptive recall for the adult learners.
> 3) English proficiency was significantly associated with the dependent variables for both age groups while holding constant the effect of instructional type, regardless of the type and time (i.e. acquisition and retention) of the tests.

Regarding the first finding, the multiple regression analyses revealed that instructional type and English proficiency, combined together, accounted for approximately half of the amount of the variance in the dependent variables (i.e. post-tests of vocabulary) in the case of both the adult and young learners. Considering the fact that the present study was not undertaken in a laboratory environment where the researcher would have been able to exert maximum control over variables, but rather in intact classrooms in which a great number of external factors (e.g. noise, class size, and peer pressure) are constantly at play, these variance figures explained by only two predictors seem to be quite large. In other words, these two predictors were the determining factors of the two age groups' vocabulary learning in the present study.

On the other hand, regarding the second finding, the inspection of the beta values confirmed the larger effect of instructional type for the young learners, suggesting that the CS group in the young-learners category performed better than its EO counterpart to a greater extent than the CS group in the adult-learners category did. This result was consistent with that from the statistical analyses for the effects of instructional

type while controlling for the score of the pre-test of target vocabulary.

Lastly, English proficiency was found to be a significant factor accounting for the two age groups' vocabulary acquisition and retention, which mirrors the findings of previous vocabulary studies (Tian, 2009; Miyasako, 2002); the learners with higher English proficiency generally demonstrated a greater amount of vocabulary learning in the post-tests. This significant contribution of L2 proficiency to L2 vocabulary learning found in the present study seems to bear out the current thinking of the L2 vocabulary research community that vocabulary knowledge is strongly associated with many aspects of L2 proficiency (Read, 2000; Meara, 1996a).

6.5.3 Relationship between Word Variables and Vocabulary Learning

The sixth research question addressed the association between the learners' vocabulary gains and word-related variables (or intrinsic word properties), including 1) length of words, 2) concreteness of words, 3) word class (i.e. whether the word is a noun or non-noun), and 4) whether the type of English word is a "single word" or "lexical string". The result was that the *concreteness of the words* was the only intrinsic word property consistently associated with the mean gain for each word, regardless of the time of assessment and the type of knowledge being tested, in the case of both the adult and young learners; in other words, the more concrete the target word is, the more likely it is that the word will be learnt. This finding is in accord with previous L1 vocabulary studies (Schwanenflugel et al., 1997; Elley, 1989) and one L2 vocabulary study (de Groot and Keijzer, 2000), which have shown the positive relationship between the *concreteness* of words and learners' vocabulary gains.

Unlike the *concreteness of words*, the other word-related factors did not show significant associations with the mean gain for each word. In particular, it is interesting

to note that *word-class* was not a significant word property, which was found to be significantly related to vocabulary gains in previous studies (N.Ellis and Beaton, 1993a; Elley, 1989). Therefore, what would be a possible explanation for this contradictory finding? It seems that the answer to this question lies in *the concreteness of nouns* included in the present study. That is, based on twelve native speakers' mean ratings of the concreteness of these target nouns on a scale of one (i.e. most abstract) to seven (most concrete), they were found to be nouns with a moderate or weak degree of concreteness – mean rating = 5.07 (SD = .99) for the target nouns for the young learners and 4.30 (SD = 1.31) for the target nouns for the adult learners; to put it simply, many of these nouns were not ones which raise the most concrete images. Consequently, as in the case of Schwanenflugel et al. (1997) in which the target nouns included abstract nouns and nouns without clear boundaries, the learners in the present study did not necessarily learn more nouns than other grammatical parts of speech (e.g. verbs, adjectives). Thus, in some regards, this finding seems to further highlight the *concreteness of words* as an important intrinsic word property for vocabulary learning.

In addition to *word-class*, the *length of words* was not significantly related to the mean gains of vocabulary. This result seems to make sense in view of Ellis' (1999) point that "it may be difficult to disentangle the effects of word length from other associated factors" (p.44). For example, the *length of words* could be associated with the frequency of words (Laufer, 1997) or it may interact with lack of familiarity with the writing system of the target language on the part of learners (Meara, 1984).

6.5.4 The Effects of Instructional Type on the Learning of Words with Different Degrees of Concreteness

Having seen the significant relationship between the *concreteness of words* as an intrinsic

word property and the mean gain for each word, the next task was to investigate the differential effects of Code-switching (CS) and English-only (EO) instruction, if any, on the two age groups' learning of words that vary in terms of concreteness. The purpose of this investigation was largely concerned with providing pedagogical implications to EFL practitioners. For example, if CS instruction were found to be more effective than EO instruction in terms of learners' acquisition of abstract words (or vice versa), such a finding would be able to further inform practitioners' vocabulary teaching. Thus, instead of merely suggesting "whether to use CS or not" in terms of vocabulary teaching, we would be able to offer pedagogical implications as to "when to use CS."

In the case of the young learners, the superiority of teacher CS over EO instruction was consistently found for both abstract and concrete words, regardless of the type of vocabulary knowledge and time of testing. This result was more or less an expected one, in view of the research finding discussed in the previous sections that CS instruction always yielded better learning outcomes than EO instruction for young learners in terms of vocabulary acquisition and retention.

A more complicated picture emerged in terms of the adult group's learning of words that vary as to their concreteness. As for the abstract words, teacher CS was found to have only a short-term superiority over EO instruction, indicating that there was no significant difference between the two types of instruction in terms of the retention of abstract words. The effects of the two types of instruction were generally not distinguishable in terms of learning of the concrete words. In other words, this result suggests that EO instruction allowed students to make vocabulary gains that were comparable with teacher CS in terms of the adult group's learning of concrete words.

Having reviewed the findings regarding the differential effects of CS and EO instruction on words with different degrees of concreteness, different pedagogical

recommendations can now be made for adult and young learners. For young learners, teachers may briefly switch to Korean for learners' comprehension and learning of unfamiliar English words, regardless of their concreteness, as teacher CS appears to have both short-term and long-term superiority over EO instruction. On the other hand, in light of the findings of the present study, English teachers for more advanced levels of learners are advised to make more selective pedagogical decisions regarding teaching English words that vary in terms of their concreteness. As for abstract words, teachers may switch to Korean briefly to explain target vocabulary, as this would have short-term superiority over EO instruction. However, for concrete words, teachers may consider using EO instruction, as it not only results in similar amounts of vocabulary gains on the part of learners, but also provides additional English input – teachers' oral explanation in English. One additional factor to be considered in terms of whether to use EO instruction or CS in teaching concrete words then would be the availability of time allowed for lexical explanation in the target lesson. If the time is rather limited for lexical explanation (as more class time is supposed to be spent on more meaning-focused parts of the lesson), teachers may opt to give the meanings of concrete words in Korean for this practical reason. Otherwise, EO instruction for teaching this type of English word would be certainly beneficial to learners for the input-related reason mentioned above.

6.6 EFL Learners' Attitudes towards Teacher Code-switching

Having discussed the effectiveness of instructional type for vocabulary learning, the present section will turn its attention to the findings of the study drawn from the participant questionnaire and interview regarding learners' attitudes towards teacher Code-switching (CS) and other related aspects of English language teaching in relation to their vocabulary learning – the focus of the seventh research question of this study.

Due to the intertwined nature of these issues, this section will present discussions of the findings under two main headings; "learners' attitudes towards the monolingual approach" and "learners' attitudes towards the bilingual approach." The term "monolingual approach" here should be understood as involving various aspects of L2 teaching, including the use of native speaker English teachers (NSETs), English-only (EO) instruction, and using English synonyms/definitions in teaching English vocabulary. On the other hand, the bilingual approach should be construed as a term integrating the use of non-native speaker English teachers' (NNSETs), their CS behaviours, and using Korean equivalents or explanations in teaching English vocabulary. These sections will discuss the two age groups' overall attitudes towards the monolingual and bilingual approaches, and will also offer some pedagogical implications that these findings may have for the English learning of adult and young learners.

6.6.1 Learners' Attitudes towards the Monolingual Approach

In general, the adult learners showed a greater tolerance for the monolingual approach to English teaching than the young learners. As for NSETs and English instruction, a quantitative analysis of the questionnaire revealed that the adult learners by and large showed more positive attitudes towards NSETs and English instruction than the young learners (although a majority of them were against the idea of English exclusivity in terms of teachers' instruction). In addition, the adult learners showed a greater appreciation of native speakers' teaching of conversation/speaking skills, which corresponds to the findings of Benke and Medgyes (2005). The adult learners' preference for the monolingual approach was also found in their preference for vocabulary teaching techniques, with more than two thirds of them preferring learning English vocabulary through English-based explanation and with English-only instruction of vocabulary,

provided that it is comprehensible. These results largely contrast with those for the young learners, who were by and large skeptical about the effects of teachers' EO instruction and learning vocabulary through teachers' English explanations. Considering the overall differences in the adult and young learners' attitudes towards the monolingual approach, what possible explanations exist for this phenomenon?

One possible explanation for this divergence of opinions between the two age groups lies in their differences in terms of maturity and learning experience. That is, from the quantitative analysis and interview data, it was found that the adult learners were generally more aware of the importance of English input, the role of English vocabulary and using English in classrooms to develop their English proficiency than the young learners. Based on these findings, we can speculate that the adult learners would be more willing to take advantage of the monolingual approach and its various components than the young learners. In particular, the fact that the adult learners are aware of the importance of input seems to imply that these learners recognize the value of English-based instruction and NSETs, who are commonly believed to maintain this type of instruction more effectively than NNSETs.

Another explanation for this phenomenon might be related to their L2 proficiency levels. As Chavez (2003) found in her study, there might be some increasing preference for the L2 with increases in the learners' L2 proficiency. This finding makes sense in view of the results of the present study, in particular that the adult learners with higher English proficiency by and large showed a greater preference for the monolingual (i.e. L2) approach. On the other hand, the young learners who have limited L2 basic interpersonal communicative skills (Cummins, 1980b) might feel flustered by the monolingual approach which by and large negates the integration of learners' L1 in L2 teaching. As the interview data with the young learners revealed, EO instruction seems to

have some potential to cause them to experience cognitive overload, which in turn could have some negative bearing on their L2 learning.

One pedagogical implication from the above discussion could be the need to be aware that young EFL learners do not greatly prefer the monolingual approach. In line with the results of Oh (2006), the present study shows that Korean EFL learners at the primary level do not have a great preference for NSETs, nor do these learners as a whole show a positive attitude towards EO instruction. On the other hand, the adult learners in the present study, like other populations of similar age in previous studies (Rolin-Ianziti and Varshney, 2008; Chavez, 2003), seem to appreciate various aspects of the monolingual approach. Having said that, the findings of the present study point to the need to consider each age group's attitudes towards the monolingual approach, and consequently to take account of such information when making pedagogical decisions. This suggestion will be further elaborated in a discussion of learners' attitudes towards the bilingual approach, to which we turn next.

6.6.2 Learners' Attitudes towards the Bilingual Approach

Having discussed the adult learners' greater preference for the monolingual approach in comparison with the young learners, let us now turn to the two age groups' attitudes towards a bilingual approach.

In general, the adult and young learners showed positive attitudes towards teacher CS and the various pedagogical functions it serves. For example, there was a general consensus among both age groups that teacher CS enhanced their understanding of lesson content and that it delivered classroom management information more effectively than EO instruction. These findings generally appear to concur with those of previous studies on similar issues (Chavez, 2003; Macaro, 1997) that a majority of L2

learners indicate a preference for the L1 in transmitting knowledge about the L2 and in fulfilling communicative purposes such as delivering instructions for classroom activities and assessment outlines.

In addition, both age groups, in particular the young learners, showed positive attitudes towards teachers' use of the L1 in order for them to access the meaning of English vocabulary, which is in accord with the findings of Rolin-Ianziti and Varshney (2008). To be more specific, the adult and young learners believed that using Korean would result in better vocabulary learning and that providing Korean equivalents for new words with examples of English sentences involving those words would cater to their needs in learning English vocabulary. It should be noted that the findings regarding the adult learners' positive attitudes towards teacher CS in learning vocabulary do not contradict those concerning their preference for English input for vocabulary learning. Although these learners indicated some preference for English explanation, they simultaneously believed that teachers' Korean input would be effective for vocabulary learning.

The learners' (especially the young ones') preference for the CS resource in terms of vocabulary comprehension and learning was, as can be expected, tempered by the difficulty of understanding the non-CS (i.e. L2-only) resource, which usually includes unfamiliar English words or phrases. From the learners' perspectives, monolingual dictionary entries (i.e. explanation of English vocabulary in English) and NSETs' instruction of vocabulary are on many occasions not comprehensible and less efficient due to these unfamiliar words or phrases than bilingual dictionary entries and NNSETs' use of Korean. Although it may be possible for NSETs to use the CS resource (i.e. Korean) for teaching vocabulary (after many years of English teaching in Korea), their explanations may not be optimized for learners than those of NNSETs in view of

the fact that they cannot have a better knowledge of their learners than their NNSET counterparts.

While both age groups generally show positive attitudes towards teachers' Korean input for learning English vocabulary, a closer examination of the quantitative analysis revealed that there are indeed some subtle differences between the two age groups in terms of their preferences for vocabulary teaching techniques. With *how to pronounce English words* being the most favoured technique for the two age groups, the adult learners showed their preference for techniques such as learning through English synonyms/definitions and experiencing target words in sentence contexts, whereas the young learners preferred learning through visual aids and Korean equivalents/explanations; therefore, the adult and young learners respectively indicated a preference for more advanced and basic teaching techniques. This result empirically supports the aforementioned point in this chapter that the young learners are less experienced and proficient learners with a greater preference for L1 input than their adult counterparts.

As for the learners' attitudes towards NNSETs, the interview data revealed that the learners often attributed the strength of the NNSETs to their ability to use Korean, which could serve both medium-oriented (e.g. teaching vocabulary items) and message-oriented functions (i.e. communicating messages) as discussed above. At the same time, more than half of the adult interviewees showed concerns regarding NNSETs and their excessive use of Korean, which may turn their English lessons into less communicative ones. Thus, there is some consensus among these learners that English teachers' CS should not exceed a certain threshold level (Macaro, 2005), although this threshold seems to vary among individual learners.

Although this investigation did not seek to test the relationship between learners'

attitudes towards the bilingual approach and their L2 learning, an obvious pedagogical implication from the findings of the participant questionnaire and interview data is worth mentioning. In general terms, the results reported above clearly point to the young learners' preference for the bilingual approach in their learning, and the possibility of an increasing preference for the monolingual approach with an increase in their English proficiency and maturity. Thus, practitioners may wish to take into account these research findings in designing their teaching curricula.

Turning to the more specific question of what implications can be drawn for teaching practices, it seems that NNSETs' CS for vocabulary explanation would be of considerable help for young learners, which fits in well with the pedagogical implication drawn from the examination of the effectiveness of instructional type for vocabulary learning (section 6.4). While adult learners would also benefit from teacher CS for vocabulary learning, given their preference for English input and explanation, practitioners should also consider providing premodified input (Krashen, 1985) or interactionally modified input (Long, 1996) in English for adult learners' vocabulary acquisition. However, practitioners may also need to be aware of the finding of the present study that a majority of adult and young EFL learners believe that teachers should use CS to enhance learners' understanding of the lesson content and to discuss tests, assignments or other administrative information. Further longitudinal research would need to examine the relative effects of using CS or maintaining L2-only instruction for these communicative purposes on L2 learning itself in the long term.

6.7 Summary

This chapter has provided a discussion of the findings of the present study in light of the relevant SLA literature, tapping into both theoretical perspectives and empirical studies.

This discussion has mainly focused on the following two issues; the effect of teacher Code-switching (CS) on two age groups' vocabulary acquisition and these learners' attitudes towards teacher CS and other relevant aspects of English language teaching. The chapter also provided pedagogical implications for L2 teaching practitioners, based on the study's outcomes.

The chapter opened with a review of the vocabulary learning contextualized in the present study, and the pedagogical value of lexical Focus on Form in meaning-oriented classroom activities. This was followed by a discussion of the findings regarding the effects of teacher CS on EFL learners' vocabulary acquisition, and their implications for the debate over L1 use in L2 classrooms, L2 teachers' use of CS, and bilingual teachers' vocabulary teaching practices. The chapter went on to discuss the differential effects of teacher CS on the two age groups' vocabulary learning at some length, providing implications for age-appropriate L2 teaching methodologies. Then, the chapter further discussed the role of several factors related to L2 vocabulary learning, including different types of vocabulary knowledge, learners' English proficiency, and the effects of intrinsic word properties on L2 vocabulary learning. Lastly, the chapter explored the issue of the two age groups' attitudes towards teacher CS and other relevant aspects of English teaching, which contributes to our understanding of the issue of teacher CS from learners' perspectives, and provides some explanations for the results of the differential effects of teacher CS on the two age groups' L2 vocabulary learning.

The next chapter will provide conclusions and an idea of the contribution of the present study to SLA literature, along with reflections about methodological issues, limitations of the study as well as directions for future areas of research.

Chapter 7 Conclusions

In this chapter, the major findings of the research undertaken for the present thesis are summarized first. Next, the implications of these findings for the existing knowledge in certain areas of SLA literature are described. Then, the preliminary framework of a model of teacher Code-switching (CS) is presented, followed by recommendations for future research.

7.1 Summary of Major Findings

There are two major research aims in the present thesis: 1) to examine the effectiveness of teacher CS for adult and young EFL learners' vocabulary acquisition in meaning-focused communicative language classrooms, and 2) to reveal these two age groups' attitudes towards teacher CS and other relevant aspects of English teaching. In order to achieve these two aims, complementary research methods were implemented: the quasi-experimental study conducive to ecological validity addressing the issue of the effectiveness of teacher CS, and the questionnaire/interview design dealing with learners' attitudes towards teacher CS.

Regarding the effectiveness issue, we have demonstrated that a brief switch to learners' L1 (i.e. Korean) to explain the meaning of the target L2 (i.e. English) vocabulary items is generally more facilitative for both age groups' vocabulary learning than providing English-only (EO) information. The superiority of teacher CS over EO instruction was found not only in short-term learning (i.e. immediately after the instructional period), but also in the long-term – a lapse of three weeks from the instructional period. This result was consistent, when statistically controlling for the effects of their knowledge of the target vocabulary at the outset of the study or when

controlling for their English proficiency.

However, upon closer examination, the differential effects of teacher CS on the two age groups were further revealed, with teacher CS yielding a much larger amount of vocabulary gain for the young learners. In particular, when examining the relative effects of teacher CS and EO instruction on two levels of vocabulary knowledge, – receptive recall and receptive recognition, it was found that the effect of teacher CS is not distinguishable from that of EO instruction in terms of retention of receptive recall for the adult learners. Overall, regardless of the time of testing and types of vocabulary knowledge, teacher CS, without exception, proved to be far more effective for the young learners than for the adult learners. In addition, as for the learning of words that vary in terms of their concreteness, teacher CS was always found to be more effective than EO instruction in the case of the young learners, whereas it demonstrated somewhat limited advantages over EO instruction for the adult learners. More specifically, while teacher CS had a short-term superiority over EO instruction in terms of learning of abstract words, there was almost no difference between the two types of instruction, as far as the concrete words are concerned. In brief, the differential effects of teacher CS for the adult and young learners were found not only in their overall vocabulary learning, but also in learning different types of vocabulary items.

In terms of learners' attitudes towards teacher CS and other relevant aspects of English teaching, we have discovered that both the adult and young EFL learners assign many pedagogical roles to teachers' use of the Korean language, such as enhancing their understanding of lesson content and explaining class outlines and administrative information. In addition, it was found that the two age groups were by and large against the idea of EO instruction, and thus were in favour of at least some degree of teachers' Korean use.

On the other hand, differences between the two age groups were also revealed. The adult learners, who were found to be more aware of the importance of being exposed to English input and using English in learning processes, showed more positive attitudes towards the monolingual approach (e.g. native speaker English teachers, instruction in English) than the young learners. In particular, two age groups differed from each other in terms of their attitudes towards the monolingual approach in relation to English vocabulary learning. That is, while both age groups believed that learning English vocabulary through Korean would be beneficial to their learning, the adult learners also desired to have English-based information about English vocabulary items. Such a positive attitude towards English input regarding vocabulary items was not found among the young learners.

7.2 Implications of the Present Study

In light of the major findings described above, this research provides implications for four areas in SLA literature, which are interrelated to some degree: 1) the ongoing debate over teachers' use of learners' L1 in L2 classrooms, 2) the value of bilingual teachers' vocabulary explanations, 3) the relative effects of providing L1- and L2-based input on L2 vocabulary acquisition, and 4) differences between adult and young learners in terms of their attitudes towards teachers' language use.

First, the findings of this study contribute empirically-based knowledge to the theoretical discussion about teachers' L1 use in L2 classrooms, which has predominantly been based on SLA theorists and educational researchers' opinions. By providing evidence of the positive effects of teacher CS on L2 learning (i.e. receptive aspects of vocabulary knowledge), this research calls for some change in the status quo of L2 teaching professions – a strong proposition of L2 exclusivity; thus at least in the context

of FL settings, we may need to move from the maximal position to the optimal position (Macaro, 2001), in which parameters for teachers' use of the L1 are being investigated to optimize the effectiveness of their instruction. For the context of English language education in Korea, in which English teachers are not given any proper guidelines on their language use in English classrooms, the findings of this research inform them of pedagogy related to English vocabulary teaching – briefly switching to Korean to explain the meaning of an English vocabulary item in the middle of meaning-focused communicative activities being carried out predominantly in English.

In addition, based on the fact that this research is the first which examines the effects of teacher CS (and L2-only instruction) on different age groups, it attempts to take the above argument one step further: the evidence provided by this research points to the need to take learners' age (and L2 proficiency) into consideration in making pedagogical decisions regarding teachers' language use. Given that learners are sequential bilinguals and are deficient in L2 input outside classrooms, a gradual increase of L2 use as a function of learners' age (and proficiency) seems to be a more learning-conducive pedagogical approach than L2-only instruction for all age groups from the outset, as far as learners' vocabulary acquisition is concerned. Of course, this proposition is severely qualified by the fact that the present study involves only two cohorts – freshmen at the undergraduate level and learners in the final grade at the primary level. Nevertheless, it serves as a starting point for further investigations to facilitate pedagogical decisions related to teachers' use of the target language (and L1) for different age groups of learners.

This research also gives us insights into the value of bilingual teachers' vocabulary explanations. The findings of this research reveal that Korean-based information about English vocabulary items provided by bilingual teachers yields a

greater amount of vocabulary gains than EO explanations provided by monolingual (i.e. native speaker) teachers. It should be noted that no previous study has compared the relative effectiveness of monolingual and bilingual teachers' vocabulary explanations, in particular for learners at different L2 proficiency levels. In light of this, this research offers useful direct empirical evidence for the model of "the teacher as dictionary and dictionary designer" (Macaro et al., 2009), which points to the advantage of having the knowledge of learners' L1 on the part of bilingual teachers as a valuable teaching resource.

Implications for L2 vocabulary studies derived from the results of this research concern the relative effectiveness of L1- and L2-based input for learning receptive aspects of vocabulary knowledge. In general, the findings in this research reveal that L1-based input is more effective than L2-based input, not least for less proficient learners. Given that most previous studies dealing with this issue have been in the written context (i.e. the effects of glossing or dictionary entries), this research, along with a recent study by Tian (2009), contributes knowledge to one strand of L2 vocabulary research – the relative effects of L1 and L2 input –, and provides evidence of these two types of input in the *oral* context (i.e. teachers' oral explanation).

Another implication arising from this research concerns different age groups' attitudes towards teacher CS and other relevant aspects of L2 teaching, the role of which in L2 learning has largely been overlooked or underestimated in SLA literature. This research observes that different age groups might have different attitudes towards teacher CS, and that their respective attitude may be associated with their beliefs about language learning or their learning outcomes. Therefore, the findings of this research suggest that investigation into learners' perspectives would open the window for additional insights into the issue of teacher CS, allowing us to design more learner-oriented (and age-

appropriate) methodologies.

7.3 A Preliminary Framework for a Model of Teacher Code-switching

In section 1.2.3, it was argued that an empirically-based model of teacher CS is needed in order to provide pedagogical implications for L2 teaching practitioners, who will be guided by this model in terms of when and how to use CS for their learners. To this end, the present thesis proposes two factors that determine the effectiveness of teacher CS:

1. Learners' ages/proficiency levels: in EFL contexts like Korea, learners' age and proficiency are generally correlated, apart from exceptional cases. The results of the present study advance the proposition that teacher CS is more effective for beginner and younger learners.
2. Learners' attitudes towards teacher CS: it is possible that learners at earlier stages may have more positive attitudes towards teacher CS (although individual differences may also exist within a certain age group), and this may positively affect their L2 learning.

In addition to these two factors, this research explored the effectiveness of teacher CS for one particular language area – vocabulary, and its subcategories – abstract and concrete vocabulary items, based on the results of the *post-hoc* analyses.

In light of the above research scheme, this model proposes that learners' age/proficiency, their attitudes towards teacher CS, and target language areas will together determine the effectiveness of teacher CS. It further takes into account some practical considerations in intact L2 classrooms, such as individual learner differences (e.g. L2 proficiency), class size, level of distraction, time constraints, and bilingual

teachers' proficiency in the L1 and L2. For example, the more variance, as far as L2 proficiency is concerned, among individual learners exists in a target classroom, the more likely it is that teacher CS, as opposed to L2-only instruction, will be effective in teaching L2 items. Also, severe time constraints may also make teacher CS very effective for students' learning, again compared to L2-only instruction.

This model should not be seen as a complete model of teacher CS, but merely as a preliminary but sound framework, as much more empirical knowledge has to be established. In addition, the possibility that other unknown factors might jointly determine the effectiveness of teacher CS cannot be ruled out. In order to develop a more comprehensive and complete model of teacher CS, future research should identify these unknown factors, if any, as well as investigate the factors within the above model in greater depth.

7.4 Recommendations for Further Research

This final section of the thesis suggests a number of avenues for future research that will contribute further empirical knowledge to the proposed model of teacher CS in section 7.3.

The present study has investigated only one area of language learning – L2 vocabulary. Future research should examine the effects of teacher CS on other language areas, such as grammar knowledge and communication skills. In addition, as mentioned in section 6.6.2, examining the effects of CS for communicative purposes would also contribute to the development of the model of teacher CS. As far as vocabulary knowledge is concerned, future research in light of this may additionally deal with other aspects of vocabulary knowledge, such as word association knowledge, lexical phrases (DeCarrico, 2001), and ultimately lexical competence (Meara, 2005).

It is also important to investigate the causality between learners' attitudes towards teacher CS (or L2-only instruction) and their subsequent learning outcomes, which would significantly contribute to the model of teacher CS. The present study provides only indirect evidence for this issue, through the implementation of the participant questionnaire and semi-structured interviews. Also, an important avenue for future research is to examine a possible association between learners' attitudes towards teacher CS (or L2-only instruction) and their L2 proficiency levels, which was hinted at in the findings of the present study.

Another recommendation for further research concerns the inclusion of more advanced L2 learners in the research. In light of this, future research studies should aim to determine, for each language area that might be applicable, a threshold level of L2 proficiency, above which L2-only instruction may become more effective, compared with teacher CS. Of course, not necessarily every language area can be found for such a threshold level. For those language areas that are applicable, until learners reach these threshold levels, teacher CS may be judiciously used as a valuable teaching resource, rather than being avoided without theory-driven and empirically-based rationales.

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Appendices

Appendix A: Reading Texts for the Adult Learners

Coffee Culture

Coffee is so popular in the Americas, Europe and even Asia that we can see a variety of shops which specialize in coffee. Among these shops, Starbucks is probably the most popular one in the world today.

The first Starbucks coffee shop opened in 1971 in downtown Seattle, Washington, in the United States. It was a small coffee shop that roasted its own coffee beans. The coffee shop's business did well, and by 1981 there were three more Starbucks stores in Seattle. Things really began to shift into high gear for the company in 1981. That year, Howard Schultz met the three men who ran Starbucks. Schultz worked in New York for a company that made kitchen equipment. He noticed that Starbucks ordered an unusually large number of special coffee makers, and he was curious about the company. Schulz went to Seattle to see what Starbucks did, and he liked what he saw. He wanted to become part of the company. In 1982, the original Starbucks owners hired Schultz as the company's head of marketing.

In 1983, Schultz travelled to Italy. The unique atmosphere of the espresso bars there caught his eye. To Schultz, it seemed that Italians spent their daily lives in three places: home, work, and coffee bars. His experience in Italy gave Schulz a new idea for Starbucks back in Seattle. Schultz created an ambience for Starbucks coffee shops that was comfortable and casual, and customers everywhere seemed to relish it. Between 1987 and 1992, Starbucks opened 150 new franchises-and that was only the beginning. As a matter of fact, by the year 2000, three new Starbucks stores opened in far-flung destinations around the world everyday. And these stores are always in high demand.

Today, Starbucks has thousands of stores, including stores in twenty-six countries. One thing that helps make Starbucks succeed in cities outside the United States is the way Starbucks works with local stores and restaurants. By collaborating with a store already in the city, Starbucks gains an understanding of customers in the city. This understanding helps Starbucks open stores in the right locations for their customers.

(354 words)

Urban Legends

Have you heard about the woman who put her wet dog in the microwave to dry it, and ended up cooking her dog by mistake? Or did you hear about the man who died at his desk at work, and nobody in the office noticed he was dead for five days? These unrelated stories have two things in common. They are both not true, and they are both urban legends.

Usually, legends or folklore are stories of events from the distant past. Urban legends, on the other hand, are stories set in the recent past, perhaps even last week! Urban legends also take place in cities or in places well known to people. Another characteristic of urban legends is that there are many different versions of the same story, with local information changed to make the story seem more real. Today, the Internet has become a common way for urban legends to spread very quickly.

A good example of an urban legend is the story of the girl who wanted really tight jeans. In the 1980s, it was fashionable to wear excessively tight jeans. At that time, Levi's sold special jeans that shrank when you washed them. According to the story, these special jeans intrigued a teenage girl who wanted to make her jeans as tight as possible, so she wore them in the bathtub. Then, they shrank so much that the girl passed away! Actually, this legend started from a Levi's advertisement on television. In the TV ad, a man stepped into a bathtub and his tight jeans became the perfect size. The popularity of this legend apparently comes from the idea of teens trying too hard to look good.

However, some urban legends actually start from bizarre real events, a nugget of real truth. For example, there is a story about muggers using snakes to rob people. There have been real reports about muggers doing this. The muggers threaten a victim when the snake suddenly springs up from the mugger's bag. Then they take the victim's money. These robbers are very common, so you should keep an eye out for strangers carrying snakes.

(357 words)

Shakespeare, where are you now?

William Shakespeare (1564-1616) wrote many plays and poems which are ubiquitous. But perhaps you think the works of an Elizabethan playwright are not important today? Well, think again. Shakespeare's works have survived the years and then some! For example, Romeo and Juliet has not only been performed again and again in theatres around the world, but it has also been made into a popular movie which was all the rage in the 1990s.

How did this renowned writer start out in the theatre? During the late 1500s, Shakespeare's plays were often performed at the Globe theatre in London. The Globe was a large open-air theatre which used only natural lighting. Shows at the Globe used very few props but performances were always interesting and exciting and they flourished for many years. However, in 1613 during a performance of Shakespeare's *Henry VIII*, a cannon ignited the roof of the stage, and the ensuing fire completely got out of hand and destroyed the theatre. The Globe was fixed a year later, but it didn't stay open long. The theatre was closed by the Puritans, who did not approve of entertainment. The Globe never opened again and the building was finally torn down in 1644. It was a catastrophe for many theatre lovers.

Theatre lovers in England never forgot the Globe, and in 1970 a decision was made to rebuild it as close to the original design as possible. Imagine how people felt when, in 1989, the people working on the new Globe came across some of the original building only about 100 meters from the new theatre. They were building the new theatre almost in the original Globe's location! The new Globe opened in 1999 and has since won many awards and accolades as one of the premiere tourist attractions in Europe. Since the new theatre opened, hundreds of thousands of people have attended Shakespearean performances such as *A Midsummer Night's Dream*, *As you like it*, and *Henry V*. Shakespeare, where are you now? At the Globe, of course!

(342 words)

I cut the cheese!

To cut the cheese or to pass gas. These are both somewhat droll ways to talk about something that everyone does: Farts! A normal person passes about half a litre of gas a day. That equals about fourteen farts per day. Lots of people are embarrassed by farts, but there is no need to be. The first step is to admit that you do it. After you face up to this fact, then you can really enjoy learning some interesting facts about farts.

First of all, let's look at how farts are generated. There are several sources of fart gas. We get fart gas from the air we gulp. Gas also goes into our intestines from our blood. In addition, gas is also produced from chemical reactions and bacteria living in our digestive system. Highly-strung people usually have more gas. This is because they gulp more air. In addition, food goes through their digestive systems faster. This means that the oxygen cannot be absorbed from the food quickly enough. Therefore, oxygen naturally in the food goes into the intestines and becomes fart gas.

Another interesting fact is that a person's diet affects the odor of farts. This odor has to do with a certain chemical in food. Foods with a lot of sulphur in them, such as eggs, meat, and raisins, cause stinky farts. Beans are notorious for causing a lot of farts, but these farts aren't really stinky. However, they do contain a lot of sugars that bacteria in the intestines love. The bacteria devour the sugars and excrete gas.

Finally, people wonder, "where do farts go when you hold them in? Is it harmful to hold these farts?" Well, these farts will not poison you. However, you may get a nasty stomach ache from the pressure. Farts that you hold in are neither released nor absorbed. They move back up into the intestine and sooner or later come out. They are not lost, just delayed. So now that you know some facts about farts, be proud of yourself and say, "Yes, I cut the cheese!"

(351 words)

Appendix B: Reading Texts for the Young Learners

Jinho's birthday

Jinho's birthday is on Sunday at his house.
He can't wait for his birthday party.
When he sleeps, he dreams about his birthday.
He's very happy because his mom will bake and decorate a cake for him.
He wants a new wallet for his birthday gift.
He doesn't want to get a bouquet like the last year.
He is very excited, so he will stay up tonight.

For his birthday party, he will invite his best friends and his cousin, Minji.
And he will celebrate his birthday with them.
He likes table tennis and he will play it with his friends.
Jinho's favorite cake is chocolate kimchi.

Is chocolate kimchi cake delicious?
His friends don't like chocolate kimchi cake.
And they will make fun of him *no doubt*!
He will have to eat the cake by himself.
Poor Jinho!

(146 words)

The Magic Store

Nami is at the magic store. The magic store has many things that catch her eye.

Nami sees pricey magic wands and very old spell books.

She wants to change Jinho into a frog because Jinho steals her things.

Nami sees red now. Nami asks the clerk, “do you have an evil wand?”

The clerk gives Nami an evil wand. Now, Nami wants a spell book.

The spell book is on the shelf. It looks like an ancient book.

She wipes the cover of the book.

The title of the spell book is "How to make frogs."

She wants to make Jinho a frog.

Nami reads the spell book, but she doesn't know anything.

Magic is not *a piece of cake*! She wants a magic tutor to help her!

The next time Jinho steals Nami’s things, she will certainly change him into a frog!

(152 words)

Four Seasons Hotel

Jinho's family takes a thrilling vacation every year.
They always reserve a room at the Four Seasons Hotel.
The Four Seasons Hotel is a very unique place.

The first floor is the Spring floor. The second floor is the Summer floor.
The third floor is the Fall floor. The fourth floor is the Winter floor.

Nami likes the Summer floor because the summer breeze blows from the entrance.
It also has a large pool and ice cream!!

Jinho likes the Fall floor because it has great food.
Food makes his mouth water.
He likes to stroll in the forest and gaze at the beautiful leaves.

Jinho's parents like the Winter floor.
But Jinho doesn’t like the Winter floor because it is freezing.
Last time he almost got frostbite. But he likes icicles.
The Spring floor is temporarily under-construction.

(145 words)

Seven people and one bathroom

Jinho has a huge family.

He lives with his parents and his relatives.

There are seven people in the house and one bathroom!

In the morning, the bathroom always has a long queue and Jinho gets upset.

Why his grandfather reads the newspaper in the bathroom is beyond him.

Nami, Jinho's sister, always tells Jinho to chill out.

But Jinho refuses to listen to his sister because he doesn't like to wait.

Jinho's father is a plumber and his mother is a carpenter.

Jinho recently begged his parents to build a new bathroom in the house.

But they think that Jinho is out of his mind.

Jinho will have to be content with only one bathroom in the house.

Or maybe tomorrow morning he will go to his neighbor’s bathroom.

(144 words)

Appendix C: Instructions for the Imageability Task

(adapted from N.Ellis & Beaton, 1993b)

Instructions: Any word which, in your estimation, arouses a mental image (i.e., a mental picture or sound, or other sensory experience) very quickly and easily should be given a high imagery rating; any word that arouses a mental image with difficulty or not at all should be given a low imagery rating. Think of the nouns *apple* or *fact* and the verbs *to run* or *to know. Apple* or *to run* would probably arouse an image relatively easily and would be rated as high imagery; *fact* or *to know* would probably do so with difficulty and would be rated as low imagery. Your ratings will be made on a 7-point scale, on which **1** is the low imagery end of the scale and **7** is the high imagery end of the scale. There are no right or wrong answers.

Please rate the imageability of following words on a scale of 1 to 7. (2 pages in total).

(low imagery) 1 – 2 – 3 – 4 – 5 – 6 – 7 (high imagery)

wallet		tutor		plumber		gaze	
bake		evil		beg		thrilling	
table tennis		a piece of cake		neighbor		breeze	
no doubt		see red		content		unique	
make fun of		spell (as in magic spell)		out of his mind		makes your mouth water	
invite		pricey		refuse		stroll	
decorate		title		upset		freezing	
favourite		clerk		recently		entrance	
by oneself		wipe		queue		frostbite	
delicious		catch someone's eye		carpenter		under-construction	
celebrate		steal		relative		reserve	
cousin		ancient		huge		temporarily	
bouquet		wand		something is beyond him		pool	

stay up		certainly		chill out		icicle	

(low imagery) 1 – 2 – 3 – 4 – 5 – 6 – 7 (high imagery)

equipment		intrigue		come across		excrete	
collaborate		microwave		open-air		intestine	
gain an understanding		victim		all the rage		gulp	
caught one's eye		excessively		cannon		absorbed	
location		spread		ubiquitous		highly-strung	
relish		spring up		approve of		nasty	
downtown (city centre)		the distant past		ignite		somewhat	
high gear		unrelated		premiere		devour	
hire		apparent		prop		face up to	
roast		keep your eye out for		renowned		notorious	
unique		folklore		tear down		has to do with	
local		shrink		catastrophe		sooner or later	
far-flung		pass away		flourish		odor	
ambience		nugget		accolade		raisin	
in high demand		bizarre		ensuing		droll	
unusually		mugger		out of hand		generate	

Thank you very much for your time!

Appendix D: Vocabulary Tests for the Adult Learners

Pre-test of vocabulary in the 2nd session (VKS format)

***Please follow the instructions below.**

If you don't remember having seen this word before, circle 1.
If you have seen this word before but you don't know what it means, circle 2.
If you know this word, circle 3 and provide the meaning of the word in either English (synonym/definition) or Korean.

job	1	2	3	_____	**prepare**	1	2	3	_____
equipment	1	2	3	_____	**intrigue**	1	2	3	_____
collaborate	1	2	3	_____	**microwave**	1	2	3	_____
gain an understanding	1	2	3	_____	**victim**	1	2	3	_____
barrier	1	2	3	_____	**experience**	1	2	3	_____
caught one's eye	1	2	3	_____	**excessively**	1	2	3	_____
location	1	2	3	_____	**spread**	1	2	3	_____
relish	1	2	3	_____	**spring up**	1	2	3	_____
downtown	1	2	3	_____	**the distant past**	1	2	3	_____
high gear	1	2	3	_____	**unrelated**	1	2	3	_____
roast	1	2	3	_____	**keep your eye out for**	1	2	3	_____
advice	1	2	3	_____	**effort**	1	2	3	_____
hire	1	2	3	_____	**apparent**	1	2	3	_____
unique	1	2	3	_____	**folklore**	1	2	3	_____
local	1	2	3	_____	**shrink**	1	2	3	_____
far-flung	1	2	3	_____	**pass away**	1	2	3	_____
ambience	1	2	3	_____	**nugget**	1	2	3	_____
benefit	1	2	3	_____	**population**	1	2	3	_____
industry	1	2	3	_____	**difficult**	1	2	3	_____
unusually	1	2	3	_____	**bizarre**	1	2	3	_____

in high demand	1	2	3	_____	**mugger**	1	2	3	_____
connect	1	2	3	_____	**calculate**	1	2	3	_____
excrete	1	2	3	_____	**come across**	1	2	3	_____
intestine	1	2	3	_____	**open air**	1	2	3	_____
swallow	1	2	3	_____	**all the rage**	1	2	3	_____
absorbed	1	2	3	_____	**cannon**	1	2	3	_____
highly-strung	1	2	3	_____	**ubiquitous**	1	2	3	_____
attention	1	2	3	_____	**possess**	1	2	3	_____
nasty	1	2	3	_____	**approve of**	1	2	3	_____
somewhat	1	2	3	_____	**ignite**	1	2	3	_____
consume	1	2	3	_____	**premiere**	1	2	3	_____
face up to	1	2	3	_____	**prop**	1	2	3	_____
purpose	1	2	3	_____	**insist**	1	2	3	_____
notorious	1	2	3	_____	**renowned**	1	2	3	_____
sooner or later	1	2	3	_____	**tear down (torn down의 현재형)**	1	2	3	_____
entire	1	2	3	_____	**custom**	1	2	3	_____
has to do with	1	2	3	_____	**catastrophe**	1	2	3	_____
odor	1	2	3	_____	**flourish**	1	2	3	_____
raisin	1	2	3	_____	**accolade**	1	2	3	_____
education	1	2	3	_____	**ensuing**	1	2	3	_____
opinion	1	2	3	_____	**out of hand**	1	2	3	_____

1st Immediate vocabulary test in the 3rd session (VKS format)

***Please follow the instructions below.**

If you don't remember having seen this word before, circle 1.
If you have seen this word before but you don't know what it means, circle 2.
If you know this word, circle 3 and provide the meaning of the word in either English (synonym/definition) or Korean.

equipment	1	2	3	_____
collaborate	1	2	3	_____
gain an understanding	1	2	3	_____
caught one's eye	1	2	3	_____
location	1	2	3	_____
relish	1	2	3	_____
downtown	1	2	3	_____
high gear	1	2	3	_____
hire	1	2	3	_____
roast	1	2	3	_____
unique	1	2	3	_____
local	1	2	3	_____
far-flung	1	2	3	_____
ambience	1	2	3	_____
in high demand	1	2	3	_____
unusually	1	2	3	_____

1st Immediate vocabulary test in the 3rd session (MC format)

Choose from A, B, C, D the one which best matches the preceding word.

1. **equipment**
(A) one of the things you choose on television
(B) something important that happens
(C) special things that you need for doing something
(D) things which control a business

2. **collaborate**
(A) to avoid doing something (B) to finish the work on your own
(C) to hit something quickly (D) to work together

3. **gain an understanding**
(A) to learn about (B) to ask for help
(C) to try something (D) to exchange ideas with

4. **caught one's eye**
(A) to shock someone (B) to get someone's attention
(C) to touch one's eye (D) to upset someone

5. **location**
(A) ground (B) environment
(C) place (D) order

6. **relish**
(A) to deal with (B) to free someone from something
(C) to pay money (D) to enjoy from something

7. **downtown**
(A) the center of a city (B) a large field
(C) state (D) capital

8. **high gear**
(A) a set of wheels (B) a state of maximum activity
(C) an important job (D) a great amount of money

9. **hire**	(A) 고려하다	(B) 상의하다	(C) 고용하다	(D) 교류하다
10. **roast**	(A) 던지다	(B) 생산하다	(C) 태우다	(D) 볶다
11. **unique**	(A) 전형적인	(B) 지적인	(C) 화려한	(D) 독특한
12. **local**	(A) 유명한	(B) 지역의	(C) 번화가의	(D) 규모가 큰
13. **far-flung**	(A) 다수의	(B) 외부의	(C) 광범위한	(D) 밀집된
14. **ambience**	(A) 위치	(B) 가격	(C) 음악	(D) 분위기
15. **in high demand**	(A) 요구사항이 많은	(B) 인기 많은	(C) 구입한	(D) 최근의
16. **unusually**	(A) 일반적으로	(B) 생산적으로	(C) 보기 드물게	(D) 주기적으로

2nd Immediate vocabulary test in the 4th session (VKS format)

***Please follow the instructions below.**

If you don't remember having seen this word before, circle 1.
If you have seen this word before but you don't know what it means, circle 2.
If you know this word, circle 3 and provide the meaning of the word in either English (synonym/definition) or Korean.

intrigue	1	2	3	_____
microwave	1	2	3	_____
victim	1	2	3	_____
excessively	1	2	3	_____
spread	1	2	3	_____
spring up	1	2	3	_____
the distant past	1	2	3	_____
unrelated	1	2	3	_____
apparent	1	2	3	_____
keep your eye out for	1	2	3	_____
folklore	1	2	3	_____
shrink	1	2	3	_____
pass away	1	2	3	_____
nugget	1	2	3	_____
bizarre	1	2	3	_____
mugger	1	2	3	_____

2nd Immediate vocabulary test in the 4th session (MC format)

Choose from A, B, C, D the one which best matches the preceding word.

1. **intrigue**	(A) 사기를 치다	(B) 흥미를 돋구다	(C) 심각히 고려하다	(D) 산만하게 하다
2. **microwave**	(A) 세탁기	(B) 냉장고	(C) 전자레인지	(D) 실험도구
3. **victim**	(A) 인질	(B) 강도	(C) 범죄자	(D) 피해자
4. **excessively**	(A) 지나치게	(B) 과장하여	(C) 위를 향하여	(D) 적은 정도로
5. **spread**	(A) 만들어지다	(B) 퍼지다	(C) 끊기다	(D) 사라지다
6. **spring up**	(A) 낚아채다	(B) 놀라게 하다	(C) 뛰어오르다	(D) 기어가다
7. **the distant past**	(A) 근래의 과거	(B) 기록된 사실	(C) 이전의 사실	(D) 먼 과거
8. **unrelated**	(A) 관계없는	(B) 모순된	(C) 일치한	(D) 믿기 힘든

9. **apparent**
(A) related to appearance (B) easy to understand
(C) additional (D) more important

10. **keep your eye out for**
(A) to continue something (B) to write about something
(C) to read something curiously (D) to watch for something carefully

11. **folklore**
(A) the traditional stories of people
(B) informal conversations about other people
(C) feeling that makes you believe that something is true
(D) a hero from the story

12. **shrink** means 'become _____.'
(A) useless (B) smaller (C) possible (D) wearing out

13. **pass away**
(A) to feel angry (B) to go by
(C) to fight against something (D) to die

14. **nugget**
(A) a measure of time (B) final result
(C) small portion (D) hidden message

15. **bizarre**
(A) possibly fake (B) funny
(C) very strange (D) surprising

16. **mugger** is a person who _____.
(A) is able to do something very well (B) has strange, unusual powers
(C) attacks some people and steals money (D) tells a lie to people

1st Delayed vocabulary test in the 5th session (VKS format)

***Please follow the instructions below.**

If you don't remember having seen this word before, circle 1.
If you have seen this word before but you don't know what it means, circle 2.
If you know this word, circle 3 and provide the meaning of the word in either English (synonym/definition) or Korean.

equipment	1	2	3	_____	**intrigue**	1	2	3	_____
collaborate	1	2	3	_____	**microwave**	1	2	3	_____
gain an understanding	1	2	3	_____	**victim**	1	2	3	_____
caught one's eye	1	2	3	_____	**excessively**	1	2	3	_____
location	1	2	3	_____	**spread**	1	2	3	_____
relish	1	2	3	_____	**spring up**	1	2	3	_____
downtown	1	2	3	_____	**the distant past**	1	2	3	_____
high gear	1	2	3	_____	**unrelated**	1	2	3	_____
hire	1	2	3	_____	**apparent**	1	2	3	_____
roast	1	2	3	_____	**keep your eye out for**	1	2	3	_____
unique	1	2	3	_____	**folklore**	1	2	3	_____
local	1	2	3	_____	**shrink**	1	2	3	_____
far-flung	1	2	3	_____	**pass away**	1	2	3	_____
ambience	1	2	3	_____	**nugget**	1	2	3	_____
in high demand	1	2	3	_____	**bizarre**	1	2	3	_____
unusually	1	2	3	_____	**mugger**	1	2	3	_____

1st Delayed vocabulary test in the 5th session (MC format)

Choose from A, B, C, D the one which best matches the preceding word.

1. **equipment** (A) things which control a business
(B) special things that you need for doing something
(C) something important that happens
(D) one of the things you choose on television

2. **collaborate** (A) to avoid doing something (B) to work together
(C) to hit something quickly (D) to finish the work on your own

3. **gain an understanding** (A) to ask for help (B) to learn about
(C) to exchange ideas with (D) to try something

4. **caught one's eye** (A) to upset someone (B) to touch one's eye
(C) to get someone's attention (D) to shock someone

5. **location** (A) order (B) environment
(C) place (D) ground

6. **relish** (A) to enjoy from something (B) to free someone from something
(C) to pay money (D) to deal with

7. **downtown** (A) capital (B) a large field
(C) state (D) the center of a city

8. **high gear** (A) a state of maximum activity (B) a set of wheels
(C) a great amount of money (D) an important job

9. **apparent** (A) related to appearance (B) more important
(C) additional (D) easy to understand

10. **keep your eye out for** (A) to watch for something carefully (B) to write about something
(C) to read something curiously (D) to continue something

11. **folklore** (A) a hero from the story
(B) feeling that makes you believe that something is true
(C) informal conversations about other people
(D) the traditional stories of people

12. **shrink** means 'become _____.'
(A) useless (B) wearing out (C) possible (D) smaller

13. **pass away** (A) to fight against something (B) to die
(C) to feel angry (D) to go by

14. **nugget** (A) a measure of time (B) small portion (C) hidden message (D) final result

15. **bizarre** (A) possibly fake (B) very strange (C) funny (D) surprising

16. **mugger** is a person who _____.
(A) is able to do something very well (B) attacks some people and steals money
(C) has strange, unusual powers (D) tells a lie to people

17. **hire**	(A) 고용하다	(B) 상의하다	(C) 고려하다	(D) 교류하다
18. **roast**	(A) 던지다	(B) 볶다	(C) 태우다	(D) 생산하다
19. **unique**	(A) 전형적인	(B) 지적인	(C) 독특한	(D) 화려한
20. **local**	(A) 유명한	(B) 규모가 큰	(C) 번화가의	(D) 지역의
21. **far-flung**	(A) 외부의	(B) 다수의	(C) 광범위한	(D) 밀집된
22. **ambience**	(A) 음악	(B) 분위기	(C) 위치	(D) 가격
23. **in high demand**	(A) 인기 많은	(B) 요구사항이 많은	(C) 구입한	(D) 최근의
24. **unusually**	(A) 일반적으로	(B) 생산적으로	(C) 주기적으로	(D) 보기 드물게
25. **intrigue**	(A) 사기를 치다	(B) 산만하게 하다	(C) 심각히 고려하다	(D) 흥미를 돋구다
26. **microwave**	(A) 냉장고	(B) 세탁기	(C) 실험도구	(D) 전자레인지
27. **victim**	(A) 인질	(B) 강도	(C) 피해자	(D) 범죄자
28. **excessively**	(A) 위를 향하여	(B) 과장하여	(C) 지나치게	(D) 적은 정도로
29. **spread**	(A) 만들어지다	(B) 끊기다	(C) 퍼지다	(D) 사라지다
30. **spring up**	(A) 기어가다	(B) 놀라게 하다	(C) 뛰어오르다	(D) 낚아채다
31. **the distant past**	(A) 먼 과거	(B) 기록된 사실	(C) 이전의 사실	(D) 근래의 과거
32. **unrelated**	(A) 관계없는	(B) 일치한	(C) 모순된	(D) 믿기 힘든

3rd Immediate vocabulary test in the 6th session (VKS format)

***Please follow the instructions below.**

If you don't remember having seen this word before, circle 1.
If you have seen this word before but you don't know what it means, circle 2.
If you know this word, circle 3 and provide the meaning of the word in either English (synonym/definition) or Korean.

come across	1	2	3	_____
open-air	1	2	3	_____
all the rage	1	2	3	_____
cannon	1	2	3	_____
ubiquitous	1	2	3	_____
approve of	1	2	3	_____
ignite	1	2	3	_____
premiere	1	2	3	_____
prop	1	2	3	_____
renowned	1	2	3	_____
tear down	1	2	3	_____
(torn down의 현재형)				
catastrophe	1	2	3	_____
flourish	1	2	3	_____
accolade	1	2	3	_____
ensuing	1	2	3	_____
out of hand	1	2	3	_____

3rd Immediate vocabulary test in the 6th session (MC format)

Sample of the multiple-choice test for the Adult Learners

Choose from A, B, C, D the one which best matches the preceding word.

1. **come across**	(A) to learn about something (C) to find something by chance	(B) to walk around some place (D) to become something different
2. **open-air**	(A) having some fresh air (C) without a roof	(B) with a lot of open windows (D) having a great view
3. **all the rage**	(A) very popular at the moment (C) ready for something	(B) beyond the limits (D) very angry
4. **cannon**	(A) a camera brand (C) a person who carries a bomb	(B) a large gun on wheels (D) a deep valley with steep sides of rock
5. **ubiquitous**	(A) close to (C) existing everywhere	(B) clear in every respect (D) placed in the centre of the world
6. **approve of**	(A) to correct something (C) to have no comment about	(B) to make something clear (D) to have a good opinion about
7. **ignite**	(A) to keep something safe (C) to destroy something	(B) to hurt or kill people (D) to make something start to burn

8. **premiere**	(A) of best quality	(B) first or initial	(C) liked by people	(D) high class
9. **prop**	(A) 조명시설	(B) 무대	(C) 대본	(D) 소도구
10. **renowned**	(A) 최근의	(B) 잊기 힘든	(C) 명성 있는	(D) 잘 팔리는
11. **tear down** **(torn down의 현재형)**	(A) 공격하다	(B) 허물다	(C) 감동을 주다	(D) 눈물을 닦다
12. **catastrophe**	(A) 대참사	(B) 역사적 사건	(C) 충격적 사실	(D) 소유격 부호
13. **flourish**	(A) 번영하다	(B) 생산하다	(C) 가능하게 하다	(D) 매진되다
14. **accolade**	(A) 가속	(B) 칭찬	(C) 업적	(D) 상금
15. **ensuing**	(A) 최후의	(B) 두려운	(C) 뒤이은	(D) 확신하는
16. **out of hand**	(A) 어려운	(B) 이질적인	(C) 손으로부터	(D) 통제가 안 되는

4th Immediate vocabulary test in the 7th session (VKS format)

***Please follow the instructions below.**

If you don't remember having seen this word before, circle 1.
If you have seen this word before but you don't know what it means, circle 2.
If you know this word, circle 3 and provide the meaning of the word in either English (synonym/definition) or Korean.

excrete	1	2	3	_____
intestine	1	2	3	_____
gulp	1	2	3	_____
absorbed	1	2	3	_____
highly-strung	1	2	3	_____
nasty	1	2	3	_____
somewhat	1	2	3	_____
devour	1	2	3	_____
face up to	1	2	3	_____
notorious	1	2	3	_____
has to do with	1	2	3	_____
sooner or later	1	2	3	_____
odor	1	2	3	_____
raisin	1	2	3	_____
droll	1	2	3	_____
generate	1	2	3	_____

4th Immediate vocabulary test in the 7th session (MC format)

Choose from A, B, C, D the one which best matches the preceding word.

1. **excrete**	(A) 시험하다	(B) 분비하다	(C) 제거하다	(D) 결정하다
2. **intestine**	(A) 위	(B) 혈관	(C) 장	(D) 식도
3. **gulp**	(A) 트림하다	(B) 저장하다	(C) 순환시키다	(D) 삼키다
4. **absorbed**	(A) 참아낸	(B) 절대적인	(C) 영향 받은	(D) 흡수된
5. **highly-strung**	(A) 고집이 센	(B) 활발한	(C) 체격이 큰	(D) 신경과민의
6. **nasty**	(A) 불쾌한	(B) 지속되는	(C) 어지러운	(D) 가벼운
7. **somewhat**	(A) 어느 정도	(B) 무엇이든지	(C) 어떤 것	(D) 대단히
8. **droll**	(A) 복잡한	(B) 유명한	(C) 비슷한	(D) 익살스러운

9. **devour**	(A) to bring a feeling into your mind	(B) to eat all of something quickly
	(C) to invent something new	(D) to mix with a liquid
10. **face up to**	(A) to turn one's face	(B) not to run away from something difficult
	(C) not to finish something	(D) to look at the sky
11. **notorious**	(A) impossible to control	(B) strongly believed by people
	(C) to be angry	(D) popular for being bad
12. **has to do with**	(A) to hold something in one's hands	(B) to stay with (somebody)
	(C) to get to the point	(D) to be connected with

13. **sooner or later**	(A) at the moment	(B) at sometime in the future
	(C) immediately before	(D) from time to time
14. **odor**	(A) the sound of something	(B) a health condition
	(C) a request for food in a restaurant	(D) a particular smell
15. **raisin**	(A) a sweet and dried grape	(B) the growth of something
	(C) an upward movement	(D) a large yellow fruit
16. **generate**	(A) to move from one place to another	(B) to create or produce
	(C) to do something nice or kind	(D) to make a connection

2nd Delayed vocabulary test in the 8th session (VKS format)

***Please follow the instructions below.**

If you don't remember having seen this word before, circle 1.
If you have seen this word before but you don't know what it means, circle 2.
If you know this word, circle 3 and provide the meaning of the word in either English (synonym/definition) or Korean.

come across	1	2	3	_____	**excrete**	1	2	3	_____
open-air	1	2	3	_____	**intestine**	1	2	3	_____
all the rage	1	2	3	_____	**gulp**	1	2	3	_____
cannon	1	2	3	_____	**absorbed**	1	2	3	_____
ubiquitous	1	2	3	_____	**highly-strung**	1	2	3	_____
approve of	1	2	3	_____	**nasty**	1	2	3	_____
ignite	1	2	3	_____	**somewhat**	1	2	3	_____
premiere	1	2	3	_____	**devour**	1	2	3	_____
prop	1	2	3	_____	**face up to**	1	2	3	_____
renowned	1	2	3	_____	**notorious**	1	2	3	_____
tear down (torn down의 현재형)	1	2	3	_____	**has to do with**	1	2	3	_____
catastrophe	1	2	3	_____	**sooner or later**	1	2	3	_____
flourish	1	2	3	_____	**odor**	1	2	3	_____
accolade	1	2	3	_____	**raisin**	1	2	3	_____
ensuing	1	2	3	_____	**droll**	1	2	3	_____
out of hand	1	2	3	_____	**generate**	1	2	3	_____

2nd Delayed vocabulary test in the 8th session (MC format)

Choose from A, B, C, D the one which best matches the preceding word.

1. **devour**	(A) to eat all of something quickly	(B) to bring a feeling into your mind
	(C) to mix with a liquid	(D) to invent something new
2. **face up to**	(A) not to finish something	(B) to look at the sky
	(C) to turn one's face	(D) not to run away from something difficult
3. **notorious**	(A) popular for being bad	(B) to be angry
	(C) strongly believed by people	(D) impossible to control
4. **has to do with**	(A) to stay with (somebody)	(B) to get to the point
	(C) to hold something in one's hands	(D) to be connected with
5. **sooner or later**	(A) immediately before	(B) from time to time
	(C) at sometime in the future	(D) at the moment
6. **odor**	(A) a request for food in a restaurant	(B) the sound of something
	(C) a health condition	(D) a particular smell
7. **raisin**	(A) the growth of something	(B) a sweet and dried grape
	(C) a large yellow fruit	(D) an upward movement
8. **generate**	(A) to do something nice or kind	(B) to make a connection
	(C) to move from one place to another	(D) to create or produce
9. **come across**	(A) to become something different	(B) to find something by chance
	(C) to walk around some place	(D) to learn about something
10. **open-air**	(A) having a great view	(B) without a roof
	(C) with a lot of open windows	(D) having some fresh air
11. **all the rage**	(A) ready for something	(B) very angry
	(C) very popular at the moment	(D) beyond the limits
12. **cannon**	(A) a large gun on wheels	(B) a camera brand
	(C) a deep valley with steep sides of rock	(D) a person who carries a bomb
13. **ubiquitous**	(A) existing everywhere	(B) close to
	(C) clear in every respect	(D) placed in the centre of the world
14. **approve of**	(A) to make something clear	(B) to have a good opinion about
	(C) to have no comment about	(D) to correct something

15. **ignite** (A) to destroy something (B) to make something start to burn (C) to hurt or kill people (D) to keep something safe

16. **premiere** (A) first or initial (B) of best quality (C) high class (D) liked by people

17. **excrete**	(A) 제거하다	(B) 결정하다	(C) 시험하다	(D) 분비하다
18. **intestine**	(A) 식도	(B) 장	(C) 혈관	(D) 위
19. **gulp**	(A) 순환시키다	(B) 삼키다	(C) 트림하다	(D) 저장하다
20. **absorbed**	(A) 영향 받은	(B) 참아낸	(C) 절대적인	(D) 흡수된
21. **highly-strung**	(A) 신경과민의	(B) 고집이 센	(C) 체격이 큰	(D) 활발한
22. **nasty**	(A) 가벼운	(B) 불쾌한	(C) 지속되는	(D) 어지러운
23. **somewhat**	(A) 어떤 것	(B) 어느 정도	(C) 대단히	(D) 무엇이든지
24. **droll**	(A) 복잡한	(B) 유명한	(C) 비슷한	(D) 익살스러운
25. **prop**	(A) 대본	(B) 무대	(C) 조명시설	(D) 소도구
26. **renowned**	(A) 잘 팔리는	(B) 명성 있는	(C) 잊기 힘든	(D) 최근의
27. **tear down (torn down의 현재형)**	(A) 감동을 주다	(B) 허물다	(C) 눈물을 닦다	(D) 공격하다
28. **catastrophe**	(A) 충격적 사실	(B) 소유격 부호	(C) 대참사	(D) 역사적 사건
29. **flourish**	(A) 가능하게 하다	(B) 매진되다	(C) 번영하다	(D) 생산하다
30. **accolade**	(A) 업적	(B) 상금	(C) 가속	(D) 칭찬
31. **ensuing**	(A) 최후의	(B) 확신하는	(C) 두려운	(D) 뒤이은
32. **out of hand**	(A) 통제가 안 되는	(B) 어려운	(C) 이질적인	(D) 손으로부터

Appendix E: Vocabulary Tests for the Young Learners

***Please follow the instructions below.**

If you don't remember having seen this word before, circle 1.
If you have seen this word before but you don't know what it means, circle 2.
If you know this word, circle 3 and provide the meaning of the word in either English (synonym/definition) or Korean.

Pre-test of vocabulary in the 2nd session (VKS format)

dog	1	2	3	_____	**happy**	1	2	3	_____
make fun of	1	2	3	_____	**tutor**	1	2	3	_____
bake	1	2	3	_____	**evil**	1	2	3	_____
invite	1	2	3	_____	**a piece of cake**	1	2	3	_____
no doubt	1	2	3	_____	**see red**	1	2	3	_____
wallet	1	2	3	_____	**spell**	1	2	3	_____
table tennis	1	2	3	_____	**catch someone's eye**	1	2	3	_____
egg	1	2	3	_____	**easy**	1	2	3	_____
decorate	1	2	3	_____	**title**	1	2	3	_____
favorite	1	2	3	_____	**clerk**	1	2	3	_____
by oneself	1	2	3	_____	**wipe**	1	2	3	_____
delicious	1	2	3	_____	**pricey**	1	2	3	_____
celebrate	1	2	3	_____	**steal**	1	2	3	_____
cousin	1	2	3	_____	**ancient**	1	2	3	_____
bouquet	1	2	3	_____	**wand**	1	2	3	_____
stay up	1	2	3	_____	**certainly**	1	2	3	_____
father	1	2	3	_____	**snow**	1	2	3	_____
save	1	2	3	_____	**remember**	1	2	3	_____
gaze	1	2	3	_____	**plumber**	1	2	3	_____
thrilling	1	2	3	_____	**beg**	1	2	3	_____

breeze	1	2	3	_____	**neighbor**	1	2	3	_____
unique	1	2	3	_____	**content**	1	2	3	_____
makes your mouth water	1	2	3	_____	**something is beyond him**	1	2	3	_____
surprise	1	2	3	_____	**hobby**	1	2	3	_____
stroll	1	2	3	_____	**refuse**	1	2	3	_____
freezing	1	2	3	_____	**upset**	1	2	3	_____
entrance	1	2	3	_____	**recently**	1	2	3	_____
frostbite	1	2	3	_____	**queue**	1	2	3	_____
under-construction	1	2	3	_____	**carpenter**	1	2	3	_____
problem	1	2	3	_____	**arrive**	1	2	3	_____
temporarily	1	2	3	_____	**huge**	1	2	3	_____
pool	1	2	3	_____	**out of his mind**	1	2	3	_____
icicle	1	2	3	_____	**chill out**	1	2	3	_____
reserve	1	2	3	_____	**relative**	1	2	3	_____

1st Immediate vocabulary test in the 3rd session (VKS format)

***Please follow the instructions below.**

If you don't remember having seen this word before, circle 1.
If you have seen this word before but you don't know what it means, circle 2.
If you know this word, circle 3 and provide the meaning of the word in either English (synonym/definition) or Korean.

make fun of	1	2	3	_____
bake	1	2	3	_____
invite	1	2	3	_____
no doubt	1	2	3	_____
wallet	1	2	3	_____
table tennis	1	2	3	_____
decorate	1	2	3	_____
favorite	1	2	3	_____
by oneself	1	2	3	_____
delicious	1	2	3	_____
celebrate	1	2	3	_____
cousin	1	2	3	_____
bouquet	1	2	3	_____
stay up	1	2	3	_____

1st Immediate vocabulary test in the 3rd session (MC format)

Choose from A, B, C, D the one which best matches the preceding word.

1. **make fun of**	(A) 즐겁게 하다	(B) 놀리다	(C) 만들다	(D) 함께하다
2. **bake**	(A) 얻다	(B) 사다	(C) 굽다	(D) 먹다
3. **invite**	(A) 전화하다	(B) 축하하다	(C) 선물을 사다	(D) 초대하다
4. **no doubt**	(A) 잔인하게	(B) 어렵게	(C) 확실하게	(D) 걱정하며
5. **wallet**	(A) 긴 바지	(B) 가방	(C) 지갑	(D) 책꽂이
6. **table tennis**	(A) 컵쌓기	(B) 테니스	(C) 탁구	(D) 당구
7. **decorate**	(A) 준비하다	(B) 만들다	(C) 배달하다	(D) 꾸미다

8. f**avorite**
(A) liked very much (B) liked a little bit
(C) not liked (D) hated very much

9. **by oneself**
(A) without other people (B) with joy
(C) always (D) by the way

10. '**Delicious**' is something _____.
(A) easy to see (B) very small (C) fun to play (D) very good to eat

11. When you '**celebrate**,' you _____.
(A) fight with your friends (B) have a party for good reasons
(C) go to see a doctor (D) help other people

12. **Cousin** is _____.
(A) a man who has a child (B) the child of your uncle or aunt
(C) a person that you like (D) a person in the same building

13. **bouquet**
(A) a small white bread (B) a beautiful stone
(C) a thin cake (D) a group of flowers

14. **stay up**
(A) not move (B) play with friends
(C) watch but do nothing (D) not go to bed

2nd Immediate vocabulary test in the 4th session (VKS format)

***Please follow the instructions below.**

If you don't remember having seen this word before, circle 1.
If you have seen this word before but you don't know what it means, circle 2.
If you know this word, circle 3 and provide the meaning of the word in either English (synonym/definition) or Korean.

tutor	1	2	3	_____
evil	1	2	3	_____
a piece of cake	1	2	3	_____
see red	1	2	3	_____
spell	1	2	3	_____
pricey	1	2	3	_____
title	1	2	3	_____
clerk	1	2	3	_____
wipe	1	2	3	_____
catch someone's eye	1	2	3	_____
steal	1	2	3	_____
ancient	1	2	3	_____
wand	1	2	3	_____
certainly	1	2	3	_____

2nd Immediate vocabulary test in the 4th session (MC format)

Choose from A, B, C, D the one which best matches the preceding word.

1. **tutor** (A) the leader of the school (B) a teacher who teaches people (C) a woman who looks after kids (D) a person in an office

2. **evil** (A) smart (B) working hard (C) very bad (D) honest

3. **a piece of cake** (A) something hard to see (B) a piece of dessert (C) a very small thing (D) something very easy

4. He **sees red** means ____.
(A) he is healthy (B) he is angry (C) he is jealous (D) he is afraid

5. **spell** (A) a very strong feeling (B) strong attack (C) magic words (D) a thing that is different

6. **pricey** (A) a lot of (B) beautiful (C) interesting (D) expensive

7. **title** (A) the name of something (B) a little story (C) a small piece of card (D) a hero or heroine

8. **clerk** (A) 마법사 (B) 조수 (C) 청소원 (D) 판매원

9. **wipe** (A) 정리하다 (B) 덮다 (C) 버리다 (D) 닦다

10. **catch her eye** (A) 관심을 끌다 (B) 깜짝 놀래 키다 (C) 얼굴을 바라보다 (D) 눈을 만지다

11. **steal** (A) 훔치다 (B) 상처를 주다 (C) 비밀을 드러내다 (D) 버리다

12. **ancient** (A) 찢어진 (B) 더러운 (C) 두꺼운 (D) 매우 오래된

13. **wand** (A) 요술 (B) 요술봉 (C) 마법책 (D) 마법사

14. **certainly** (A) 가능하면 (B) 희망적으로 (C) 확실히 (D) 어렵게

1st Delayed vocabulary test in the 5th session (VKS format)

***Please follow the instructions below.**

If you don't remember having seen this word before, circle 1.
If you have seen this word before but you don't know what it means, circle 2.
If you know this word, circle 3 and provide the meaning of the word in either English (synonym/definition) or Korean.

make fun of	1	2	3	_____	**tutor**	1	2	3	_____
bake	1	2	3	_____	**evil**	1	2	3	_____
invite	1	2	3	_____	**a piece of cake**	1	2	3	_____
no doubt	1	2	3	_____	**see red**	1	2	3	_____
wallet	1	2	3	_____	**spell**	1	2	3	_____
table tennis	1	2	3	_____	**pricey**	1	2	3	_____
decorate	1	2	3	_____	**title**	1	2	3	_____
favorite	1	2	3	_____	**clerk**	1	2	3	_____
by oneself	1	2	3	_____	**wipe**	1	2	3	_____
delicious	1	2	3	_____	**catch someone's eye**	1	2	3	_____
celebrate	1	2	3	_____	**steal**	1	2	3	_____
cousin	1	2	3	_____	**ancient**	1	2	3	_____
bouquet	1	2	3	_____	**wand**	1	2	3	_____
stay up	1	2	3	_____	**certainly**	1	2	3	_____

1st Delayed vocabulary test in the 5th session (MC format)

Choose from A, B, C, D the one which best matches the preceding word.

1. **bake** (A) 굽다 (B) 먹다 (C) 얻다 (D) 사다

2. **make fun of** (A) 만들다 (B) 놀리다 (C) 함께하다 (D) 즐겁게 하다

3. **table tennis** (A) 컵쌓기 (B) 탁구 (C) 테니스 (D) 당구

4. **invite** (A) 축하하다 (B) 초대하다 (C) 선물을 사다 (D) 전화하다

5. **decorate** (A) 배달하다 (B) 준비하다 (C) 만들다 (D) 꾸미다

6. **wallet** (A) 책꽂이 (B) 지갑 (C) 가방 (D) 긴 바지

7. **no doubt** (A) 확실하게 (B) 걱정하며 (C) 잔인하게 (D) 어렵게

8. **wand** (A) 마법책 (B) 양탄자 (C) 요술봉 (D) 요술

9. **ancient** (A) 더러운 (B) 두꺼운 (C) 찢어진 (D) 매우 오래된

10. **clerk** (A) 판매원 (B) 청소원 (C) 조수 (D) 마법사

11. **wipe** (A) 덮다 (B) 버리다 (C) 정리하다 (D) 닦다

12. **steal** (A) 버리다 (B) 비밀을 드러내다 (C) 상처를 주다 (D) 훔치다

13. **catch her eye** (A) 깜짝 놀래 키다 (B) 얼굴을 바라보다 (C) 관심을 끌다 (D) 눈을 만지다

14. **certainly** (A) 어렵게 (B) 가능하면 (C) 확실히 (D) 희망적으로

15. He **sees red** means ____.

(A) he is angry (B) he is healthy (C) he is afraid (D) he is jealous

16. **tutor** (A) a teacher who teaches people (B) the leader of the school (C) a person in an office (D) a woman who looks after kids

17. **a piece of cake** (A) a piece of dessert (B) something hard to see (C) something very easy (D) a very small thing

18. **evil** (A) honest (B) very bad (C) working hard (D) smart

19. **pricey** (A) expensive (B) a lot of (C) beautiful (D) interesting

20. **title** (A) a hero or heroine (B) a small piece of card (C) a little story (D) the name of something

21. When you '**celebrate**,' you _____.

(A) have a party for good reasons (B) help other people (C) go to see a doctor (D) fight with your friends

22. **favorite** (A) liked a little bit (B) not liked (C) hated very much (D) liked very much

23. **by oneself** (A) with joy (B) always (C) without other people (D) by the way

24. '**Delicious**' is something _____.

(A) easy to see (B) very good to eat (C) very small (D) fun to play

25. **spell** (A) a thing that is different (B) magic words (C) strong attack (D) a very strong feeling

26. **stay up** (A) play with friends (B) not move (C) not go to bed (D) watch but do nothing

27. **bouquet** (A) a thin cake (B) a group of flowers (C) a small white bread (D) a beautiful stone

28. **Cousin** is _____.

(A) the child of your uncle or aunt (B) a person in the same building (C) a person that you like (D) a man who has a child

3rd Immediate vocabulary test in the 6th session (VKS format)

***Please follow the instructions below.**

If you don't remember having seen this word before, circle 1.
If you have seen this word before but you don't know what it means, circle 2.
If you know this word, circle 3 and provide the meaning of the word in either English (synonym/definition) or Korean.

gaze	1 2 3	_____
thrilling	1 2 3	_____
breeze	1 2 3	_____
unique	1 2 3	_____
makes your mouth water	1 2 3	_____
stroll	1 2 3	_____
freezing	1 2 3	_____
entrance	1 2 3	_____
frostbite	1 2 3	_____
under-construction	1 2 3	_____
reserve	1 2 3	_____
temporarily	1 2 3	_____
pool	1 2 3	_____
icicle	1 2 3	_____

3rd Immediate vocabulary test in the 6th session (MC format)

Choose from A, B, C, D the one which best matches the preceding word.

1. **gaze** (A) pick something up (B) have something in hand (C) look at something for a long time (D) walk around

2. **thrilling** (A) very expensive (B) very exciting (C) for a lot of the time (D) very busy

3. **breeze** (A) the light from the sun (B) a light wind (C) a nice smell (D) a very happy feeling

4. **unique** (A) very special (B) quiet and not exciting (C) very beautiful (D) a lot of

5. If something **makes your mouth water**, it

(A) makes you hot (B) makes you want to buy something (C) makes you want to eat it (D) makes you tired

6. **freezing** (A) with some ice (B) very cold (C) getting a lot of snow (D) with a very strong wind

7. **stroll** (A) enjoy the weather (B) walk slowly (C) take a sleep (D) stay inside

8. **entrance** (A) 입구 (B) 가장자리 (C) 정원 (D) 창문

9. **frostbite** (A) 두통 (B) 얼음 (C) 동상 (D) 감기

10. **under-construction** (A) 허물어진 (B) 공사중인 (C) 준비중인 (D)청소중인

11. **reserve** (A) 구입하다 (B) 예약하다 (C) 자주 오다 (D) 즐기다

12. **temporarily** (A) 안타깝게도 (B) 매우 자주 (C) 1년 동안 (D) 잠시 동안

13. **pool** (A) 놀이터 (B) 미끄럼틀 (C) 낚시터 (D) 수영장

14. **icicle** (A) 고드름 (B)에스키모 집 (C) 얼음 음료 (D) 눈싸움

4th Immediate vocabulary test in the 7th session (VKS format)

***Please follow the instructions below.**

If you don't remember having seen this word before, circle 1.
If you have seen this word before but you don't know what it means, circle 2.
If you know this word, circle 3 and provide the meaning of the word in either English (synonym/definition) or Korean.

plumber	1	2	3	_____
beg	1	2	3	_____
neighbor	1	2	3	_____
content	1	2	3	_____
out of his mind	1	2	3	_____
refuse	1	2	3	_____
upset	1	2	3	_____
recently	1	2	3	_____
queue	1	2	3	_____
carpenter	1	2	3	_____
relative	1	2	3	_____
huge	1	2	3	_____
something is beyond him	1	2	3	_____
chill out	1	2	3	_____

4th Immediate vocabulary test in the 7th session (MC format)

Choose from A, B, C, D the one which best matches the preceding word.

1. **plumber**	(A) 배관공	(B) 전기기술자	(C) 디자이너	(D) 환경미화원
2. **beg**	(A) 짜증내다	(B) 믿게 하다	(C) 크게 만들다	(D) 부탁하다
3. **neighbor**	(A) 여동생	(B) 동네 가게	(C) 친척	(D) 이웃
4. **content**	(A) 계속하는	(B) 만족한	(C) 급한	(D) 슬퍼하는
5. **out of his mind**	(A) 불만이 있는	(B) 정신 나간	(C) 욕심 많은	(D) 관심 없는
6. **refuse**	(A) 화를 내다	(B) 포기하다	(C) 거절하다	(D) 참견하다
7. **upset**	(A) 참고 있는	(B) 서두르는	(C) 기분이 안 좋은	(D) 열정적인

8. **recently**	(A) very soon	(B) sometimes	(C) everyday	(D) not long ago
9. **huge**	(A) very clean	(B) very good	(C) very big	(D) very old

10. **queue**
(A) a thing that a shop sells
(B) a waiting line of people
(C) a place where people eat
(D) the name and address

11. **carpenter** is a person who_____.
(A) makes things from wood
(B) stops fire
(C) takes letters to people
(D) designs buildings

12. **relative**
(A) a person in your family
(B) people who live next door
(C) a person who plays a game with you
(D) people in your work

13. **Something is beyond him** means _____.

(A) he is very short
(B) difficult for him to understand
(C) it makes him angry
(D) he is underwater

14. **chill out**
(A) to eat something hot
(B) to feel sad
(C) to stop feeling angry
(D) to do something bad

2nd Delayed vocabulary test in the 8th session (VKS format)

***Please follow the instructions below.**

If you don't remember having seen this word before, circle 1.
If you have seen this word before but you don't know what it means, circle 2.
If you know this word, circle 3 and provide the meaning of the word in either English (synonym/definition) or Korean.

plumber	1	2	3	_____	**gaze**	1	2	3	_____
beg	1	2	3	_____	**thrilling**	1	2	3	_____
neighbor	1	2	3	_____	**breeze**	1	2	3	_____
content	1	2	3	_____	**unique**	1	2	3	_____
out of his mind	1	2	3	_____	**makes your mouth water**	1	2	3	_____
refuse	1	2	3	_____	**stroll**	1	2	3	_____
upset	1	2	3	_____	**freezing**	1	2	3	_____
recently	1	2	3	_____	**entrance**	1	2	3	_____
queue	1	2	3	_____	**frostbite**	1	2	3	_____
carpenter	1	2	3	_____	**under-construction**	1	2	3	_____
relative	1	2	3	_____	**reserve**	1	2	3	_____
huge	1	2	3	_____	**temporarily**	1	2	3	_____
something is beyond him	1	2	3	_____	**pool**	1	2	3	_____
chill out	1	2	3	_____	**icicle**	1	2	3	_____

2nd Delayed vocabulary test in the 8th session (MC format)

Choose from A, B, C, D the one which best matches the preceding word.

1. **gaze** (A) look at something for a long time (B) walk around (C) pick something up (D) have something in hand

2. **thrilling** (A) very busy (B) very expensive (C) very exciting (D) for a lot of the time

3. **breeze** (A) a light wind (B) a very happy feeling (C) a nice smell (D) the light from the sun

4. **unique** (A) a lot of (B) quiet and not exciting (C) very special (D) very beautiful

5. If something **makes your mouth water**, it **_____.**

(A) makes you tired (B) makes you want to buy something
(C) makes you hot (D) makes you want to eat it

6. **freezing** (A) getting a lot of snow (B) very cold (C) with a very strong wind (D) with some ice

7. **queue** (A) a place where people eat (B) a thing that a shop sells (C) the name and address (D) a waiting line of people

8. **relative** (A) people in your work (B) a person in your family (C) a person who plays a game with you (D) people who live next door

9. **carpenter** is a person who_____.
(A) designs buildings (B) makes things from wood
(C) takes letters to people (D) stops fire

10. **Something is beyond him** means _____.
(A) it makes him angry (B) he is very short
(C) he is underwater (D) difficult for him to understand

11. **chill out** (A) to feel sad (B) to do something bad (C) to eat something hot (D) to stop feeling angry

12. **stroll** (A) stay inside (B) enjoy the weather (C) take a sleep (D) walk slowly

13. **recently** (A) very soon (B) not long ago (C) sometimes (D) everyday

14. **huge** (A) very good (B) very big (C) very clean (D) very old

15. **entrance**	(A) 입구	(B) 정원	(C) 창문	(D) 가장자리
16. **frostbite**	(A) 감기	(B) 두통	(C) 동상	(D) 얼음
17. **under-construction**	(A) 공사중인	(B) 준비중인	(C) 허물어진	(D) 청소중인
18. **reserve**	(A) 즐기다	(B) 구입하다	(C) 예약하다	(D) 자주 오다
19. **temporarily**	(A) 잠시 동안	(B) 안타깝게도	(C) 매우 자주	(D) 1년 동안
20. **pool**	(A) 미끄럼틀	(B) 수영장	(C) 낚시터	(D) 놀이터
21. **icicle**	(A) 눈싸움	(B) 얼음 음료	(C) 고드름	(D) 에스키모 집
22. **plumber**	(A) 환경미화원	(B) 배관공	(C) 디자이너	(D) 전기기술자
23. **beg**	(A) 믿게 하다	(B) 짜증내다	(C) 부탁하다	(D) 크게 만들다
24. **neighbor**	(A) 친척	(B) 이웃	(C) 여동생	(D) 동네 가게
25. **content**	(A) 슬퍼하는	(B) 급한	(C) 만족한	(D) 계속하는
26. **out of his mind**	(A) 정신 나간	(B) 관심 없는	(C) 불만이 있는	(D) 욕심 많은
27. **refuse**	(A) 참견하다	(B) 거절하다	(C) 화를 내다	(D) 포기하다
28. **upset**	(A) 서두르는	(B) 열정적인	(C) 기분이 안 좋은	(D) 참고 있는

Appendix F: The Participant Questionnaire for the Adult Learners

UNIVERSITY OF OXFORD
DEPARTMENT OF EDUCATION

I would like to ask you to help us by answering the following questions concerning English learning. This is not a test so there are no 'right' or 'wrong' answers, and you don't even have to give your name if you wish. I am interested in your personal opinion. Please give your answers sincerely as only this will guarantee the success of this research. Thank you very much for your help.

Name (Optional):

Section 1 Biographical Information

1. Gender Male ☐ Female ☐

2. Age _____

3. Did you grow up primarily in an English-speaking country?
Yes☐ No ☐ If so, for how long? ____ years

4. How many years have you been studying English? ____ years

5. Do(es) your mother and/or father speak English?
Yes, both my father and mother ☐ Yes, only my father/mother ☐
No, neither parent ☐

6. Have you ever been involved in a class that was conducted entirely (or almost entirely) in English? Check if applicable (You may check more than one). If you check one of the boxes, please specify when (elementary, middle or high school).

School in Korea (including after school hours) ☐ Private tutoring in Korea ☐
English learning institutes in Korea ☐ Class in English speaking country ☐
When? _____

7. When you studied in secondary school, you were taught by…
A native speaker of Korean ☐
A native English instructor ☐
Both native speaker of Korean and native speaker of English ☐

8. Have you taken any English examination (e.g. TOEFL, TOEIC, TEPS, IETLS) already?
If so, please write 1) name of the test_____ 2) your score _____

9. How good do you feel your knowledge of English is in the following areas? (1=not very good, 5=very good)

Listening	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
Reading	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
Writing	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
Speaking	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
Vocabulary	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐

10. Please check all the out-of-classroom activities you are currently doing in order to learn English. Also, state how many hours you self-study English per week (other than the class you are taking now).

Studying with textbooks ☐ (e.g.TOEFL/TOEIC/Vocabulary)
Listening to radio/MP3/tape ☐ (e.g. Arirang channel)
Watching English drama/TV/films ☐
Preparing for English examinations ☐
Attending English institutes or private tutoring ☐

____ hours per week on average

Section 2 Use of English in your current English class

All responses you provide in this section of the questionnaire pertain only to the English course you are currently taking.

1. My English teacher uses English to teach/explain course materials about ____ of the time overall in the classroom. (please circle)
A) Less than 25% B) 25% - 50% C) 51% - 75% D) 76% - 99% E) 100%

2. My English teacher uses English to communicate with students about ____ of the time overall in the classroom. (please circle)
A) Less than 25% B) 25% - 50% C) 51% - 75% D) 76% - 99% E) 100%

3. How much can you understand when your teacher speaks English? (please circle)
A) Less than 25% B) 25% - 50% C) 51% - 75% D) 76% - 99% E) 100%

4. How much English do you think your teacher should use in communicating with students in order to be most helpful (or appropriate) to you in learning English? (please circle)
A) Less than 25% B) 25% - 50% C) 51% - 75% D) 76% - 99% E) 100%

5. When your English teacher gives you an English-only definition (what a word means by using other English words), what do you do (exclusive to English-only condition)?

A) Try to translate the word into Korean B) Try to understand the word as it is
C) It depends on the difficulty or type of words

6. When your teacher teaches a new word found in a reading passage, how does he (she) teach the word?
(multiple choice)

A) Provides English definition/paraphrases B) Provides Korean equivalent/explanations
C) Provides an example sentence D) Uses visual aids
E) Makes students guess first F) Teaches how to pronounce the word
G) Others _____

7. In which of the following English language skills do you think your teacher's use of English has helped you the most? (multiple option)
A) Vocabulary B) Grammar C) Reading D) Writing E) Listening F) Speaking

8. In which of the following English language skills do you think your teacher's code-switching to Korean has helped you the most? **(**multiple option/if applicable)
A) Vocabulary B) Grammar C) Reading D) Writing E) Listening F) Speaking

Section 3 Your Opinions About Learning English

Mark the extent to which you agree or disagree with the following statements (1=strongly disagree; 2=disagree; 3= neutral; 4= agree; 5=strongly agree)

3. About learning in general

	strongly disagree 1	disagree 2	neutral 3	agree 4	strongly agree 5
3.1 Teachers should use only English in English classrooms.	☐	☐	☐	☐	☐
3.2 In general I would prefer a native speaker as an English teacher.	☐	☐	☐	☐	☐
3.3 I prefer English-only instruction because it gives me more opportunity to be exposed to English.	☐	☐	☐	☐	☐
3.4 I wish I had only non-native teachers of English.	☐	☐	☐	☐	☐
3.5 In general, a non-native teacher predicts learners' (potential) difficulties well.	☐	☐	☐	☐	☐
3.6 English-only instruction would work better for advanced level students.	☐	☐	☐	☐	☐
3.7 Teachers should use English mostly and	☐	☐	☐	☐	☐

use Korean a little bit in English classrooms.

3.8 A native speaker teaches speaking skills/conversation more effectively.	☐	☐	☐	☐	☐
3.9 The only thing that matters is how they teach. It does not matter what the teacher's native language is.	☐	☐	☐	☐	☐
3.10 In general, a native speaker teacher is more interesting.	☐	☐	☐	☐	☐
3.11 The more English students use in the classroom, the better they will be at communicating in English.	☐	☐	☐	☐	☐
3.12 Students must use English a great deal in the classroom.	☐	☐	☐	☐	☐
3.13 Teachers should use English and Korean to an equal extent.	☐	☐	☐	☐	☐
3.14 Teachers should switch to Korean on certain occasions because it saves time.	☐	☐	☐	☐	☐
3.15 Teachers should switch to Korean on certain occasions because it is more effective than the use of English in helping me understand what is being taught.	☐	☐	☐	☐	☐
3.16 Teachers should switch to Korean on certain occasions because it makes me feel more comfortable.	☐	☐	☐	☐	☐
3.17 Teachers should switch to Korean on certain occasions because it helps the teacher and us to avoid communication breakdowns.	☐	☐	☐	☐	☐
3.18 Learning vocabulary is important for learning English.	☐	☐	☐	☐	☐
3.19 Learning English is interesting.	☐	☐	☐	☐	☐
3.20 Teachers should use Korean mostly and use English a little bit.	☐	☐	☐	☐	☐
3.21 1 believe that, regardless of how much English students choose to use, the instructor should use English at all times in the	☐	☐	☐	☐	☐

classroom.

3.22 1 believe that teachers should switch to Korean to discuss tests, assignments or other administrative information.	☐	☐	☐	☐	☐

4. Your Decision to Study English (State whether these statements apply to you or not)

I study English because…	strongly disagree	disagree	neutral	agree	strongly agree
	1	2	3	4	5
4.1 it's a university requirement.	☐	☐	☐	☐	☐
4.2 I have a personal interest in learning English.	☐	☐	☐	☐	☐
4.3 I want to take English examinations (e.g.TOEIC).	☐	☐	☐	☐	☐
4.4 I am interested in English speaking countries (and studying there one day).	☐	☐	☐	☐	☐
4.5 I would like to get a good job.	☐	☐	☐	☐	☐
4.6 it's a job requirement.	☐	☐	☐	☐	☐
4.7 I want to make friends with native English speakers on the internet or in person.	☐	☐	☐	☐	☐

5. Vocabulary Learning

5a I prefer my teacher to use only English in teaching English vocabulary because…	strongly disagree	disagree	neutral	agree	strongly agree
	1	2	3	4	5
5.1 my memory will last longer.	☐	☐	☐	☐	☐
5.2 it is more effective in understanding words.	☐	☐	☐	☐	☐
5.3 learning new words through their definitions will help us learn other words in the definitions.	☐	☐	☐	☐	☐
5.4 an English class should provide maximal English input, so vocabulary should also be taught in English.	☐	☐	☐	☐	☐

5.5 Korean explanations of target words will de-motivate students.	☐	☐	☐	☐	☐
5.6 If understandable, I prefer English-only instructions when it comes to vocabulary learning.	☐	☐	☐	☐	☐

5b I prefer my teacher to use English and Korean in teaching English vocabulary because…	strongly disagree	disagree	neutral	agree	strongly agree
	1	2	3	4	5
5.7 English-only explanations is not easy to understand on certain occasions.	☐	☐	☐	☐	☐
5.8 using both languages will result in better understanding.	☐	☐	☐	☐	☐
5.9 English-only explanation of new words will de-motivate students.	☐	☐	☐	☐	☐
5.10 It would be best if the teacher provides Korean equivalents and examples of English sentences involving the new word.	☐	☐	☐	☐	☐
5.11 Korean explanation is more cost/time-effective than English-only explanation.	☐	☐	☐	☐	☐

5c When my teacher teachers a new word found in the reading passage, I want him (her) to…	strongly disagree	disagree	neutral	agree	strongly agree
	1	2	3	4	5
5.12 provide an English definition/paraphrases.	☐	☐	☐	☐	☐
5.13 provide a Korean equivalent/explanations.	☐	☐	☐	☐	☐
5.14 provide an example sentence.	☐	☐	☐	☐	☐
5.15 use visual aids in explaining the words.	☐	☐	☐	☐	☐
5.16 make students guess first and teach the meaning later.	☐	☐	☐	☐	☐
5.17 teach how to pronounce the word.	☐	☐	☐	☐	☐

*Would you be willing to be contacted by the researchers in order to provide more detailed information? If so, please provide your email address: (Optional!)

Thank you very much.

Please check whether you have answered all the questions. Any inquiry about the questionnaire, please contact: Jang Ho Lee (jang.lee@education.ox.ac.uk)

Appendix G: The Participant Questionnaire for the Young Learners

UNIVERSITY OF OXFORD
DEPARTMENT OF EDUCATION

I would like to ask you to help us by answering the following questions concerning English learning. This is not a test so there are no 'right' or 'wrong' answers, and you don't even have to give your name if you wish. I am interested in your personal opinion. Please give your answers sincerely as only this will guarantee the success of this research. Thank you very much for your help.

Name (Optional):

Section 1 Biographical Information

1. Gender Male ☐ Female ☐

2. Age _____

3. Did you grow up primarily in an English-speaking country?
Yes☐ No ☐ If so, for how long? ____ years

4. How many years have you been studying English? ____ years

5. Does your mother and/or father speak English?
Yes, both my father and mother ☐ Yes, only my father/mother ☐
No, neither parent ☐

6. Have you ever been involved in a class that was conducted entirely (or almost entirely) in English? Check if applicable (You may check more than one).

School in Korea (including after school hours) ☐ Private tutoring in Korea ☐
English learning institutes in Korea ☐ Class in English speaking country ☐
(ex. TOSS, 영어마을)

7. In your current school, your are currently taught by
A native speaker of Korean ☐
A native English instructor ☐
Both native speaker of Korean and native speaker of English ☐

8. How good do you feel your knowledge of English is in the following areas? (1=not very good, 5=very good)

Listening	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
Reading	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
Writing	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
Speaking	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
Vocabulary	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐

9. Please check all the out-of-classroom activities you are currently doing in order to learn English. Also, state how many hours you self-study English per week (other than the class you are taking now).

Studying with textbooks ☐
Watching English comics/books/ TV programs ☐
Preparing for English examinations ☐
Weekly materials (구몬, 파닉스) ☐
After school English class ☐
Attending English institutes or private tutoring (e.g.TOSS)☐

_____ hours per week on average

Section 2 Use of English in your current English class

All responses you provide in this section of the questionnaire pertain only to the English course you are currently taking.

1. My English teacher uses English to teach/explain course materials about ____ of the time overall in the classroom. (please circle)
A) Less than 25% B) 25% - 50% C) 51% - 75% D) 76% - 99% E) 100%

2. My English teacher uses English to communicate with students about ____ of the time overall in the classroom. (please circle)
A) Less than 25% B) 25% - 50% C) 51% - 75% D) 76% - 99% E) 100%

3. How much can you understand when your teacher speaks English? (please circle)
A) Less than 25% B) 25% - 50% C) 51% - 75% D) 76% - 99% E) 100%

4. How much English do you think your teacher should use in communicating with students in order to be most helpful (or appropriate) to you in learning English? (please circle)
A) Less than 25% B) 25% - 50% C) 51% - 75% D) 76% - 99% E) 100%

5. When your English teacher gives you an English-only definition (what a word means by using other English words), what do you do (exclusive to English-only condition)?
A) try to translate the word into Korean B) try to understand the word as it is
C) it depends on the difficulty or type of words

6. When your teacher teaches a new word found in a reading passage, how does he (she) teach the word? (multiple choice)

A) Provides English definition/paraphrases
B) Provides Korean equivalent/explanations
C) Provides an example sentence
D) Uses visual aids
E) Makes students guess first
F) Teaches how to pronounce the word
G) Others _____

Section 3 Your Opinions About Learning English

Mark the extent to which you agree or disagree with the following statements (1=strongly disagree; 2=disagree; 3= neither disagree nor agree; 4= agree; 5=strongly agree)

3. About learning in general

	strongly disagree 1	disagree 2	neutral 3	agree 4	strongly agree 5
3.1 Teachers should use only English in English classrooms.	☐	☐	☐	☐	☐
3.2 In general I would prefer a native speaker as an English teacher.	☐	☐	☐	☐	☐
3.3 I prefer English-only instruction because it gives me more opportunity to be exposed to English.	☐	☐	☐	☐	☐
3.4 I wish I had only non-native teachers of English.	☐	☐	☐	☐	☐
3.5 In general, a non-native teacher predicts learners' (potential) difficulties well.	☐	☐	☐	☐	☐
3.6 English-only instruction would work better for advanced level students.	☐	☐	☐	☐	☐
3.7 Teachers should use English mostly and use Korean a little bit in English classrooms.	☐	☐	☐	☐	☐
3.8 A native speaker teaches speaking skills/conversation more effectively.	☐	☐	☐	☐	☐
3.9 The only thing that matters is how they teach. It does not matter what the teacher's native language is.	☐	☐	☐	☐	☐
3.10 In general, a native speaker teacher is more interesting.	☐	☐	☐	☐	☐
3.11 The more English students use in the	☐	☐	☐	☐	☐

classroom, the better they will be at communicating in English.					
3.12 Students must use English a great deal in the classroom.	☐	☐	☐	☐	☐
3.13 Teachers should use English and Korean to an equal extent.	☐	☐	☐	☐	☐
3.14 Teachers should switch to Korean on certain occasions because it saves time.	☐	☐	☐	☐	☐
3.15 Teachers should switch to Korean on certain occasions because it is more effective than the use of English in helping me understand what is being taught.	☐	☐	☐	☐	☐
3.16 Teachers should switch to Korean on certain occasions because it makes me feel more comfortable.	☐	☐	☐	☐	☐
3.17 Teachers should switch to Korean on certain occasions because it helps the teacher and us to avoid communication breakdowns.	☐	☐	☐	☐	☐
3.18 Learning vocabulary is important for learning English.	☐	☐	☐	☐	☐
3.19 Learning English is interesting.	☐	☐	☐	☐	☐
3.20 Teachers should use Korean mostly and use English a little bit.	☐	☐	☐	☐	☐
3.21 1 believe that, regardless of how much English students choose to use, the instructor should use English at all times in the classroom.	☐	☐	☐	☐	☐
3.22 1 believe that teachers should switch to Korean to discuss tests, assignments or other administrative information.	☐	☐	☐	☐	☐

4. Your Decision to Study English (State whether these statements apply

to you or not)

I study English because…	strongly disagree	disagree	neutral	agree	strongly agree
	1	2	3	4	5
4.1 my parents ask me to do so.	☐	☐	☐	☐	☐
4.2 I like learning English.	☐	☐	☐	☐	☐
4.3 I want to get a high score on English tests at school.	☐	☐	☐	☐	☐
4.4 I am interested in English speaking countries (and studying one day).	☐	☐	☐	☐	☐
4.5 my friends are learning English.	☐	☐	☐	☐	☐
4.6 The school says I have to.	☐	☐	☐	☐	☐
4.7 I want to go to a good school and university.	☐	☐	☐	☐	☐
4.8 I want to make friends with native English speakers on the internet or in reality.	☐	☐	☐	☐	☐

5. Vocabulary Learning

5a I prefer my teacher to use only English in teaching English vocabulary because…	strongly disagree	disagree	neutral	agree	strongly agree
	1	2	3	4	5
5.1 my memory will last longer.	☐	☐	☐	☐	☐
5.2 it is more effective in understanding words.	☐	☐	☐	☐	☐
5.3 learning new words through their definitions will help us learn other words in the definitions.	☐	☐	☐	☐	☐
5.4 because an English class should provide maximal English input, so vocabulary should also be taught in English.	☐	☐	☐	☐	☐
5.5 Korean explanations of target words will de-motivate students.	☐	☐	☐	☐	☐
5.6 If understandable, I prefer English-only instructions when it comes to vocabulary learning.	☐	☐	☐	☐	☐

5b I prefer my teacher to use English and Korean in teaching English vocabulary because…	strongly disagree	disagree	neutral	agree	strongly agree
	1	2	3	4	5
5.7 English-only explanations is not easy to understand on certain occasions.	☐	☐	☐	☐	☐
5.8 using both languages will result in better understanding.	☐	☐	☐	☐	☐
5.9 English-only explanation of new words will de-motivate students.	☐	☐	☐	☐	☐
5.10 It would be best if the teacher provides Korean equivalents and examples of English sentences involving the new word.	☐	☐	☐	☐	☐
5.11 Korean explanation is more cost/time-effective than English-only explanation.	☐	☐	☐	☐	☐

5c When my teacher teachers a new word found in the reading passage, I want him (her) to…	strongly disagree	disagree	neutral	agree	strongly agree
	1	2	3	4	5
5.12 provide an English definition/paraphrases.	☐	☐	☐	☐	☐
5.13 provide a Korean equivalent/explanations.	☐	☐	☐	☐	☐
5.14 provide an example sentence.	☐	☐	☐	☐	☐
5.15 use visual aids in explaining the words.	☐	☐	☐	☐	☐
5.16 make students guess first and teach the meaning later.	☐	☐	☐	☐	☐
5.17 teach how to pronounce the word.	☐	☐	☐	☐	☐

*Would you be willing to be contacted by the researchers in order to provide more detailed information? If so, please provide your email address: (Optional!)

Thank you very much.

Please check whether you have answered all the questions. Any inquiry about the questionnaire, please contact: Jang Ho Lee (jang.lee@education.ox.ac.uk)

Appendix H: Distribution Graphs for the Dataset

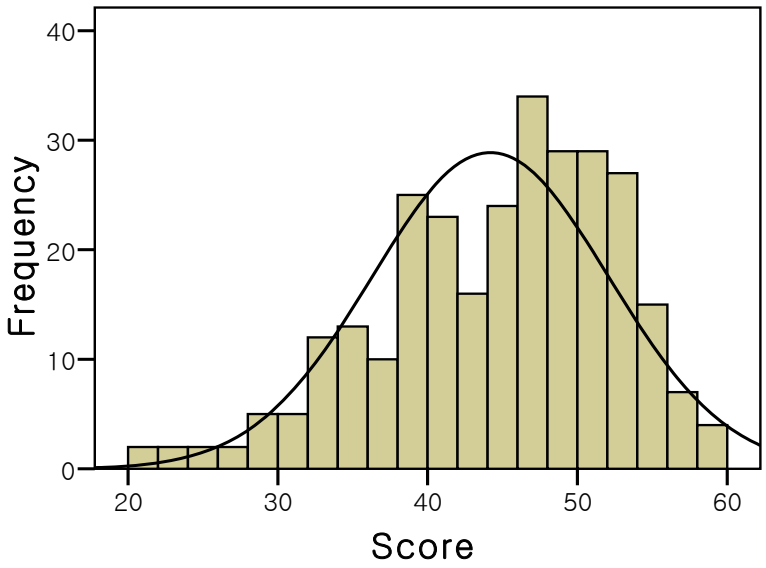


Figure H.1 Adult learners: Distribution of TOSEL scores

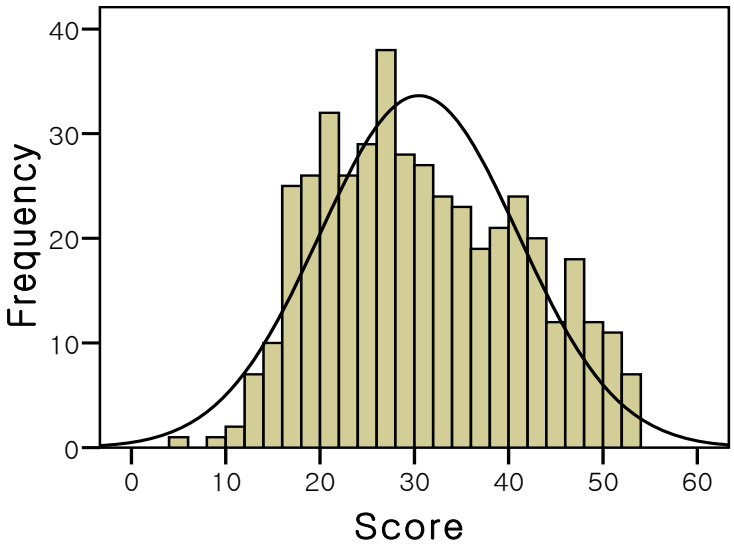


Figure H.2 Young learners: Distribution of TOSEL scores

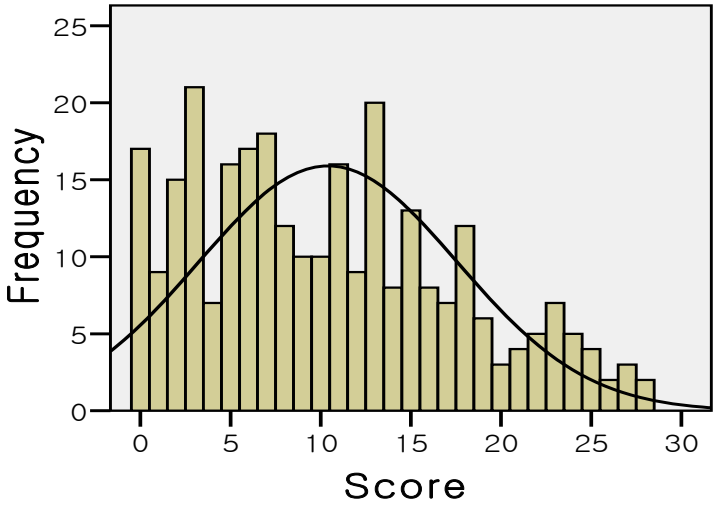


Figure H.3 Adult learners: Distribution of pre-test of vocabulary scores

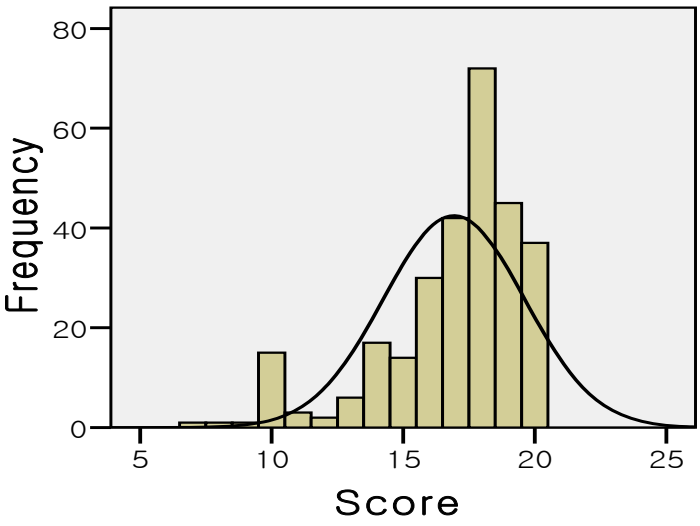


Figure H.4 Adult learners: Distribution of basic vocabulary scores

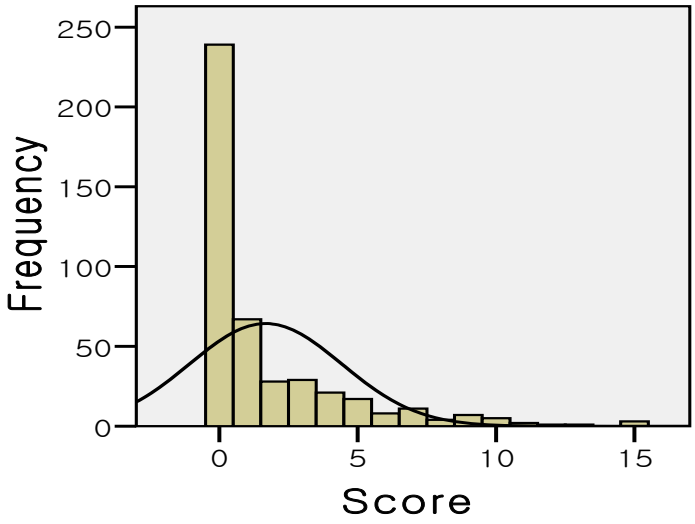


Figure H.5 Young learners: Distribution of pre-test of vocabulary scores

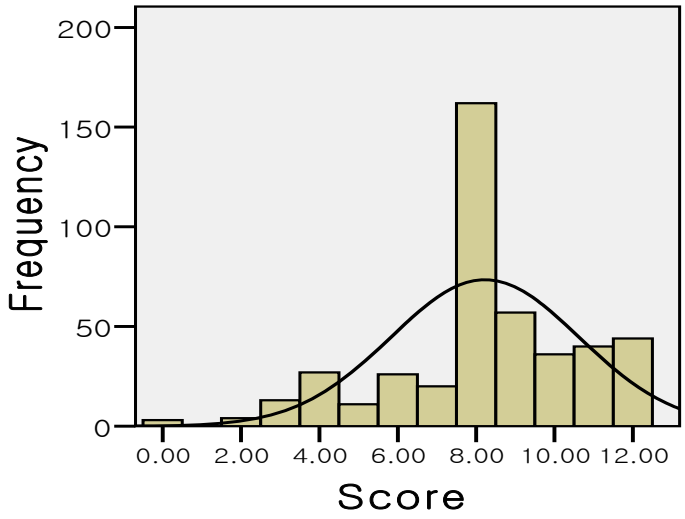


Figure H.6 Young learners: Distribution of basic vocabulary scores

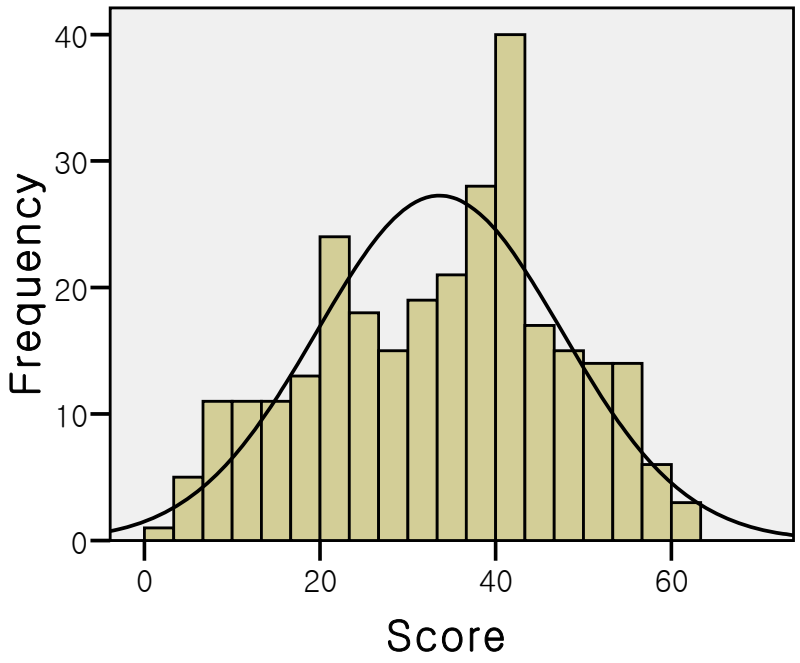


Figure H.7 Adult learners: Distribution of VKS immediate post-test scores

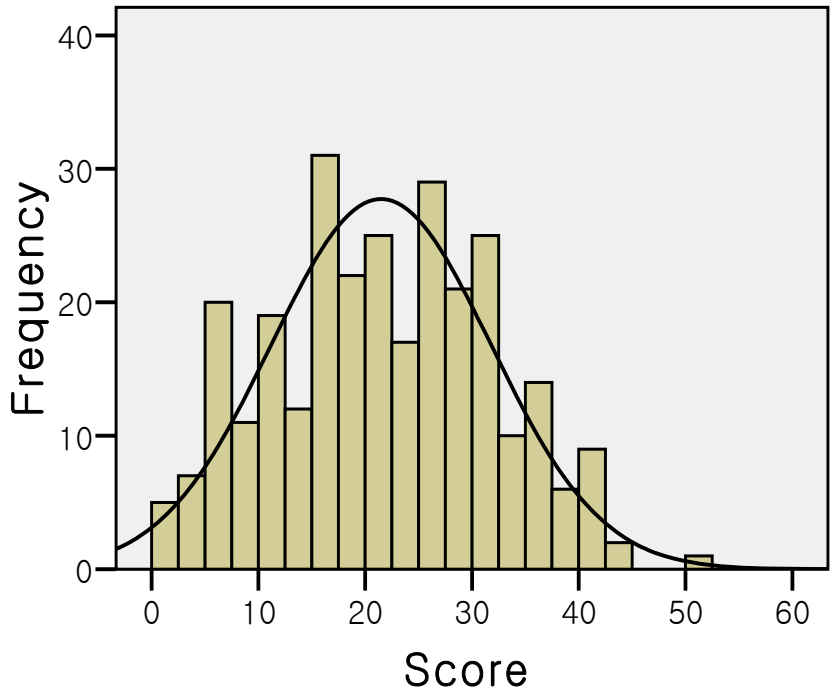


Figure H.8 Adult learners: Distribution of VKS delayed post-test scores

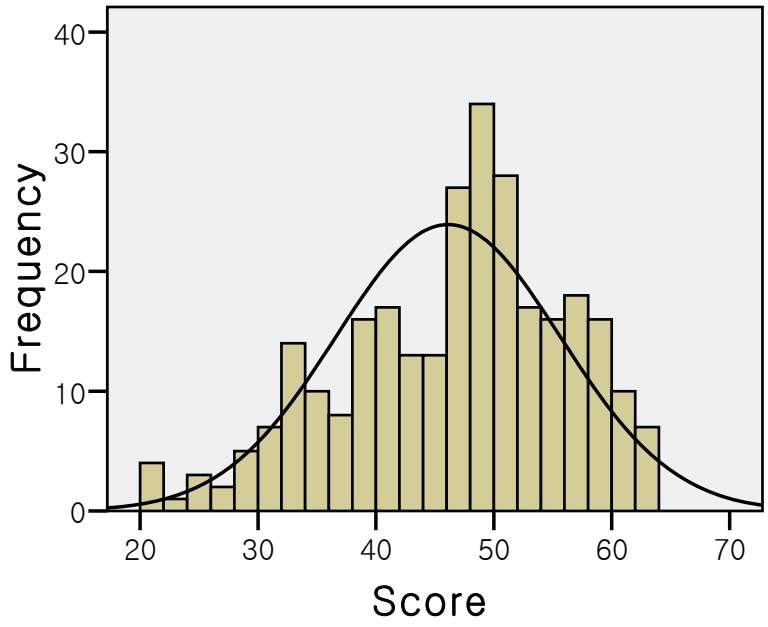


Figure H.9 Adult learners: Distribution of MC immediate post-test scores

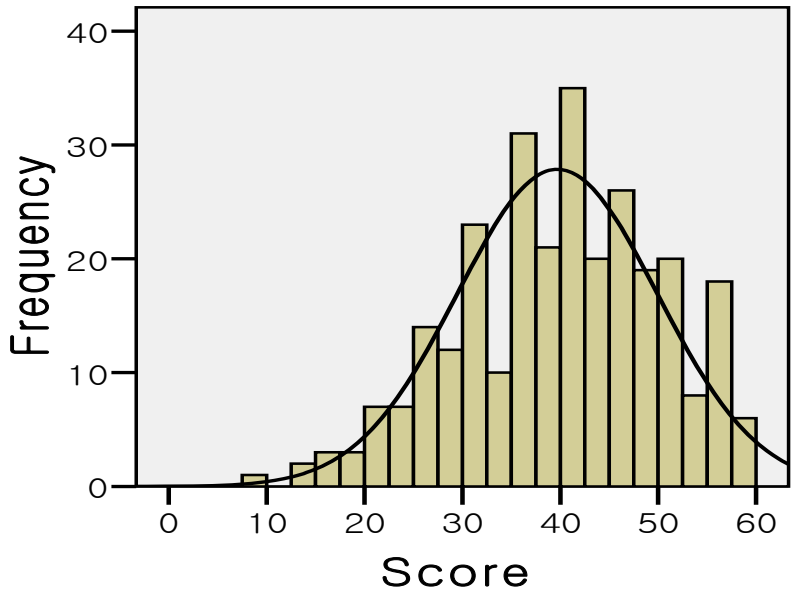


Figure H.10 Adult learners: Distribution of MC delayed post-test scores

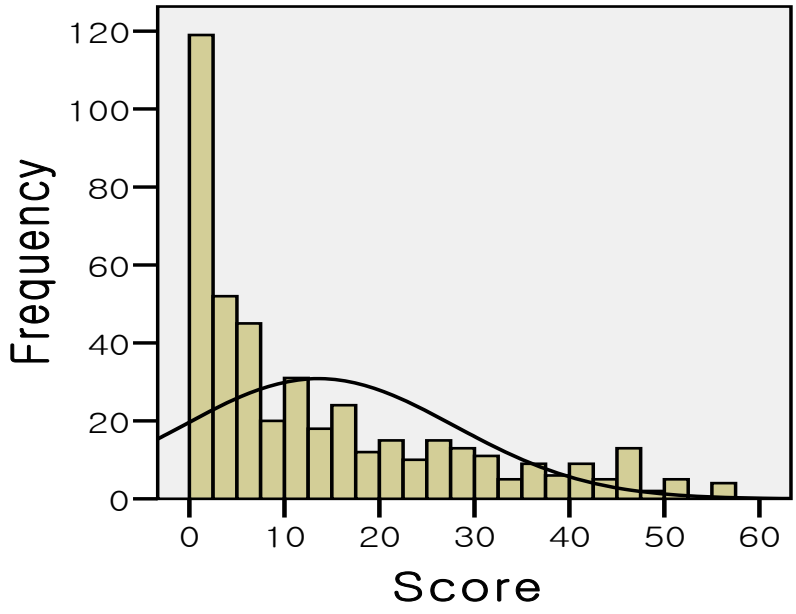


Figure H.11 Young learners: Distribution of VKS immediate post-test scores

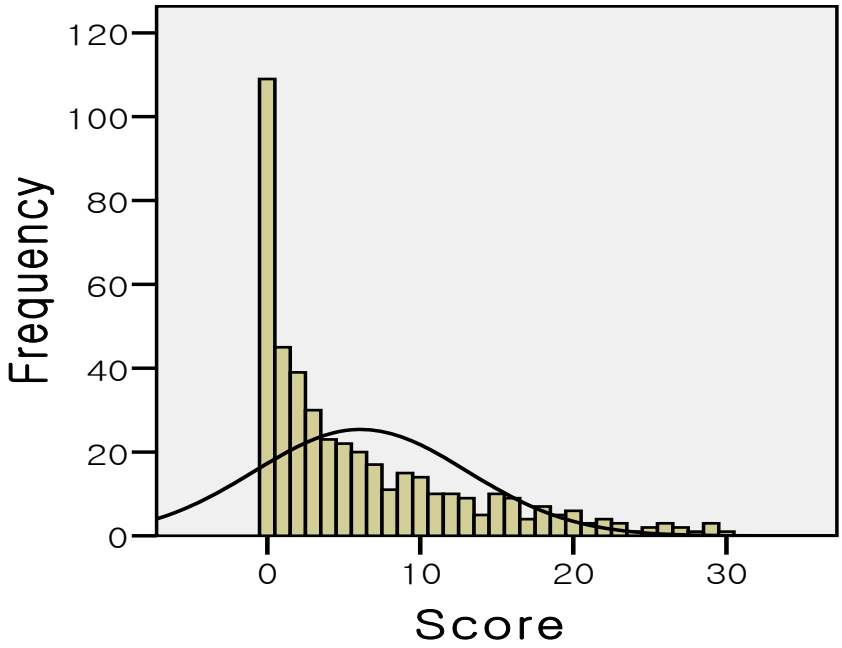


Figure H.12 Young learners: Distribution of VKS delayed post-test scores

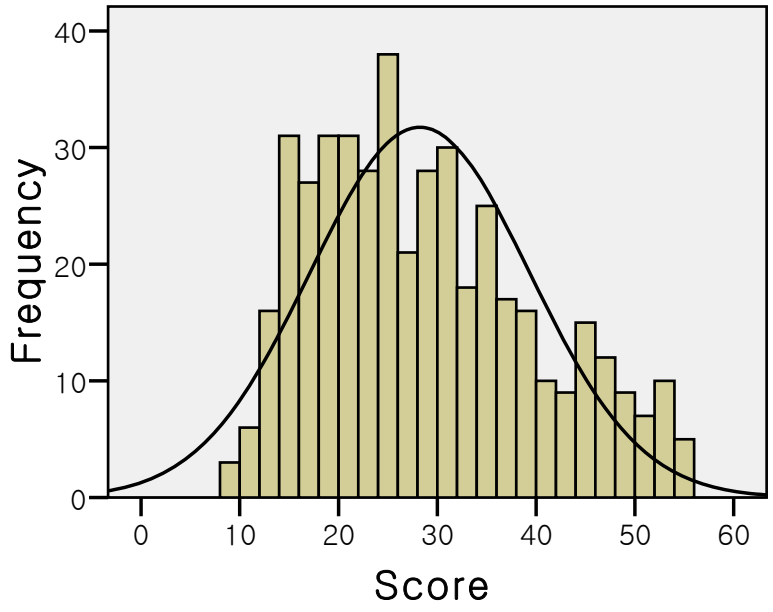


Figure H.13 Young learners: Distribution of MC immediate post-test scores

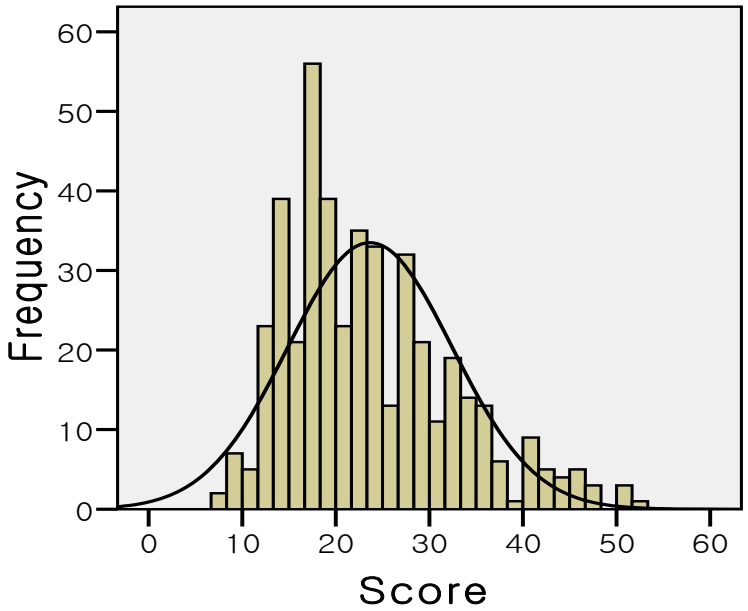


Figure H.14 Young learners: Distribution of MC delayed post-test scores

Appendix I: Regression Models with English Proficiency and Instructional Type

Adult Learners: Regression Model with the Acquisition Tests

With the VKS acquisition test, a significant model emerged: F (2, 283) = 166.02, p < .001. The model with two predictors explained 53.7% of the variance in the criterion variable, when errors associated with the predictor variables were adjusted (adjusted R^2 = .537). Table I.1 gives information for the predictor variables that are included in the model. In the first column in Table I.1 (and for all other tables in this section), *B* and beta (β) respectively indicate "unstandardized regression coefficients" and "standardized regression coefficients." An asterisk attached to a beta value indicates the significance of the *t*-test associated with that particular predictor, which in turn indicates whether the predictor made a significant contribution to the regression model.

Table I.1 Adult learners: Regression with the VKS acquisition test

Variable	*B*	*SE B*	β
Constant	-24.97	3.29	
Instructional type	7.43	1.13	.27**
English proficiency	1.24	.07	.70**

Note adjusted R^2 = .537 **p < .001.

As can be seen from Table I.1, English proficiency and instructional type were significant predictors, the standardized beta values for which were .70 and .27, respectively. The positive beta values for these predictors indicate first that the CS group in the adult-learners category scored higher on the VKS acquisition test than its EO counterpart, and second that there was a positive correlation between the adult learners'

English proficiency and their scores on the VKS acquisition test.

Table I.2 gives information related to the predictor variables that are included in the model with the MC acquisition test. Again, the model was a significant fit with the data: F (2, 283) = 148.01, $p < .001$. The model with two predictors explained 50.8% of the variance (adjusted $R^2 = .508$). The standardized beta values for English proficiency and instructional type (.70 and .20 respectively) were more or less similar to those found with the VKS acquisition test, with the degree of contribution by instructional type being slightly smaller in the case of the MC acquisition test.

Table I.2 Adult learners: Regression with the MC acquisition test

Variable	*B*	*SE B*	*β*
Constant	6.85	2.32	
Instructional type	3.80	.79	.20**
English proficiency	.85	.05	.70**

Note adjusted $R^2 = .508$ **$p < .001$.

Adult Learners: Regression Model with the Retention Tests

With the VKS retention test, a significant model emerged: F (2, 283) = 65.17 and a corresponding p value of .001. The model with two predictors explained 31.1% of the variance (adjusted $R^2 = .311$). Table I.3 gives information for the predictor variables that are included in the model.

Table I.3 Adult learners: Regression with the VKS retention test

Variable	*B*	*SE B*	*β*
Constant	-10.89	2.96	
Instructional type	.12	1.01	.01
English proficiency	.73	.06	.56**

Note adjusted $R^2 = .311$ $^{**}p < .001$.

Compared to the regression models with the acquisition tests, two differences were found with the regressions model concerning the VKS retention test. First, the amount of variance accounted for in the criterion variable by the two predictors was substantially lower (adjusted $R^2 = .311$) in the case of the VKS retention test. This result seems to imply that other variables might have been involved in this test (e.g. memory related variables), and consequently, English proficiency and instructional type together might have had less bearing on the adult learners' retention of receptive recall. Second, scanning the *t* values and *p* values for each coefficient in the SPSS output revealed that instructional type was not a statistically significant predictor in this regression model while controlling for the effect of English proficiency. The same dataset was run with the *stepwise* regression method, and it was found that instructional type indeed was excluded as a predictor in the model, $t = .114$, $p = .91$. This indicates that instructional type was not significantly related to the adult learners' retention of recall knowledge, which corresponded to the result of the ANCOVA in section 4.5.2. Indeed, the conspicuous reduction in the amount of variance accounted for here seems to be connected with the fact that instructional type did not contribute much to this model, unlike the other regression models in which instructional type was a significant predictor.

Table I.4 gives information related to the predictor variables that are included in the model with the MC retention test. The overall regression model was statistically

significant, F (2, 283) = 94.53, $p < .001$. The model with two predictors explained 39.6% of the variance (adjusted $R^2 = .396$), which was higher than the amount of variance explained by the model with the VKS retention test but was still lower than those with the acquisition tests. The standardized beta values for instructional type and English proficiency with the MC retention test were as follows: $\beta = .12$ and .63, respectively. Scanning the t values and p values for each coefficient further showed that the two predictors were able to account for a significant portion of variability in the scores of the MC retention test at an α level of .01, independent of the effect of each other.

Table I.4 Adult learners: Regression with the MC retention test

Variable	*B*	*SE B*	*β*
Constant	2.41	2.76	
Instructional type	2.47	.94	.12*
English proficiency	.82	.06	.63**

Note adjusted $R^2 = .396$ *$p < .01$ **$p < .001$.

In brief, the two predictors (i.e. instructional type and English proficiency test), combined together, explained a significant percentage of the variance in the scores of the post-tests of vocabulary for the adult learners. The results of the regression analyses revealed that the amount of variance explained for the retention tests (31.1% for the VKS and 39.6% for the MC) was slightly lower than that for the acquisition tests (53.7% for the VKS and 50.8% for the MC). It was suggested that this result may be due to the fact that the retention tests might have been further concerned with other memory-related or external factors which have not been identified. On average, the two predictors accounted for 43.8% of the variance in the four criterion (dependent) variables.

As initially hypothesized, English proficiency was significantly associated with

the dependent variables. In other words, the adult learners with higher English proficiency scored higher on the post-tests of vocabulary. Indeed, for the adult learners, the strength of this relationship was fairly constant, regardless of the time of assessment and different types of test. It was a slightly less important predictor in the retention tests than in the acquisition tests, in view of its beta values.

Most importantly, instructional type was still a significant predictor while holding constant the effect of English proficiency, except for the retention of receptive recall, the finding of which mirrored that of the ANCOVA in section 4.5.2. The relative importance of instructional type on the four post-tests of vocabulary (according to the time of assessment and type of test) found in the multiple regression models was also identical to that found in the series of ANCOVA; it was most strongly related to the acquisition of receptive recall, and slightly less so to the acquisition of receptive recognition and the retention of receptive recognition.

Young Learners: Regression Model with the Acquisition Tests

With the VKS acquisition test, a significant model emerged: F (2, 440) = 255.30, p < .001. For this regression model, the value of the adjusted R^2 was .535, indicating that 53.5% of the variance in the criterion variable was accounted for. Table I.5 gives information for the predictor variables that are included in the model.

Table I.5 Young learners: Regression with the VKS acquisition test

Variable	*B*	*SE B*	*β*
Constant	-18.19	1.52	
Instructional type	11.58	.93	.40**
English proficiency	.85	.04	.62**

Note adjusted R^2 = .535 **p < .001.

The standardized beta values for each coefficient in Table I.5 showed that instructional type and English proficiency made a significant contribution to the model with the VKS acquisition test for the young learners (β = .40 and .62, respectively). The positive sign in the beta value for these two variables indicates that the CS group in the young-learners category scored higher on the VKS acquisition test than the EO group, and that there was a positive correlation between the young learners' English proficiency and their scores on the VKS acquisition test.

Similar results were found with the regression models for the MC acquisition test (Table I.6). The overall regression model was statistically significant: F (2, 440) = 330.34, p < .001. This regression model with the two predictors explained 59.8% of the variance (adjusted R^2 = .598), which was the highest amount of variance accounted for among all the criterion variables. The standardized beta values for the two variables were similar to those in the regression models with the VKS acquisition test, β = .40 and .68 for instructional type and English proficiency, respectively. The two predictors were both statistically significant while holding constant the effect of each other. When we take into consideration the results of the acquisition test for both age groups, the results with the regression models corresponded to those with ANCOVA procedures, with instructional type being more influential for the young learners than for the adult learners.

Table I.6 Young learners: Regression with the MC acquisition test

Variable	*B*	*SE B*	β
Constant	1.88	1.09	
Instructional type	8.82	.67	.40**
English proficiency	.72	.03	.68**

Note adjusted R^2 = .598 **p < .001.

Young Learners: Regression Model with the Retention Tests

With the VKS retention test, the two predictors accounted for 54.7% of the total variance (adjusted R^2 = .547). The F value (2, 440) of 267.87, with a corresponding p value of .001, revealed that this regression model was statistically significant. In this model, instructional type and English proficiency were again significant predictors (β = .19 and .72, respectively). As can be seen from their beta values, retention of receptive recall was the area in which English proficiency was a relatively more important predictor than instructional type for the young learners, with instructional type having the smallest degree of importance among the four regression models respectively with the four post-tests of vocabulary. Table I.7 gives information for the two predictor variables that are included in the model.

Table I.7 Young learners: Regression with the VKS retention test

Variable	*B*	*SE B*	β
Constant	-9.80	.73	
Instructional type	2.65	.45	.19**
English proficiency	.48	.02	.72**

Note adjusted R^2 = .547 **p < .001.

Regarding the MC retention test, the regression model with the two predictors accounted for 49.8% of the variance in the score (R^2 = .498), and was a significant fit with the data, F (2, 440) = 219.84, p < .001. Table I.8 further shows that the two predictors were both significantly related to the variance in the score of the MC retention tests, while controlling for the effect of each other. The standardized beta values for these predictors show that instructional type and English proficiency were positively and strongly related to the MC retention test (β = .31 and .65 respectively).

Table I.8 Young learners: Regression with the MC retention test

Variable	*B*	*SE B*	*β*
Constant	4.45	.97	
Instructional type	5.37	.59	.31**
English proficiency	.54	.03	.65**

Note adjusted R^2 = .498 **p < .001.

In the case of the young learners, the two predictors explained a significant percentage of the variance in the scores of the post-tests of vocabulary as seen in the results of the regression models above. As in the case of the adult learners, the amount of variance explained by the two predictors for the retention tests (54.7% for the VKS and 49.8% for the MC) was slightly lower than that for the acquisition tests (53.5% for the VKS and 59.8% for the MC). Still, the two predictors together accounted for 54.5 % of the variance in the four criterion (dependent) variables on average, which was approximately 10% higher than for the adult learners (43.8%).

The results of the multiple regression analyses further revealed that there was a statistically significant relationship between English proficiency and the post-test of vocabulary, while holding constant the effect of instructional type. That is, as in the case of the adult learners, the young learners with higher English proficiency scored higher on the post-tests of vocabulary. The high impact of instructional type on vocabulary acquisition and retention for the young learners found in the results of the ANCOVA in section 4.6.2 was also implied in the regression models. The relationship between the instructional type and criterion variables was still statistically significant while controlling for the effect of English proficiency. In view of the fact that instructional type was "dummy" coded (English-only group = 0, Code-switching group = 1), the positive

beta values for instructional type in the regression coefficients tables indicated that the CS group on average performed better on the post-tests of vocabulary than the EO group. Furthermore, as can already be seen from the results of the ANCOVA, instructional type was more strongly related to the scores for the acquisition tests (β = .40 for both the VKS and MC tests) than to those for the retention tests (β = .19 for the VKS test and .31 for the MC test).

Appendix J: Mean Gains for Each Target Word

Table J.1 Adult learners: Mean gains for each target word (the percentage of correct responses for each item)

Target Words	Immediate VKS post-test	Immediate MC post-test	Delayed VKS post-test	Delayed MC post-test
equipment	0.76	0.78	0.83	0.79
collaborate	0.48	0.77	0.32	0.74
gain an understanding	0.65	0.62	0.57	0.6
catch one's eye	0.66	0.74	0.5	0.77
location	0.8	0.84	0.85	0.9
relish	0.35	0.59	0.17	0.47
downtown	0.52	0.8	0.48	0.75
high gear	0.16	0.51	0.12	0.55
hire	0.63	0.88	0.67	0.88
roast	0.44	0.69	0.38	0.64
unique	0.75	0.9	0.79	0.9
local	0.76	0.97	0.81	0.93
far-flung	0.42	0.81	0.2	0.86
ambience	0.27	0.84	0.1	0.88
in high demand	0.55	0.49	0.44	0.31
unusually	0.49	0.77	0.47	0.69
intrigue	0.47	0.86	0.07	0.59
microwave	0.76	0.97	0.6	0.95
victim	0.83	0.9	0.79	0.85
excessively	0.6	0.8	0.39	0.62
spread	0.78	0.95	0.76	0.89
spring up	0.52	0.79	0.39	0.84
the distant past	0.58	0.77	0.49	0.74
unrelated	0.65	0.85	0.57	0.83
apparent	0.32	0.47	0.27	0.33
keep your eye out for	0.41	0.76	0.12	0.66
folklore	0.57	0.73	0.21	0.59
shrink	0.52	0.69	0.25	0.56
pass away	0.56	0.73	0.38	0.59
nugget	0.41	0.68	0.17	0.59
bizarre	0.48	0.72	0.12	0.56

mugger	0.62	0.76	0.24	0.68
come across	0.48	0.5	0.23	0.36
open-air	0.69	0.67	0.4	0.49
all the rage	0.35	0.69	0.02	0.41
cannon	0.69	0.58	0.41	0.47
ubiquitous	0.59	0.64	0.28	0.53
approve of	0.45	0.37	0.33	0.34
ignite	0.47	0.63	0.17	0.5
premiere	0.37	0.52	0.3	0.76
prop	0.51	0.79	0.1	0.73
renowned	0.49	0.82	0.28	0.76
tear down	0.48	0.67	0.14	0.4
catastrophe	0.48	0.73	0.19	0.62
flourish	0.52	0.85	0.35	0.77
accolade	0.3	0.53	0.06	0.26
ensuing	0.22	0.47	0.03	0.18
out of hand	0.5	0.86	0.28	0.81
excrete	0.52	0.92	0.14	0.52
intestine	0.58	0.89	0.18	0.71
gulp	0.6	0.73	0.26	0.49
absorbed	0.74	0.88	0.61	0.83
highly-strung	0.47	0.78	0.04	0.63
nasty	0.46	0.84	0.26	0.64
somewhat	0.37	0.54	0.21	0.31
devour	0.44	0.76	0.27	0.52
face up to	0.55	0.42	0.45	0.34
notorious	0.4	0.66	0.17	0.46
has to do with	0.38	0.65	0.2	0.59
sooner or later	0.56	0.48	0.53	0.38
odor	0.67	0.79	0.34	0.63
raisin	0.47	0.66	0.18	0.56
droll	0.48	0.69	0.14	0.6
generate	0.55	0.68	0.44	0.52

Table J.2 Young learners: Mean gains for each target word (the percentage of correct responses for each item)

Target Words	Immediate VKS post-test	Immediate MC post-test	Delayed VKS post-test	Delayed MC post-test
wallet	0.27	0.79	0.16	0.68
bake	0.46	0.81	0.35	0.84
table tennis	0.53	0.76	0.48	0.73
no doubt	0.17	0.59	0.03	0.42
make fun of	0.24	0.28	0.16	0.16
invite	0.23	0.7	0.15	0.67
decorate	0.22	0.58	0.16	0.51
favorite	0.35	0.42	0.32	0.36
by oneself	0.15	0.25	0.08	0.31
delicious	0.4	0.44	0.37	0.49
celebrate	0.08	0.42	0.05	0.32
cousin	0.3	0.44	0.24	0.38
bouquet	0.13	0.34	0.05	0.28
stay up	0.18	0.33	0.1	0.29
tutor	0.3	0.45	0.03	0.3
evil	0.3	0.54	0.15	0.48
a piece of cake	0.22	0.37	0.14	0.34
see red	0.33	0.56	0.23	0.4
spell	0.21	0.42	0.07	0.31
pricey	0.12	0.3	0.02	0.32
title	0.25	0.34	0.17	0.34
clerk	0.19	0.48	0.06	0.42
wipe	0.18	0.46	0.05	0.4
catch someone's eye	0.23	0.58	0.13	0.51
steal	0.27	0.65	0.18	0.56
ancient	0.09	0.64	0.02	0.58
wand	0.21	0.52	0.09	0.49
certainly	0.14	0.45	0.01	0.37
plumber	0.28	0.72	0.05	0.57
beg	0.24	0.49	0.05	0.44
neighbor	0.39	0.6	0.23	0.54
content	0.15	0.52	0	0.42
out of his mind	0.43	0.75	0.22	0.54
refuse	0.07	0.47	0.02	0.41
upset	0.29	0.52	0.1	0.37

recently	0.05	0.28	0.01	0.31
queue	0.18	0.41	0.01	0.28
carpenter	0.29	0.38	0.07	0.33
relative	0.08	0.41	0.01	0.27
huge	0.35	0.53	0.14	0.44
something is beyond him	0.18	0.32	0.01	0.25
chill out	0.24	0.39	0.04	0.34
gaze	0.24	0.39	0	0.41
thrilling	0.27	0.48	0.02	0.3
breeze	0.15	0.39	0.02	0.24
unique	0.26	0.44	0.06	0.33
make your mouth water	0.4	0.42	0.25	0.32
stroll	0.15	0.35	0	0.2
freezing	0.24	0.47	0.11	0.44
entrance	0.18	0.65	0.01	0.47
frostbite	0.16	0.63	0.01	0.53
under-construction	0.35	0.62	0.07	0.5
reserve	0.11	0.63	0.01	0.42
temporarily	0.18	0.51	0	0.4
pool	0.5	0.79	0.4	0.74
icicle	0.43	0.73	0.15	0.59