

**CROSS LANGUAGE TRANSFER AND FOREIGN LANGUAGE LEARNING**  
**MOTIVATION IN ENGLISH AND CHINESE**

A Dissertation

by

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## ABSTRACT

This dissertation investigated two issues: cross-language transfer among three typologically distant languages—Korean, English, and Chinese—and the language learning motivation of Korean students as it relates to two foreign languages—English and Chinese. The study participants were Korean-speaking 9<sup>th</sup> graders who studied English and Chinese as foreign languages for seven years and one year, respectively.

In the first of this dissertation's two articles, the author examined the nature of morphology-based cross-language transfer from Korean to reading and writing in English and Chinese. Utilizing the body of recent morphological awareness research as a potent point of reference, the author investigated whether the skill of morphological awareness in Korean can be transferred to reading and writing in English and, by extension, whether morphological awareness skills in Korean and English can be transferred to reading and writing in Chinese. While this inquiry found no significant transfer of morphological awareness from Korean to writing in English or Chinese, it did ultimately link morphological awareness in Korean with a significant contribution to reading comprehension in the two target languages. This study also served to underscore the unique morphology-based transfer that can facilitate reading comprehension across different orthographies and the importance of proficiency in the target language.

The second article investigated the motivation for learning a foreign language by exploring the potential relationship between motivation orientation, expectancy, and language performance. In particular, the author analyzed the primary motivations for

Korean-speaking students in learning English as a second language (L2) and Chinese as a third language (L3), respectively, and whether expectancy for L2 and L3 mediated the relationship between motivation orientation and language performance. A mediating effect of expectancy between motivation orientation and language performance was, indeed, observed in a significant way for both English and Chinese, while the magnitude of the mediation was found to differ between the two target languages. This latter discrepancy can be interpreted as resulting from the different types of influence of required motivational orientation and instrumental motivational orientation and their discrete scopes of influence in English and Chinese learning.

In the final analysis, this dissertation studied the interdependence among three typologically distant languages, focusing on morphological awareness; it also compared the motivational effect as it affects learning in two foreign languages. Results from both lines of inquiry strongly suggest that the diverse cross-language transfer effect and motivational factors in foreign language skills are directly tied to the target language, proficiency in the target language, and the socio-educational context in which the language is learned.

## **DEDICATION**

To my beloved family, Hankyeung Choi, Minsik Choi, and Minjae Choi.

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# CHAPTER I

## INTRODUCTION

This dissertation examines the nature of morphology-based cross-language transfer from Korean to reading and writing in two foreign languages, English and Chinese, as well as the motivation to learn these two languages among Korean-speaking 9<sup>th</sup> graders. Currently, English and Chinese are the most popular foreign languages among Korean students (Ding & Saunders, 2006). Therefore, studies on cross-language transfer among Korean, English, and Chinese and the language learning motivation in English and Chinese may further advance our understanding of the critical roles that linguistics and motivational factors play in the acquisition of second/foreign languages.

This research is based on one specific case of English-as-a-foreign-language (EFL) context in Korea where English is learned as an L2 and Chinese as an L3. However, this language education environment is not unique to Korea; it can be observed in other Asian countries such as Japan, Thailand, and Malaysia, and demonstrates the increasing global economic and socio-cultural influence of the U.S. and China. Given the interest in multilingualism and the increase of multicultural discourse, especially as it relates to an Asian EFL context, analyses of the linguistic relationships of these different writing systems and modeling of the second/foreign language learning motivational effect on language performance have gained increasing cachet as research topics in the field of applied linguistics studies. However, there is scant empirical evidence regarding cross-language transfer among these three typologically distant

languages. A comparative study of these distant languages (Korean, English, and Chinese) could explain the possible occurrence of cross-language transfer by focusing on the contribution of morphological awareness of these three languages and identifying the contribution of morphological awareness in the two-language model. Additionally, there remains a need for more empirical evidence regarding language-learning motivation among EFL learners who acquire second and third languages simultaneously. In this regard, an analysis of the diverse motivational factors of foreign language learning would do much to elucidate the different motivational orientations in language learning, depending on the target language and the context.

The purpose of this dissertation was thus two-fold. First, I examined the interdependence of three typologically distant languages by focusing on the morphological cross-language transfer. Second, I analyzed the potential relationship between motivation orientation, expectancy, and language performance by comparing L2 and L3 learning motivation in the Korean EFL context. This dissertation follows a journal-ready format, with Chapter I as the Introduction, followed by Chapters II and III containing the two main articles. In the first article, I examined the nature of morphology-based cross-language transfer from Korean to reading and writing acquisition in English and Chinese among Korean-speaking 9<sup>th</sup> graders who have studied English for seven years and Chinese for one year as foreign languages. The investigation of morphological awareness transfer was conducted while taking into account the typological distance in any combination of Korean, English, and Chinese, keeping in mind that morphological awareness has explained a significant amount of variance in

cross-language transfer in Korean-English (Wang, Ko, et al., 2009) and Chinese-English acquisition (Pasquarella et al., 2011; Wang, Cheng, et al., 2006; Wang, Yang, et al., 2009). The participants of the current study undertook a set of comparable Korean (L1), English (L2), and Chinese (L3) tasks assessing morphological awareness, vocabulary, reading comprehension, and writing. Based on the correlation and hierarchical regression analyses, I examined whether (a) morphological awareness skills in Korean can be transferred to reading and writing in English among 9<sup>th</sup> grade Korean students; (b) morphological awareness skills in Korean and English can be transferred to reading and writing in Chinese among 9<sup>th</sup> grade Korean students.

In the second article, I investigated the nature of foreign language learning motivation among native Korean 9<sup>th</sup> graders. When this study specified the motivation for learning EFL in East Asian countries, the required orientation was added to the two traditional motivational orientations: integrative and instrumental. Two Structural Equation Modelings were performed to explore the existence of mediating effect and potential relationships among three phases; motivation orientation, expectancy, and language performance. I investigated: (a) the primary motivations for Korean-speaking students learning English as L2 and Chinese as L3, respectively; and (b) whether expectancy for L2 and L3 mediates the relationship between motivation orientation and language performance. Finally, Chapter IV concludes this dissertation with a discussion of findings derived from the two empirical studies.

**CHAPTER II**

**MORPHOLOGY BASED CROSS LANGUAGE TRANSFER FROM KOREAN  
TO LITERACY ACQUISITION IN ENGLISH AND CHINESE\***

**Introduction**

The number of living languages spoken throughout the world is estimated to be approximately 6,909 (Lewis, 2009). In many countries, such as Switzerland and Canada, there are more bilingual or multilingual individuals than those who are monolingual and, at some stage in their formal education, many students in these countries are reported to have learned a second or later-acquired language, with these numbers increasing at a faster rate than for those who are monolingual learners (Tucker, 2003). As a result, research in second- (L2) and third-language (L3) acquisition is desired as a way to provide a clear understanding of the nature of such acquisition in order to inform language teaching. Although a handful of studies have been conducted that address the importance of phonological and orthographic awareness in reading (Wang, Koda, & Perfetti, 2003; Wang, Park, & Lee, 2006; Wang, Yang, & Cheng, 2009), the role of morphological awareness in learning to read has not been investigated to the same degree, mainly due to the fact that the effect of morphological awareness is more complicated and requires a longer period of time to acquire skills in morphology compared to phonology in a given language (Wang, Cheng, & Chen, 2006).

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Furthermore, cross language transfer has been examined extensively, mostly in an English-as-a-second-language (ESL) environment, with the focus on two typologically similar languages, such as English and Spanish (e.g., Lindsey, Manis, & Bailey, 2003; Ramirez, Chen, Geva, & Kiefer, 2010; Sun-Alperin & Wang, 2011); whereas less is known about the transfer that occurs between two typologically distant languages, such as Korean and English, and even less is known about transfers among three languages in a first-language (L1) dominant linguistic setting. Therefore, the purpose of this study was to explore morphology-based cross-language transfer from Korean as L1 to literacy acquisition in English and Chinese as L2 and L3, respectively, among 160 Korean 9<sup>th</sup> graders.

## **Theoretical Background**

### **Theories on Cross Language Transfer**

Although cross language transfer plays an important role in L2 acquisition, researchers have not yet reached a consensus regarding its definition and supporting theories. According to Lin and Wang (2012), on one hand, transfer is viewed as a reliance on L1 knowledge when L2 is not sufficiently developed (Gass & Selinker, 1983; Krashen, 1983), and it is influenced by the structural similarities and differences between L1 and L2 (Odlin, 1989); on the other hand, transfer is not restricted to typological differences and is defined as the ability to use prior learning experiences as a source of knowledge and skills when learning to speak and read in a new language (Genesee, Geva, Dressler, & Kamil, 2006).



Lin and Wang (2012) further noted that language transfer research may be characterized by two theories: the Contrastive Analysis Hypothesis and the Interdependence Hypothesis. The Contrastive Analysis Hypothesis (Lado, 1964) involves identifying the structural similarities and differences between learners' L1 and L2. In other words, transfer from L1 can facilitate L2 development when the two languages are structurally similar to each other, but interference will occur when the structural components of L2 are different from those in L1 (Genesee et al., 2006). Therefore, an analysis of the similarities and differences between the two languages enables one to predict difficulties in learning the target language.

The Interdependence Hypothesis, which encompasses two theories: the Competition Model (MacWhinney & Bates, 1993) and the Developmental Interdependence Hypothesis (Cummins, 1979), asserts that all language processing occurs in a common, interactive network of cognitive structures, and it is possible that all aspects of L1 can be transferred to L2 (MacWhinney, 2005). In addition, the Developmental Interdependence Hypothesis holds that the level of L2 competence a child acquires depends in part on the level of competence already achieved in L1, and it hypothesizes further that transfer will not occur if the child has not reached a certain level of L1 proficiency in which mapping skills have been internalized and automaticized (Koda, 2007). Therefore, while the Contrastive Analysis Hypothesis supports cross-language transfer based on linguistic typology, the Interdependence Hypothesis interprets such transfer as being based on mapping skills, not only in two

typologically similar languages (e.g., English and Spanish), but also in two typologically distant languages (e.g., Chinese and English; Korean and English).

### **Korean and Chinese Typology**

The typology of Korean, English, and Chinese are orthographically different. The Korean typology, the Hangul, leans more towards invention than development, and its symbol-sound correspondences are completely transparent (Yoon, Bolger, Kwon, & Perfetti, 2000). Wang, Park, and Lee (2006b) described the nature of Hangul as being alpha-syllabic; it maps letters onto phonemes similar to English, Russian, and Italian. One significant feature of Hangul is that it is nonlinear: its composition of letters is shaped into a square-like syllable block. The symbols are arranged from left to right and top to bottom. Each Hangul letter contains between one and eight strokes, compared to English letters that contain between one and four strokes. Taylor and Taylor (1995) pointed out that the uneven visual complexity of Hangul syllable blocks should help with their recognition, because the more varied the visual shapes of the graphs, the more easily they can be distinguished from one another. From the perspective of flexibility of the morphemes, there is a general consensus that L1 or L2 morphemes are more likely to be transferred if they are free, rather than bound (Anderson, 1983; Kellerman, 1983). As morphemes of the Korean (L1) and English (L2) language are very flexible, this language-specific characteristic enables further discussion of cross-language transfer.

On the other hand, the Chinese writing system is very unique in many ways. For example, Chinese script follows the morphosyllabic principle for meaning representation, which means that each character represents a syllable, a full word, or a minimal unit of

meaning (morpheme). A character is the smallest unit of the Chinese orthography and a visual-spatial unit occupies a fixed amount of space in print, which is analogous to English letters in this respect. Nevertheless, rather than being a sound symbol, each character functions as a lexical morpheme that carries a meaning. In other words, characters are primarily meaning symbols, although they can contain phonetic cues; combining them results in words. Because the characters are equally spaced, no visual word boundaries are possible (Chen, 1992; 1996). Chinese script is considered to be highly opaque because correspondence between characters and sounds is incoherent and inconsistent. This is contrasted with shallow and transparent orthographic systems, such as Finnish, Italian, and Spanish, in which phonemes are reliably represented by graphemes (Cheung, McBride-Chang, & Chow, 2006). Researchers have reported that phonological awareness is less important for reading in Chinese than for reading in English and Korean (McBride-Chang et al., 2005), because Chinese is based on a non-alphabetical word system that cannot be divided into phonemic segments (Wang, Koda, & Perfetti, 2003).

Utilizing the Contrastive Analysis Hypothesis in the context of the current study, I do not expect a close relationship between Korean (L1) and English (L2), or between English (L2) and Chinese (L3); whereas a closer relationship between Korean (L1) and Chinese (L3) would more likely be identified, because a substantial amount of current Korean vocabulary originated from classical Chinese, as a result of historic and geographic ties between the two countries, regardless of the vast difference in the current orthographical systems between these two languages. In fact, the National Institute of

Korean Language (2002) reported that 66.32% of modern Korean vocabulary is derived from classical Chinese vocabulary. For example, ‘대로’ in Korean, which means “main street” and is pronounced “daelo,” was derived from ‘大路’, which has the same meaning in the classical Chinese vocabulary and is pronounced “dàlù.” It is evident that, although the orthographies of Korean and Chinese do not resemble each other, their sounds are often very similar. These typological differences and perceived typological similarities may explain the interference and facilitation of cross-language transfer between these two languages.

### **Morphological Transfer among English, Korean, and Chinese**

Morphology deals with the diverse changes of morphemes, which are the smallest unit of a language that can be associated with meaning function (Wang, Cheng, & Chen, 2006a). According to Anglin (1993) and Carlisle (2000), morphology basically can be categorized into inflectional, derivational, and compound morphology.

Inflectional morphology pertains to the manner in which words vary as a way to express grammatical contrast in sentences, while derivational morphology focuses on the construction of new words by the use of a prefix, suffix, and part of the stem that matches a morpheme. Compound morphology deals with multi-stem morphemes, unlike inflectional and derivational morphology. The acquisition of derivational and compound morphology has been found to start later and requires a longer time to develop throughout the school years, compared to the acquisition of inflectional morphology. It has been reported that derivational morphology demonstrates a more productive role than compound morphology as it relates to word generation in English, while Chinese

contains many compound words but relatively few inflectional and derivational words (Zhang et al., 2010). Furthermore, the Korean language shares major types of morphological structures with English and is very productive in derivational word formation (Wang, Ko, & Choi, 2009).

In a comparative study of the English, Korean, and Chinese languages, McBride-Chang et al. (2005) examined the roles of phonology and morphology to explain word recognition skills. It was reported that for Korean, both phonological and morphological skills are important, whereas for Chinese, morphological awareness is more important than phonological skills, and for English, phonological awareness is more important than morphological skills. However, the importance of morphology in English reading has also been demonstrated based on other empirical evidence (Deacon & Kirby, 2004; Wang et al., 2006a). In addition, the morphology-based linguistic transfer effects have been identified by empirical research between Korean and English (Wang et al., 2009a) and Chinese and English (Pasquarella, Chen, Lam, Luo, & Ramirez, 2011; Wang et al., 2006a; Wang, Yang, & Cheng, 2009b; Zhang et al., 2010).

More specifically, exemplifying morphology-based research, Wang et al. (2009a) examined the contribution of morphological awareness among 65 Korean-English bilingual children from grades 2 to 4. A set of comparable tasks were administered that tapped into oral vocabulary, phonemic awareness, morphological awareness, real word reading, and passage reading comprehension in Korean and English. The key finding was that morphological awareness played a critical role in Korean-English bilingual reading acquisition. More specifically, morphological awareness was not only important

for within language transfer to reading acquisition in both opaque and transparent orthographies, but it also facilitated word reading across different orthographies. The authors concluded that morphological processes can be universal across different alphabetic orthographies, such as Korean and English, as well as across different writing systems, such as Chinese and English.

In another study, Wang et al. (2006b) investigated the contribution of morphological awareness in Chinese-English biliteracy acquisition. These authors administered parallel tasks in Chinese and English to measure children's skills in morphological awareness, phonological awareness, oral vocabulary, word reading, and reading comprehension. It was observed that English morphological awareness of compound structure contributed significantly to variance in both character reading and reading comprehension in Chinese, even after the effect of Chinese-based predictors had been taken into account. The authors attributed such transfer from English (L2) to Chinese (L1) to the bilingual children's rapid growth in their English skills during their primary school years. Their findings indicated a cross-language morphological transfer in the acquisition of two distinct writing systems. And, in a study that included 168 5<sup>th</sup>-grade Chinese-speaking ESL students in China, Zhang et al. (2010) examined the cross-language transfer of awareness of compound words. Their findings showed that intervention with specific instruction on morphology improved students' knowledge in compound structures in Chinese, which, in turn, resulted in their increased performance on comparable structures in the English language. These findings provided empirical evidence for cross-language transfer between two typologically distant languages.

As was mentioned earlier, despite the fact that cross-language transfer in the field of second-language learning has been widely studied, its role in third-language acquisition still remains relatively unexplored (Cenoz, Hefesin, & Jessner, 2001), mainly due to the complexity of the relationships in a three-language acquisition model (De Angelis & Selinker, 2001; Hammarberg, 2001). In addition to the cross-language transfer in L2 acquisition that may be described as directional, e.g.,  $L1 \rightarrow L2$ , in which L1 influences the learning of L2, cross-language transfer in L3 acquisition encompasses two additional relationships (i.e.,  $L1 \rightarrow L3$ ,  $L2 \rightarrow L3$ ), in which L1 or L2 may influence the acquisition of L3 (Cenoz, et al., 2001). Although some researchers consider the native language to be the dominant source of transfer (Herwig, 2001), others have shown that non-native languages may also be a dominant source of transfer to L3 (Dewaele, 2001; Williams & Hammarberg, 1998; Tremblay, 2006; Letica & Mardesic, 2007). For example, Fouser (2001) analyzed the relationship between Japanese and Korean through a sociolinguistic perspective. The results of that study indicated that native English speakers perceived that Japanese, as an L2, helped them learn Korean, as an L3, because both of these languages are closer to each other than they are to English.

### **Limitations of the Existing Literature**

A review of literature revealed several limitations that my study sought to address. First, most research has examined linguistic factors in cross-language transfer among young learners at the elementary grade level in an English-dominant context (e.g., Pasquarella et al., 2011; Wang et al., 2008; Wang, Cheng, et al., 2006; Wang, Ko, et al., 2009). This research, on the other hand, included learners at the secondary school level

in a non-English dominant, i.e., EFL learning environment. In an ESL environment, usually bilingual, the learner is exposed to English on a daily basis, while most EFL is learned in a monolingual mode in which no linguistic support is provided outside the classroom. Evidently, the empirical results must be interpreted within a specific context, because cross-language transfer is more frequently observed in bilingual settings than in EFL settings, and only at a certain level of learning can expect the bidirectional transfer to occur (Hammarberg, 2001; Zhang et al., 2010).

Second, few studies have been conducted on cross-language transfer between Korean and Chinese, and only limited information is available on simultaneous transfer among Korean, English, and Chinese. The relationships among these languages are very specific, because any combination of two languages is typologically distant.

### **Research Questions**

The current study is one of the first attempts to investigate morphology-based cross-language transfer within three writing systems simultaneously. The primary objective was to explore the extent to which morphological awareness in Korean can be transferred to reading and writing in English and Chinese among 9<sup>th</sup> grade Korean speakers in an EFL setting, so as to develop an L3 acquisition model. This is briefly presented in Figure A-1. More specifically, the following questions directed this research:

1. Can morphological awareness skills in Korean be transferred to reading and writing in English among 9<sup>th</sup> grade Korean students?
2. Can morphological awareness skills in Korean and English be transferred to reading and writing in Chinese among 9<sup>th</sup> grade Korean students?



## **Methods**

### **Participants**

A convenience sampling strategy was implemented in a middle school in a metropolitan area in Korea. A total of 160 9<sup>th</sup> graders voluntarily participated in the study and completed all tasks in Korean, English and Chinese. All student participants were instructed in Korean as their native language, and they began learning English in grade 3 and Chinese in grade 9, with English being a mandatory foreign language and Chinese serving as a mandatory elective (students had the option to choose between Chinese and Japanese). The average age of these participants was 14 years.

### **Research Context**

In regards to public education, English instruction as part of the regular school curriculum starting in the 3<sup>rd</sup> grade (elementary school) began in 1997. Traditionally, English language education in Korea has focused on grammar, vocabulary, and reading (Lee & Schallert, 1997) with grammar lessons focusing on syntax or parts of speech. Therefore, derivational morphological awareness is one of the expected outcomes of learning English grammar in Korea.

As students enter secondary school, they can also choose from seven other foreign languages (German, French, Chinese, Spanish, Japanese, Russian, and Arabic) in addition to English. Recently, however, Korean society has experienced a sweeping zeal for learning Chinese; as a result, Korean schools have begun offering more Chinese language classes. From 1991 to 2010, the number of students being taught a given language as a second foreign language changed dramatically (see Table B-1). According

to the Statistical Yearbook of Education (2010), 28% of all of public school students chose Chinese as an L3, and this number is expected to continue to grow. Chinese instruction in secondary schools begins in grade 9 and continues through grade 11. Normally, the class consists of two 40-50-minute periods per week devoted to pronunciation, vocabulary, and simple sentences to enhance communication skills. In these classes, students learn simplified Chinese characters and focus on their skills in all four-language areas (listening, speaking, reading, and writing). Because more than half of the Korean vocabulary is derived from classical Chinese characters, these characters are taught in 7<sup>th</sup> or 8<sup>th</sup> grade to facilitate learning the advanced Korean vocabulary. Chinese language classes and classical Chinese character classes both contribute to the acquisition of compound morphological awareness and vocabulary in both the Korean and Chinese languages.

### **Measures**

Experimental tasks were designed to evaluate participants' skills in morphological awareness, vocabulary, reading comprehension, and writing in three languages. First, the Standard Test of Proficiency in Korean (S-TOPIK), developed and standardized by the Korea Institute for Curriculum and Evaluation (KICE, 2006) and classified into beginning, intermediate, and advanced levels, was modified to evaluate vocabulary, reading, and writing skills in Korean. Tests of vocabulary and reading in English were adopted from the *Woodcock Language Proficiency Battery-Revised* (WLPB-R, Woodcock, 1991), which is a standardized battery that assesses broad English language proficiency in oral, reading, and written skills. Tests of vocabulary,

reading, and writing in Chinese were developed by researchers of this study based on school textbook using a format similar to that of the English tests. Morphological awareness tests were adopted from Wang, Ko, et al. (2009) for Korean and English and from Zhang et al. (2010) for Chinese.

Contrary to most previous research on cross-language transfer between two similar languages (e.g., English and Spanish), there might be limited shared features to obtain a comparable measurement across three typological distant languages (e.g., English, Korean, and Chinese), since each language has its own unique writing system. While Chinese contains many compound words but relatively few inflectional and derivational words, inflection and derivation are known to be very productive in word formation in Western languages (Zhang et al., 2010). Korean shares the major types of morphological structures with English and is very productive in derivational word formation (Wang, Ko, & Choi, 2009a). For example, most vocabulary found in Chinese textbooks is composed of compound words. On the other hand, three different levels of language proficiency should be considered for participants in this study. For example, considering the student proficiency in Korean and English of Korean 9<sup>th</sup>-graders, compound words (e.g., ice + cream = ice cream) are criticized for being too easy, and thus lack in their assessment function.

Therefore, to obtain a comparable measurement of morphological awareness in Korean, English, and Chinese, this study included tasks of derivational morphology in Korean and English, and compound morphology in Chinese. Despite the difference between derivational and compound morphology, both tasks measure an individual's

skill in generating morphologically-related words using stable morphemic units of each language. Derivational morphology in Korean and English involves the construction of a new word by adding a morpheme (affix) to change the meaning of a stem morpheme. Compound morphology in Chinese involves two types of structures, i.e., a noun + a noun and a verb + a noun. To evaluate all tasks, a pilot study was conducted using 20 students who were excluded from the subsequent research study; instructions for English and Chinese tasks were given in Korean. A detailed description of these tasks follows.

### **Korean tasks**

**Vocabulary.** Considering the fact that all participants were native Korean speakers and Korean was taught as their L1 upon school entry, I selected the advanced level vocabulary test in TOPIK, in which students were asked to choose the most appropriate words that matched the meaning of the underlined words in a given sentence. For example, in the sentence “요즈음 청년들은 일자리를 구하는 데에 많은 어려움을 느낄 것이다” (These days, young people experience serious difficulty in finding a job), with four choices: “고충(predicament),” “곤욕(insult, contempt),” “역경(adverse situation),” and “특수(specialty),” “고충(predicament)” is the best answer compared to the other options. Interestingly, in this sentence, all four choices are rooted in classical Chinese words: “고충,” pronounced as “gochoong,” was derived from “苦衷” in classical Chinese vocabulary, and pronounced “kǔzhōng.” “곤욕” and “역경” were also derived from “困辱” and “逆境” in classical Chinese vocabulary. Eight questions of this type were used to measure vocabulary skills in Korean, as a result of the frequent examples of the psycho-typological relationship between Korean and Chinese words.

**Morphological awareness.** The test for morphological awareness in Korean was adopted from Wang, Ko, et al. (2009), with modifications commensurate with students' average language skills. It measured the understanding of derivational structure. Students were asked to complete a sentence using the correct form of the clue word provided. For example, “재현이는 더하기와 음(를) 잘 할 수 있다.” [“빼다”] (Jahyun is good at addition and [subtraction].)

**Reading.** The Korean reading test was adopted from TOPIK's advanced level reading test. Students read eight different paragraphs that contained five-to-eight sentences each, and they were asked to find the best summary sentence, a place to insert a missing sentence, or a suitable sentence to fill in a blank. For example, for the following paragraph, “요즘 각 가정에는 방마다 전화나 컴퓨터 등이 부족함 없이 갖추어진 경우가 많이 있다. 그러나, 이렇게 완벽하게 갖추어진 방은 간혹 구성원들 간의 소통을 방해한다. 그러므로 불편하더라도 전화나 인터넷 등 외부와 소통할 수 있는 물건들은 공동의 생활공간에 하나씩만 두는 것이 좋다. 방에 전화가 없어야 전화를 하기 위해 거실로 나올 것이며 방에 컴퓨터가 없어야 인터넷을 하러 거실로 나오게 되고 그러다 보면 가족간의 대화가 가능해질 것이다.” (Currently, most families have a phone or computer in each room, however, this technically-equipped room could hinder communications among family members. Therefore, even though it may cause some inconvenience, it would be better to place just one piece of equipment in commonly-used spaces like living rooms. As there are often no computers or telephones in bedrooms, people must come into the living room to use this equipment. This could increase the possibility of communication among family members.) Participants were

asked to choose the best summary sentence from among four multiple choices, such as (a) 통신수단의 발달로 가족간의 의사소통이 원활해졌다 (Development of communications technology facilitates better communication among family members), (b) 개인공간을 마련함으로써 해서 가족간의 갈등을 줄일 수 있다 (Private space may decrease conflicts among family members), (c) 가족간의 의사소통을 위해 다소의 불편함을 감수해야 한다 (People should deal with some inconvenience for better communication among family members), or (d) 아이들이 컴퓨터에 노출되는 시간을 제한하는 것이 바람직하다 (It is desirable for children to limit the exposure time of computers.).

**Writing.** The Korean writing test was also adopted from TOPIK’s writing test. Two types of formats were used to evaluate writing skills. First, students were required to write a complex sentence based on a given title and five key words. For example, “자서전 쓰기의 어려움” (The Difficulty with Writing an Autobiography) was the title, and “좋은 사실의 나열” (recounting one’s history), “자기자랑” (vanity), “실수에 대한 해명” (explaining one’s previous mistakes), and “변명” (excuses), were listed as keywords. One of the best answers would be “자서전은 좋은 사실의 나열도 자기 자랑으로 들리기 쉽고 실수에 대한 해명도 변명으로 들리기 때문에 쓰기가 어렵다.” (Writing an autobiography is very difficult, because recounting one’s history and explaining one’s mistakes can be easily regarded as vanity and making excuses.) The second type of writing task consisted of reading one paragraph made up of four sentences and filling in one blank sentence in the middle of the paragraph. Both writing tasks were graded by a Korean language teacher, and each item had a maximum total of five points.

## **English tasks**

**Vocabulary.** Eight pictures were selected from the WLPB-R picture vocabulary test and the students were instructed to write the corresponding word in the blank next to the picture. Considering the students' diverse English vocabulary knowledge and cultural background, I selected eight pictures encompassing the preschool to 5<sup>th</sup> - 6<sup>th</sup> grade levels from the WLPB-R, including one item from the preschool level, three items from the grades K-2 level, two items from the 3<sup>rd</sup> - 4<sup>th</sup> grade level, and two items from the 5<sup>th</sup> - 6<sup>th</sup> grade level. Spelling errors were not penalized during scoring.

**Morphological awareness.** The morphological test was adopted from Wang, Ko, et al. (2009) and modified for group administration. As in the Korean tasks, students' awareness of the derivational structure of English words was tested. They were asked to complete a sentence based on a clue word. For example, when "profit" was the clue word, "profitable" was the best answer with which to fill in the blank in the following sentence, "Selling lemonade in summer is \_\_\_\_\_." This task included eight items with three noun derivations (e.g., famous → fame), three adjective derivations (e.g., adventure → adventurous), and two verb derivations (e.g., growth → grow).

**Reading.** The Passage Comprehension test of the WLPB-R was used to assess English reading skills; I modified this test for administration to a group. Eight items were selected based on the estimated students' average English reading skills and the pilot test results, including three items from the 2<sup>nd</sup> - 3<sup>rd</sup> grade level, two items from the 4<sup>th</sup> - 5<sup>th</sup> grade level, one item from the 6<sup>th</sup> - 11<sup>th</sup> grade level, and two items from the 12

grade-college and above-average adult level. The students were asked to find the best suitable word to fill in the blank of incomplete sentences.

**Writing.** Two types of researcher-developed English writing tests were used to measure students' writing skills. First, a paragraph with clue words was provided for students to write the missing sentence in appropriate syntax and grammar. For example, one paragraph read, "He dug for 36 hours, pulled back a huge rock, and heard his son's voice. He shouted his son's name. He heard back, "Dad? It's me, Dad! [Clue words: I, tell, the other kids, to worry]. I told them that you would save me. You did it." The second type of task involved writing a complete sentence after reading a conversation between two people. The writing samples were graded by an English language teacher; each item had a total of five points.

### **Chinese tasks**

**Vocabulary.** This task was designed in a comparable format to the English vocabulary test, with eight pictures selected from the current 9<sup>th</sup> grade Chinese language textbook as authorized by the Korean Ministry of Education, Science and Technology (2010). Considering the Chinese proficiency level of the participants, I chose three one-syllable words, four two-syllable words, and one three-syllable word from the textbook. The students were required to find the correct Pinyin to match the picture from among five multiple-choice answers. An example of the test question included a picture of a ball and five choices in Pinyin: (a) dǎ, (b) qú, (c) tī, (d) piú, and (e) qiú. There was no duplicate item among the English, Korean, and Chinese vocabulary tests.



**Morphological awareness.** The Chinese morphological test was based on the framework of Zhang et al.'s study (2010), with compound words selected from the 9<sup>th</sup> grade Chinese language textbook. Within each task, items representing different types of compounds were intermixed. The students were asked to select the option that was most similar to the target. Compound words are made from a noun + noun or a verb + noun. For example, “电脑 (computer)” and “朋友 (friend)” as target words of the noun + noun type were suggested. Three verb + noun words (e.g., “吃鱼”, “上课”, and “吃饭”) and five noun + noun compound words (e.g., “火车”, “地铁”) were suggested. There was no overlap in the Chinese vocabulary and Chinese morphology test items.

**Reading.** I designed this task to be comparable to the Korean and English reading tests, based on the 9<sup>th</sup> grade Chinese language textbook. Students read eight different dialogues that contained one to four sentences each and were asked to find the best response to a given sentence, the best summary sentence, or a suitable sentence to fill in the blank. For example, students were required to identify the time setting of the following dialogue between two persons (*Déchāng* and *Bàba*): “*Déchāng: Bàba, chīfàn le. (Dad, it's time to eat.) Bàba: Nǐ mā zuò le zhème duō cài! (Wow, your mom cooked a lot of food!) Déchān: Shì a! Jīntiān de cài zhēn duō. (We are going to have lots of food, today.) Bàba: Zhè ge cài, zhēn hǎochī! (Wow, it tastes very good!)*” Five choices were provided: (a) 밤 (night), (b) 새벽 (early morning), (c) 오후 (afternoon), (d) 식사시간 (mealtime), and (e) 취침시간 (bedtime).

**Writing.** Considering the fact that participants in this study were in the beginning stages of learning Chinese and needed the equivalent of the English and Korean writing tasks, I designed two simple Chinese writing questions. The first required writing a sentence using clue words by arranging them in the correct order. The second task involved writing a sentence for a dialogue after reading a given conversation between two people. The writing samples were graded by a school Chinese language teacher, and the total possible score for each item was five points.

The overall reliabilities estimates in terms of Cronbach's alpha for all tasks revealed that the English and Chinese tasks had higher reliabilities, ranging from 0.62 to 0.76, as compared to the Korean tasks.

### **Procedure**

All Korean, English, and Chinese language tasks were administered by school language teachers to five classes of 32 students each in quiet settings. All 160 students were taught by the same English and Chinese teachers. Administration of the tasks was divided into three sessions, one for each language. Each session lasted approximately 45 minutes and was devoted to four tasks, including morphological awareness, vocabulary, reading comprehension, and writing. The students were given a short break in the middle of each session. The order of the three sessions was counterbalanced among vocabulary, morphological awareness, reading comprehension, and writing. The order of the language tested was also counterbalanced among Korean, English, and Chinese.

## **Data Collection and Analysis**

To answer the two research questions, a correlational analysis was first conducted to establish the relationship among measures in all three languages, followed by two sets of hierarchical regression models to examine the cross-language transfer from Korean to English and Chinese. The first set included English reading and writing as outcome variables, respectively, and English and Korean skills as predictor variables. The second set included Chinese reading and writing as outcome variables, respectively, and Chinese, Korean, and English skills as predictor variables. In order to identify the unique contribution of morphological awareness to reading and writing, vocabulary was entered as a predictor variable before morphological awareness. Finally, within each set, comparison analyses were performed between high and low levels of proficiency in L2 and L3.

## **Results**

Descriptive statistics are presented in Table B-2, with means and standard deviations for Korean, English, and Chinese tasks. In this section, I report findings derived from correlational analysis, followed by regression analysis with English L2 literacy (i.e., reading and writing) and Chinese L3 literacy as dependent variables.

### **Correlation among Korean, English, and Chinese Measures**

As is shown in Table B-3, all bivariate correlation coefficients are statistically significant ( $r_s > 0.33$ ,  $p_s < 0.001$ ). It was observed that consistently within each language, both vocabulary and morphology were more strongly correlated with reading (e.g.,  $r = 0.74$  in Chinese) than with writing (e.g.,  $r = 0.59$  in Chinese). For cross-

language correlations, Korean morphology ( $r = 0.72$ ) and Chinese vocabulary were more strongly correlated with English reading and writing than Chinese morphology ( $r = 0.55$ ) and Korean vocabulary. Furthermore, English morphology and English vocabulary ( $r = 0.52$ ) were more correlated with Chinese reading than Korean morphology and Korean vocabulary ( $r = 0.39$ ), while Korean morphology and Korean vocabulary were more strongly correlated with Chinese writing than English morphology and English vocabulary.

### **English (L2) Reading and Writing as Outcomes**

In this regression model shown in Table B-4, English vocabulary, English morphology, Korean vocabulary, and Korean morphological awareness were used to explain the unique variance in English reading and writing. Korean tasks were entered after English tasks to examine the unique variance exhibited by Korean tasks over and above the English tasks. For both within and cross-language predictors, morphological tasks were entered after vocabulary tasks in order to explore the unique variance explained by morphological tasks after the effect of vocabulary task was controlled for. The results indicated that, for the within-language predictors, English morphological awareness significantly contributed to the variance in English reading and writing, respectively (8%,  $p < 0.001$  and 8%,  $p < 0.001$ ). For the cross-language predictors of English reading, Korean derivational morphology awareness explained a unique and significant amount of variance in English reading (3%,  $p < 0.001$ ) after English vocabulary, English morphology, and Korean vocabulary were accounted for; however, Korean morphology was not a significant predictor of English writing.

### **Transfer in groups with higher & lower reading proficiency**

Based on the findings in the cross-language transfer of morphological awareness in Korean to English reading comprehension, I extended the analysis of such transfer by comparing high and low levels of proficiency in L2; e.g., English reading comprehension. The students were divided into two groups of above- and below-average English reading skills (above-average group,  $n = 99$ , Mean = 7.04,  $SD = 0.79$ ; below-average group,  $n = 61$ , Mean = 3.16,  $SD = 1.47$ ). Results of the hierarchical regression on English reading are presented in Table B-5. There was a statistically significant contribution of morphology transfer in Korean to English reading among the high-level reading group (3%,  $p < 0.05$ ); whereas, the  $R$ -square change was not significant for the low-level reading group.

### **Chinese (L3) Reading and Writing as Outcomes**

Because the students in this study started learning English in 3<sup>rd</sup> grade and Chinese in 9<sup>th</sup> grade, in the regression model predicting Chinese reading and writing skills, the order of entry was Chinese vocabulary, Chinese morphology, Korean vocabulary, Korean morphology, English vocabulary, and English morphology. Korean tasks were entered after the Chinese tasks to examine the unique variance exhibited by the Korean tasks over and above the Chinese tasks. English tasks were then entered after the Chinese and Korean tasks to examine the unique variance explained by the English tasks over and above the Chinese and Korean tasks. For both the within and cross-language predictors, morphological tasks were entered after the vocabulary tasks in

order to explore the unique variance explained by the morphological tasks after the effects of the vocabulary tasks were taken into account.

Results in Table B-6 showed that, for the within-language predictors, Chinese morphological awareness clearly contributed a unique and significant amount of variance in Chinese reading and writing (2%,  $p < 0.01$  and 8%,  $p < 0.001$ , respectively). For the cross-language predictors of Chinese reading, the Korean morphology task significantly contributed to the variance in Chinese reading (6%,  $p < 0.001$ ), while there was no transfer to Chinese writing after Chinese vocabulary, Chinese morphology, and Korean vocabulary were controlled for. The English morphology task was not a significant cross-language predictor of Chinese reading or writing after the Chinese and Korean tasks were taken into consideration.

#### **Transfer in groups with higher & lower reading proficiency**

Based on the findings in the cross-language transfer of morphological awareness in Korean to Chinese reading comprehension, I extended the analysis of such transfer by comparing high and low levels of proficiency in L3; e.g., Chinese reading comprehension. The students were divided into two groups with above- and below-average abilities in Chinese reading (above-average group,  $n = 75$ , Mean = 7.52,  $SD = 0.70$ ; below-average group,  $n = 85$ , Mean = 3.73,  $SD = 1.23$ ). An examination of Table B-7 revealed that there was evidence of transfer from Korean morphology to Chinese reading in both the high- and low-level groups and that the magnitude of transfer was similar between these two groups (high-level group, 9%,  $p < 0.01$ ; low-level group, 8%,  $p < 0.01$ ).

## **Discussion**

The purpose of this study was to explore the extent to which morphological awareness in Korean can be transferred to reading and writing in the English and Chinese language among 9<sup>th</sup> grade Korean students in an EFL setting so as to develop an L3 acquisition model. The findings derived from correlational and hierarchical regression analyses are discussed within the framework of the Contrastive Analysis and Interdependence Hypotheses.

### **Within Language Transfer**

When the within-language transfer was examined, the correlational analysis suggested that students' performance in reading and writing was both related to vocabulary and morphological awareness in all three languages. It was found that English morphological awareness significantly accounted for variance in both the English reading and writing acquisition after the effect of vocabulary was taken into consideration. Such a contribution of morphology to reading and writing is also applicable to the Chinese acquisition in this sample of Korean speakers. Although the Korean and English tasks involved derivational morphology and the Chinese tasks used compound morphology, these tasks in all three languages measured an individual's skills in extending relatively stable morphemic units to morphologically-related complex words, such as derived or compound words. These findings corroborate with previous studies in which Chinese morphological awareness was reported to predict Chinese word reading, and derivational morphology in English contributed to English reading

comprehension and word reading among Chinese-English bilinguals (Wang, Cheng, et al., 2006; Wang, Yang, et al., 2009).

### **Cross Language Transfer in Second Language Acquisition**

When the cross-language model was examined using two languages, i.e., Korean (L1) and English (L2), it was observed that morphological awareness in Korean uniquely predicted English reading, controlling for English variables (vocabulary and morphology) and Korean vocabulary. This finding was not in accordance with Wang, Ko, et al.'s (2009) study, in which morphological awareness in Korean was identified to transfer to English word naming, instead of English reading comprehension, among 2<sup>nd</sup>-to-4<sup>th</sup> grade Korean-English bilinguals. It is possible that this discrepancy is due to participants' age differences and their corresponding level of sentence comprehension in English. This discrepancy may also be a result of heavy focus on reading comprehension over other areas (such as speaking, listening, and writing) in traditional English language teaching in Korea.

Even though Korean and English share a similar derivational morphological structure at word level, the sentence level structure is very different between the two languages, i.e., s (subject) + v (verb) + o (object) in English, and s + o + v in Korean (Wang, Ko, et al., 2009). Therefore, the Contrastive Analysis Hypothesis, which supports transfer in languages with similar linguistic typology, does not apply to interpretation of the results of transfer of morphological awareness in Korean to English reading in this study. Instead, the Interdependence Hypothesis provides a better explanation, because 9<sup>th</sup> grade Korean students are expected to have sufficient mapping



skills in their L1, especially in an L1-dominant environment. In addition to mapping skills in the source language, the proficiency of the target language is also a critical factor in cross-language transfer, as was the case in the current study, such that the transfer of morphological awareness from Korean to English occurred among students who were more proficient in their L2 reading. This finding mirrors that in Lee and Schallert (1997), who concluded that reading performance in L1 (Korean) and L2 (English) was positively correlated for Korean learners with more advanced levels of L2 (English).

However, no significant cross-language transfer effects were observed from Korean morphological awareness to English writing. Such findings may be accounted for by two reasons. First, writing in English entails not only morphological skills but also a sufficient understanding of the orthography and sentence structure of a language, which implies that the transfer is not likely to occur when the learners have not yet attained a certain level of target language proficiency in writing. This can be interpreted in the same context as the result of Wang, Ko, et al.'s (2009) study in which the cross-language transfer of morphological awareness was found to be limited to word reading level, not to reading comprehension, and consisted of a level of understanding sentences and passages for Korean-English bilingual children, because the fundamental grammatical differences between Korean and English may also cause more cognitive resources allocated to sentence-level understanding compared to word-level understanding when comprehending a text (Wang, Ko, et al., 2009). Another possible

reason is that the small sample size of the current study resulted in a relatively limited statistical power to detect any potential effects.

### **Cross Language Transfer in Third Language Acquisition**

When variables in all three languages were included, results from the regression analysis demonstrated that morphological awareness in Korean significantly contributed to Chinese reading, even after the effect of within-language predictors were controlled. This unique contribution of L1 morphological awareness on L3 reading can be interpreted by the Contrastive Analysis Hypothesis, because of the perceived typological proximity between Korean and Chinese. However, English (L2) morphological awareness was not a significant predictor of Chinese (L3) reading after the within-language (L3) variables and previously-learned language (L1) variables were taken into account. This finding of a lack of transfer is in contrast to the results yielded from previous research on the transfer between Chinese and English (e.g., Wang, Yang, et al., 2009; Pasquarella et al., 2011), in which English morphological awareness was found to contribute to Chinese word reading and Chinese reading comprehension. Such discrepancy may be related to participants' proficiency in the source and target languages. More specifically, in the current study, the students had been exposed to Chinese as an L3 for one academic year, and English as an L2 for seven years in an EFL environment; whereas in Wang, Yang, et al.'s (2009) and Pasquarella et al.'s (2011) studies, all the participants were Chinese-English bilinguals with a heavy exposure to English (L2), and they had more rapid improvement in English reading skills compared

to the Chinese as L1. As proposed by Hammarberg (2001), for a transfer to occur from an L2 to an L3, the speaker must reach a certain degree of L2 competence.

Similar to the findings from the two-language model, no significant results were obtained in the morphology-based transfer from L1 and L2 to L3 writing in this three-language model. There are two possible explanations. First, the lack of transfer indicates that morphological awareness in L1 is more important when learning to read than to writing in a third-language acquisition. It was agreed that writing requires higher levels of orthographical awareness, vocabulary knowledge, and understanding of the sentence structure in any given language. Writing-on-reading effects in alphabetic systems are less robust and thus observed less consistently. As Packard et al. (2006) stated, reading and writing might be linked through some third variable, such as cognitive ability (e.g., orthographic knowledge, phonological memory, etc.), which affects both skills independently. As these three languages use completely different writing systems, morphological awareness of an L1 or L2 could not be expected to overcome orthographical differences in predicting writing performance in L3. The second explanation is based on the Interdependence Hypothesis that indicates the current study's students' writing skills in Chinese are not yet fully developed for transfer.

It is important to address that, in this study, we only examined one-way transfer from L1 to L2 and L3, instead of bidirectional transfer. This forward pattern, as pointed out by Wang, Cheng, et al. (2006), was the most common transfer among late bilinguals with little experience in their L2. Analogously, participants in the current study can be considered late trilinguals who rely heavily on their skills in L1 to process L2 and L3.

In regards to implications for future practice and research, due to the scope of this study, no oral tasks from a standardized measure were included to account for the reading demands of the morphological awareness tasks. Therefore, further research on linguistic awareness, including phonology, morphology, and orthography, would be helpful in identifying the unique effect of each type of linguistic awareness.

### **Summary and Concluding Remarks**

The current study examined the contribution of morphological awareness in L1 to reading and writing in L2 and L3 in a group of 9<sup>th</sup> grade Korean speakers. Conceptually comparable tasks in morphological awareness, vocabulary, reading, and writing were designed and administered in Korean L1, English L2, and Chinese L3. The findings of the current study point to the unique cross-language transfer of morphological skills in Korean to English and Chinese reading. This result suggests that learners in an L1-dominant setting are able to apply their general knowledge about shared morphological structure from L1 to reading, not only in L2, but also in L3. Little empirical evidence is available regarding cross-language transfer among three typologically distant languages. Hence, this study contributed to the knowledge base of the importance of morphological awareness in second- and third-language learning and supported the two main hypotheses that have guided research in cross-language transfer. The results of this study underscore the need to teach reading, and probably writing, of L2 and L3 by focusing on the active use of morphological transfer in an L1-dominant environment, and to utilize the structural similarities between a source language and a target language to facilitate cross-language transfer in students' language learning.

**CHAPTER III**

**INVESTIGATING THE MEDIATING EFFECT OF EXPECTANCY ON  
MOTIVATION ORIENTATION AND SECOND/FOREIGN LANGUAGE  
ACQUISITION IN THE KOREAN CONTEXT**

**Introduction**

Motivation is one of the most important factors affecting students' success in foreign language learning and remains a subject of broad concern for foreign language teachers and researchers (Zhao, 2012). Motivation provides the primary impetus to initiating the learning of a second/foreign language; it is the driving force to sustaining the long and tedious learning process (Oxford & Shearin, 1994). The term "motivation" generally refers to the antecedent of human actions. According to motivational psychology, human behavior regards two basic dimensions of direction and intensity, the process of which accounts for the choice of a particular action, the effort expended towards that action, and the persistence related to it (Bandura, 1994). Thus, motivation relates to the direction and magnitude of human behavior, and it can be defined by answering why people decide to do something, how hard they are going to pursue it, and how long they are willing to sustain the activity (Dörnyei, 2001). In addition, motivation as a process refers to the cognitive mechanisms that account for students' choices, effort, and persistence in learning activities (Guilloteaux, 2007). Motivation as a product or state, meanwhile, is defined by Wolters (2003) as "a student's willingness to engage in and persist at a task" (p.190). With this in mind, this article explores the contribution of

motivational factors in the acquisition of a second and third language, L2 and L3, respectively, among Korean-speaking secondary school students instructed in L2 (English) and L3 (Chinese).

Scholars in the field of L2 acquisition have identified motivation as one of the key factors in determining L2 achievement (Dörnyei, 1998). It serves as an initial impetus to generate learning and functions as a subsequent sustaining force in the tedious process of acquiring a target language (Cheng & Dörnyei, 2007). It is also a decisive factor in successfully learning a second or foreign language (Gardner, 1985). As Dörnyei (1994) notes, the terms “orientation” and “motivation” are often deployed interchangeably in the L2 literature, and scholarly consensus regarding the relationship between the two factors remains elusive. Most prior research has found orientation to be the precursor or predictor of motivation (Belmechri & Hummel, 1998). Orientation refers to the intention of learning an L2, which intent is recognized as integrative and instrumental (Muftah & Rafik-Galea, 2013). In the current study, the author conformed to Chen et al.’s (2005) division of motivation orientation and expectancy and identified the setting of motivation orientation as an initial predictor. According to Crookes and Schmidt (1991), motivation is primarily associated with the learner’s orientation towards the goal of learning a second language and his or her orientation pertains to the underlying attitudes and goal to give rise to this action.

The purpose of the current research is two-fold. First, it parses the role of motivational factors in second (L2) and third language (L3) acquisition among Korean secondary school students learning English as L2 and Chinese as L3. Second, it

examines the mediating effect of expectancy on the relationship between motivation orientation and language achievement. More specifically, this study identifies the possible relationship between students' language-learning motivation orientation, expectancy, and language performance before proposing a more detailed mediated-path among these three variables.

## **Theoretical Background**

### **Theories on L2 Learning Motivation**

The field of foreign-language learning motivation research was founded in 1959 by Gardner and Lambert, two Canadian social psychologists whose interest in second-language learning motivation appeared well-suited to Canada's unusual sociolinguistic landscape, which comprises both French-and-English-speaking communities. Throughout the 1960s, '70s, and '80s, language-learning motivation research was dominated by the social psychological approach of Gardner and his Canadian associates. Moreover, the concepts of integrative and instrumental motivation orientation were first presented within an English-as-a-second-language (ESL) setting by Gardner and Lambert (1959). According to their research (1972), integrative motivation was considered as a key factor that influences the conceptualization of L2 motivation.

As a result of integrative orientation, students become interested in learning foreign languages and are motivated to learn a specific foreign tongue in order to become a member of the target language's society (Shaaban & Ghaith, 2000). Integrative orientation induces learners to actively participate in classroom activities and seek out contact with people of the target culture. On the other hand, instrumental

orientation is associated with obtaining something more functional and practical through the acquisition of a particular language (Crookes & Schmidt, 1991; Dörnyei, 1990). This type of orientation often encompasses an economic component; for example, obtaining a better job in the future, getting promoted within a company, or receiving a good score on a test. Therefore, instrumental motivation can effectively motivate language learners, especially when they value a return on their investment. The popularity of the integrative-instrumental system can be attributed to its simplicity and intuitively convincing character, but it is also partly due to the fact that broadly defined “cultural-affective” and “pragmatic-instrumental” dimensions generally emerge in empirical studies of motivation (Dörnyei, 1994). Up to the 1990s, research into language-learning motivation was dominated by the socioeducational model developed by Gardner and associates (Keblawi, 2006).

During that same decade, however, there was a notable shift in the way scholars conceptualized motivation in the context of L2 learning (Dörnyei, 1990, 1994; Tremblay & Gardner, 1995; Williams & Burden, 1997). While most research on L2 motivation had hitherto focused on social and pragmatic dimensions while applying the integrative-instrumental system, some studies now attempted to extend the Gardnerian construct by adding new components, such as intrinsic/extrinsic motivation, intellectual curiosity, attribution regarding past successes/failures, the need for achievement, self-confidence, classroom goal structure, classroom climate, and course content (Dörnyei, 1994). This new paradigm on L2 motivation studies can be summarized as: (a) promoting the cognitive aspects of motivation, especially those related to the learner’s “self-concept”



(e.g., the need for achievement, self-confidence, self-efficacy, self-determination, and self-effort); (b) integrating various influential theories that were already prevalent in mainstream psychology (e.g., goal theories and attribution theory); and (c) focusing on situational factors relevant to classroom application (e.g., characteristics of the language course and language teacher) (Cheng & Dörnyei, 2007). The various L2 motivation studies that emerged in the wake of this nascent paradigm tended to reflect such new concepts while suggesting some limitations of the socioeducational model (Belmechri & Hummel, 1998; Crookes & Schmidt, 1991; Dörnyei, 2001; Oxford & Shearin, 1994). Notwithstanding this new research stream, the most general level of motivational dimension can be described by two broad motivational subsystems, an integrative and an instrumental motivational subsystem (Dörnyei, 2001; Gardner, Masgoret, Tennant & Mihic, 2004; Lamb, 2004).

### **Second/Foreign Language Motivation in the EFL Context**

A significant number of studies have shown the importance of motivation in the English-as-a-second-language (ESL) setting. Accordingly, many motivation theories and teaching methodologies currently employed in English-as-a-foreign-language (EFL) contexts are derived mainly from second language research conducted in Canada and the U.S., Britain, and Australia (Chen et al., 2005). In terms of motivation orientation, the research framework of English-as-a-second-language (ESL) has been adapted to other foreign language learning contexts, as well as to the EFL context. Indeed, as Skehan (1991) suggests, there would seem to be a wider range of orientations than was previously supposed, and there is considerable scope to investigate different contextual

circumstances. Even in a foreign language learning context in North American culture, for example, Oxford and Shearin (1994) found that, in addition to integrative and instrumental orientations, American high school students learning Japanese had a number of other reasons for studying the language, ranging from “enjoying the elitism of taking a difficult language” to “having a private code that parents would not know.”

Other studies eschew the Gardnerian integrative model in favor of instrumental interpretations of language acquisition in the ESL setting. Dörnyei (1990) posited that instrumental orientation was significantly responsible for motivation in foreign language learning. In addition to other findings, his results linked foreign language learning motivation to a ‘need for achievement’ and ‘attribution about past failure’. Muftah and Rafik-Galea (2013), meanwhile, examined Malaysian EFL learners’ integrative and instrumental motivation toward learning English and found Malaysian pre-university students to be more instrumentally motivated in their language acquisition.

### **English learning motivation in the Chinese EFL context**

The Gardnerian motivation research framework has likewise been deployed in analyses of English learning in China and the East Asian Chinese diaspora. In her comparison of instrumental and integrative English learning motivation orientation in non-English major Chinese college students, Zhao (2012) demonstrated her participants’ inclination towards instrumental as opposed to integrative motivation. In addition, especially in Chinese EFL settings in East Asia, including mainland China, Taiwan, and Hong Kong, recent motivational research on language acquisition has incorporated a third motivational orientation, i.e., required motivation. The socio-cultural expectations

of these cultures, which generally emphasize standardized requirements at school and the workplace at the expense of individualism, raise the likelihood that such requirements can constitute a potential motivation under certain circumstances (Chen, Warden, & Chang, 2005). Indeed, Warden and Lin (2000) found that Taiwanese EFL students appeared to be motivated by standardized requirements rather than an interest in integration or any clear instrumental yield.

Cultural influences possess an extraordinary longevity in East Asia. The Confucian meritocracy of the Ming-Ch'ing period in China (1368-1911 AD) implemented social mobility through success in civil service examinations (Woodside & Elman, 1994). Thus, the Confucian relationship was upheld in such a way that studying for the exam was part and parcel of personal and family success (Chen et al., 2005). This Confucian legacy persists through the present day and extends its influence across national borders. Considering the long history of sociocultural exchange between China and Korea and the fact that contemporary Korean society remains strongly bound to Confucian traditions (Hofstede & Bond, 1988; Tu, 1996), these historical and cultural trends provide support for examining required motivation as a potential motivational orientation. Required motivation-grounded studies have also pointed out that when English is studied as a foreign language in the classroom in EFL settings like China, students have limited chances to interact with the English-speaking community.

### **English learning motivation in the Korean EFL context**

EFL motivation research in South Korea has assayed diverse school populations, both at the university level and in primary and secondary schooling. For the most part,

L2 motivation research in Korea has been performed in alignment with the Gardnerian paradigm, which primarily looks for relationships between students' EFL achievement and their use of learning strategies based on their motivation structure (Kang, 2000a, 2000b; Kim, 2004; Song, 2004). Among university learners, researchers found that the broad integrative orientation factor accounted for the highest amount of variance (Kang, 2000b; Kim, 2004); this finding, in turn, has been interpreted as a potential impetus driving university students to enrich their language courses with more cultural components in a bid to meet their integrative objectives (Kang, 2000b).

In contrast, studies involving elementary (Song, 2004) and secondary (Kang, 2000a) school learners report a form of instrumental orientation factor. More specifically, among 5<sup>th</sup> graders (age 10-11) in an elementary school in South Korea, Song (2004) identified a factor indicating that children desired good results in English; they studied English because their parents wanted them to, and because it was a compulsory subject at school. In another instance, 9<sup>th</sup> grade middle school students (age 14-15) participated in the L2 motivation research conducted by Kang (2000a), which found integrative reasons for L2 learning to be the most prevalent. However, Song's (2004) conclusion that elementary school students were motivated to study English due to its compulsory nature suggests the existence of a "required orientation" (Chen, Warden, & Chang, 2005; Warden & Lin, 2000). Such studies thus provide a strong argument for standardized requirements as a driving motivation for students in Confucian societies. This in turn suggests that required orientation can be an independent orientation factor in Eastern Asia. By using exploratory factor analysis, Kim (2004) was also able to find the

presence of a clear “required orientation” factor among 325 South Korean university EFL learners, which was distinct from the integrative and instrumental orientation factor that had also clearly emerged.

### **The Mediating Effect in the Process-Oriented L2 Motivation Model**

#### **The process-oriented L2 motivation model**

Contrary to the product-oriented approach of traditional L2 motivational research, which focuses on the question, “What is motivation?” Dörnyei and Ottó (1998) suggest a process-oriented approach that asks, “How does it work?” This model essentially seeks to integrate various research trends and ultimately characterizes motivation not simply as a static product, but as a dynamic process as well. In order to achieve these aims, the Dörnyei-Ottó model (1998) divides the motivational behavioral process into three main phases: the “preactional phase,” which determines the motivation that precedes any action, the “actional phase,” which executes motivation that influences the level of language effort, and the “postactional stages,” which exhibit critical retrospection after an action is completed. Chen et al. (2005) employed a modified version of this process model in their Taiwanese EFL’s L2 motivation study.

Chen et al.’s model (2005) designated instrumental, required, and integrative motivation as variables of the “preactional phase,” the expectancy of success and effort as variables of the “actional phase,” and self-evaluated language skills as variables of the “postactional phase.” Thus, they included expectancy as a mediating variable between motivation and language skills. This variable was divided into past expectancy (e.g., previous efforts and previous successes) and future expectancy (e.g., future efforts and

future successes). The study ultimately found expectancy to be an important mediator between motivation orientation and self-evaluated language skills in an EFL setting (Chen et al., 2005). In prior literature, expectancy had referred to the perceived likelihood of success (Dörnyei, 1994).

According to expectancy-value theories, motivation for various tasks is the product of two key factors: the individual's expectancy of success in a given task and the values he or she attaches to successfully completing that task. Motivation orientations in the preactional phase set the stage for action. If the motivations are not strong enough, action may never occur; whereas increased levels of motivation will heighten the probability of action. This process is also related to feelings about previous and future successes, i.e., expectancy (Chen et al., 2005). Shabban and Ghaith (2000) found that expectancy plays a positive role among EFL students by building confidence. In addition, researchers regard sustained engagement in learning activities as a key mediating factor between individual difference variables (e.g., motivational beliefs, ability) and achievement outcomes (Connell & Wellborn, 1991). Littlewood (2004) also identifies engagement, defined as "the learners' active personal involvement with the task" and/or learning activity, as an indispensable component of language learning.

Figure A-2 conceptualizes an overall three-stage variable model, which illustrates the relationships between motivational orientation, expectancy, and two language performances inclusive of two variables: language proficiency and school grade. To assess the mediating effect of expectancy between motivational orientation and language performance, the author applied the mediation analysis of MacKinnon and

Dwyer (1993). Mediation analysis is important in that it allows researchers to not only evaluate the success of a given ESL/EFL program, but also to obtain more specific information on the factors contributing to the program's ultimate success or failure (Cheong, MacKinnon, & Khoo, 2003). Through mediation analysis, researchers have obtained information on whether the predictor variable successfully altered the mediating variable, and whether such alteration was responsible for a change in the outcome (Baron & Kenny, 1986; MacKinnon & Dwyer, 1993). For example, if L2 motivational orientation increases students' expectancy of their success and effort, researchers may want to explore whether expectancy in cases of second language enhanced by motivation orientation is responsible for the resultant second language performance. If the motivation orientation works as expected, identifying and differentiating between successful and unsuccessful components can provide valuable and pedagogically applicable information for teachers in the EFL context. This issue is also important because the Korean EFL setting lacks environmental opportunities for actual target language use. If preactional motivation can directly influence language performance, then language instructors may value such motivation, not only for its pedagogical efficacy, but for its mitigating effect on negative environmental factors as well. Conversely, if motivation is mediated by actually using the target language, then successful EFL language acquisition may prove difficult to attain through any localized classroom emphasis on the motivator (Chen et al., 2005).

### Estimation and testing of the mediating effect

Figure A-3 graphically illustrates the single mediator causal model (Cheong et al., 2003). Mediation is a hypothesized causal chain in which one variable has an effect on a second variable, which, in turn, affects a third variable. The intervening variable is the mediator. It mediates the relationship between the first variable and a third variable. Theory-based causal variables can be conceptualized as potential mediating variables ( $M$ ) that intervene in the relationship between the predictor variable ( $X$ ) and the outcome variable ( $Y$ ). The predictor influences the outcome directly and also indirectly through the mediator. One of the most commonly used methods to obtain the point estimate of the mediated effect is the product of coefficients method (MacKinnon & Dwyer, 1993; MacKinnon et al., 1995; Sobel, 1982). In it, the following regression equations are used to estimate the mediated effect:

$$M = \beta_{01} + \alpha X + \varepsilon_1 \quad (1)$$

$$Y = \beta_{02} + \beta M + \tau X + \varepsilon_2 \quad (2)$$

In Equation 1, the potential mediator  $M$  is regressed on predictor  $X$ . In Equation 2, the outcome variable  $Y$  is regressed on predictor variable  $X$  and potential mediator  $M$ .

The coefficient  $\alpha$  represents the effect of the predictor on the potential mediator. The coefficient  $\beta$  denotes the effect of the potential mediator on the outcome after controlling for the effect of the predictor. Similarly, the coefficient  $\tau$  represents the effect of the predictor variable on the outcome variable after controlling for the effect of the mediator, while the coefficient  $\tau$  represents the uncontrolled direct effect of the predictor variable on the outcome variable. The constants  $\beta_{01}$  and  $\beta_{02}$  are the regression intercept



terms and  $\varepsilon_1$  and  $\varepsilon_2$  are residuals in the two equations. The mediated effect is estimated by the product of the two regression coefficients for  $\alpha$  and  $\beta$ , conveying that the mediated effect is determined by the extent to which the predictor changes the mediator ( $\alpha$ ) and the extent to which the mediator, in turn, changes the outcome ( $\beta$ ). Some form of mediation is supported if the effect of  $M$  remains significant after controlling for  $X$ . If  $X$  is no longer significant when  $M$  is controlled, the finding supports full mediation. If  $X$  remains significant, i.e., both  $X$  and  $M$  significantly predict  $Y$ , the finding supports partial mediation (MacKinnon, 2008).

Once the regression coefficient for the indirect effect is calculated, it needs to be tested for significance. One of the most commonly used formulas for the standard error of the product of two coefficients is based on the multivariate delta method (Sobel, 1982) or the first-order Taylor series as follows:

$$\sigma_{\alpha\beta} = \sqrt{\alpha^2\sigma_{\beta}^2 + \beta^2\sigma_{\alpha}^2} \quad (3)$$

where  $\alpha$  and  $\sigma_{\alpha}$  are the regression coefficient and its standard error, respectively, in Equation 1 and  $\beta$  and  $\sigma_{\beta}$  are the regression coefficient and its standard error, respectively, in Equation 2. For observed data, sample estimates of  $\alpha$ ,  $\sigma_{\alpha}$ ,  $\beta$ , and  $\sigma_{\beta}$  are inserted in Equation 3. The significance test of the mediated effect is conducted by dividing the estimate of the mediated effect ( $\alpha\beta$ ) by the estimated standard error ( $\sigma_{\alpha\beta}$ ), which is compared to a standard normal distribution.

The design of structural equation modeling (SEM) allows for testing these more complicated models in a single analysis rather than in separate regression analyses. SEM

software programs, such as Mplus, offers indirect effect tests using Sobel's test of mediation model (1982). In addition, the SEM analysis approach extracts model fit information that interprets the consistency of the hypothesized mediational model in relation to the data.

### **Identifying mediating path using SEM**

Based on the mediation model, the estimation of possible relationships among the three phases of the model by structural equation modeling (SEM) was suggested in Chen et al. (2005). As SEM examines any number of relationships simultaneously, it allows a variable to be dependent in relation to some variables and independent in relation to others (Hair, Anderson, Tatham, & Black, 1998; Maruyama, 1998).

For the purposes of this study, I followed the conceptual framework for finding the best fitting model described in Chen et al. (2005). Relationships among the three phases of the model were then estimated using Amos 17.0 software, which compares numerous candidate models, resulting in a model that best represents the data. By quantifying the role of each variable, the model that best fits the data could thus answer the question: which motivation orientation for learning language has the strongest effect on language acquisition?

### **Limitations of the Existing Literature**

A review of language-learning motivation literature in the EFL context revealed some inherent limitations. First, with the exception of Chen et al.'s SEM motivation study (2005), most research that was grounded in a socioeducational framework relied on a correlation-based analysis model and fell short of establishing a causal relationship

between motivational orientation and achievement (Keblawi, 2009). Second, there is insufficient empirical evidence regarding language-learning motivation among EFL learners acquiring second and third languages simultaneously. Third, many EFL motivation researchers utilized the Gardnerian dichotomy framework with integrative and instrumental motivation orientation, which provided an inadequate reference context for the complex process of L2 learning. However, this study assuages such limitations, as it investigates the language-learning motivation among Korean EFL learners acquiring second and third languages in the three-phase frame of causal relationship between motivational orientation, expectancy, and language performance.

Chen et al.'s research (2005) had two major limitations. Firstly, their motivation research does not deal directly with the existence of the mediating effect; rather it investigates what is the best-fitting mediating path among three phases, which indirectly proves the existence of the mediating effect. However, in this study, I divided the mediating effect of expectancy into two research queries: first, the existence and intensity of the mediating effect and, second, the best plausible mediating path among the three phases (language learning motivation orientation, expectancy, and language performance). In addition, Chen et al.'s motivation research (2005) used self-evaluated language skills to measure individual language performance. Moreover, as most motivation levels are also measured by survey, survey-type assessments of language skill could result in a measurement error. To assess language performance accurately in this study, as compared to Chen et al.'s self-measured language skills (2005), language proficiency tests for vocabulary and reading abilities were administered. In addition to

the language proficiency test results, academic achievement on regular school tests were used as an item to measure language performance, since most foreign language instruction is provided within the school context.

### **Research Questions and Hypothesized Model**

To my knowledge, the current study is one of the first attempts to examine the motivation of language learning among EFL learners acquiring second and third languages simultaneously. This study contributes to the knowledge base by providing observations on the importance of motivation in learning English and Chinese. Moreover, it testifies to the effect of each motivation on language performance and on mediating the role of expectancy variables in the acquisition of both L2 and L3. The main research questions I sought to address in this study are as follows:

1. Does expectancy for L2 and L3 mediate the relationship between motivation and language performance for native Korean students?
2. Which motivation orientation has the strongest relationship to language performance in English and Chinese learning, respectively?

Even though previous research (e.g., Chen et al., 2005) found that expectancy mediated the relationship between self-measured motivation orientation and self-evaluated language skill, in this study I focused on investigating the existence of the mediating effect between motivation orientation and objectively measured language performance. For this purpose, this study tested the effect of students' second/foreign language learning motivation orientation on their expectancy of previous and future

successes, as well as an indirect effect of language motivation orientation on their language performance.

I hypothesized an indirect effect of L2/L3 motivation orientation on L2/L3 proficiency and academic outcomes based on expectancy. Specifically, I expected an indirect effect of L2/L3 motivational orientation on L2/L3 performance (i.e., reading comprehension, vocabulary skill, midterm school grades, and final school grades) via the positive effect of motivation orientation on their expectancy of success, controlling for language performance on the outcome variable.

Figure A-3 presents the conceptual mediation model. The two bolded arrows ( $\alpha$  and  $\beta$ ) indicate the target mediation effect, where L2/L3 motivation orientation was hypothesized to predict L2/L3 expectancy, which, in turn, further predicted the L2/L3 proficiency and L2/L3 academic achievement. Two types of Structural Equation Modeling (SEM) were performed to examine the indirect and direct relationship between motivation, expectancy, and language performance for both L2 and L3 cases.

## **Methods**

### **Participants**

A convenience sampling strategy was implemented to include 171 Korean-speaking 9<sup>th</sup> grade students in Korea. All participants received daily schooling in their native Korean, and they began learning English in the 3<sup>rd</sup> grade and Chinese in the 9<sup>th</sup> grade. The age of these participants at the time of inclusion was 14-15 years.

## **Research Context**

These Korean EFL learners were included in the same research context mentioned in Chapter II. As all 171 students were enrolled in the same middle school and studied under the same English and Chinese language teachers, the school-specific external factors that affect motivation, such as classroom environment, teacher, class activities and class materials, were more or less uniform across all participants. Both middle and high school students in Korea must successfully complete English as a mandatory course for graduation and as a prerequisite to the university entrance examination. Therefore, student and parental interest in English education are very strong in South Korean educational settings. To achieve a higher level of English proficiency, most of the students in this study supplemented their mandatory English classes with additional English instruction through private language institutes, online learning, private tutors, etc.

In Korea, most middle schools offer one or two second foreign language classes for students to choose at the start of the 9<sup>th</sup> grade school year. In this study, participants' schools also offered 9<sup>th</sup> grade students the option of selecting Chinese or Japanese language classes. Recently, Koreans' interest in learning the Chinese language has skyrocketed as a result of the increasingly close socio-economic relationship between the two countries. Accordingly, the number of schools offering Chinese classes has increased, as presented in Table B-1. However, Chinese instruction is primarily limited to the classroom, while English education is offered not only through school instruction,

but also through an array of extracurricular programs, including English lessons at private teaching institutions, private tutors, and online learning programs.

## **Measures**

The Chen et al. (2005) survey instrument was adapted and modified for the current study, which includes three motivational orientations with expectancy and testing in an East Asian EFL setting. The survey on motivation orientation and expectancy consisted of 13 questions: three for instrumental motivation, three for required motivation, three for integrative motivation, two for expectancy of success, and two for expectancy of effort related to learning English and Chinese, respectively. All surveys were administered in Korean, the participants' first language (L1). Responses to the questions were rated on a 1-5 Likert scale. While nine questions for three motivation orientations were anchored by parameters ranging from *Strongly disagree* (1), *Neither agree nor disagree* (3), to *Strongly agree* (5), four expectancy questions for success and effort level were anchored by parameters ranging from *Not at all* (1), *Middle* (3), to *Very much* (5). Experimental tasks for vocabulary and reading comprehension were designed to evaluate participants' L2 and L3 skills. English tests of vocabulary and reading skills were adopted from the *Woodcock Language Proficiency Battery-Revised* (WLPB-R, Woodcock, 1991), which is a standardized instrument that assesses broad language proficiency in oral and written language and reading in English. Chinese tests of vocabulary and reading skills were designed based on school textbook content using a format similar to that for English.

### **Motivational orientation**

***Instrumental orientation.*** Instrumental motivation orientation questions are formulated to determine how much benefit is gained from learning a second/foreign language. Therefore, participants were asked whether or not they agreed with three statements based on Warden and Lin's (2000) and Chen et al.'s (2005) instruments: (1) You need these skills to help you obtain a higher paying job; (2) You need these skills to help you receive a raise; and (3) You need these skills to help you to change jobs more easily.

***Integrative orientation.*** Survey questions on integration motivation orientation in L2 have generally focused on facilitating social connection with native speakers (Clement, Dörnyei, & Noels, 1994). Considering the EFL context in the study, traditional integrative orientation was modified in conformance with the question sets used in Warden and Lin (2000) and Chen et al. (2005), both of which emphasized the desire to gain social prestige and make social connections. Participants were asked how much they agreed with the following statements: (1) You need these skills to help you travel overseas; (2) You need these skills to help you understand foreign movies, books, and magazines; and (3) You need these skills to help you make social contacts or gain social prestige.

***Required orientation.*** Questions pertaining to required motivation orientation were adapted directly from Chen et al. (2005): (1) You need these skills to help you pass an exam for further study in high school or at a university; (2) You need these skills to help you pass a required class from the curriculum; and (3) You need these skills to help



you pass an exam for a job or position in the future. English and Chinese classes for the 9<sup>th</sup> grade students in this study are a mandatory prerequisite for graduating from middle school. In addition to traditional instrumental and integrative orientations, required orientation could be an important motivation for learning these second/foreign languages in the Korean EFL context.

### **Expectancy**

*Past expectancy.* As noted earlier, expectancy refers to the perceived likelihood of success (Dörnyei, 1994). According to expectancy-value theories, motivation to accomplish various tasks is the product of two key factors: the individual expectancy of success in a given task and the values the individual attaches to successfully completing that task. Therefore, language use by the participants was measured using two questions, which were drawn from Dörnyei (2001), Warden and Lin (2000), and Chen et al. (2005), and assessed participants' expectancy of success and the effort level exerted in light of that expectancy. These questions were asked within two time frames—past and future, as Warden and Lin (2000) found that Taiwanese EFL learners differentiated their past efforts from future ones. Thus, there were two questions: (1) How successful were you at improving these skills in the past? (2) How much effort did you make to improve your language skills in the past?

*Future expectancy.* Simply changing the expectancy questions from past to future tense, as was done by Chen et al. (2005), I asked two questions: (1) How successful will you be at improving these skills in the future? (2) How much effort will it take to make improvements in your language skills in the future?

## **Language performance**

**Proficiency.** Vocabulary and reading comprehension tests were administered to assess English and Chinese proficiencies, respectively. For English, vocabulary and reading questions from the *Woodcock Language Proficiency Battery-Revised* (WLPB-R, Woodcock, 1991) were adapted. Vocabulary and reading assessments in Chinese were developed by the researcher of this study based on school textbooks with a format similar to that of the tests for English.

**School grade.** Midterm and final grades for one semester were used for the school grades of the English and Chinese language classes. The scores of the midterm and final exams were graded on a 0 to 100-point scale. Considering the difference in difficulty levels between the midterm and final exams for both languages, I standardized scores for the midterm and final exams (i.e., each student's score was subtracted from the average midterm score and then divided by standard deviation). All the tests were prepared by the school subject teacher based on the textbooks the students had studied throughout the semester.

## **Procedure**

All surveys and tasks in this study, for both English and Chinese, were administered in quiet classrooms. The surveys for English and Chinese learning motivation were done prior to the proficiency task. Each motivation survey contained 13 questions and students were given 20 minutes for completion. The tasks for English and Chinese proficiency were divided into two sessions for each language. Each session was estimated to last for about 25 minutes, with 5 minutes allotted for vocabulary and 20

minutes for reading. The order of the languages tested was counterbalanced between English and Chinese.

### **Data Collection and Analysis**

Midterm and final exam scores of the students were obtained to determine the school grades of the English and Chinese classes. For motivation orientation and expectancy, the surveys were completed before the midterm exam. Language skills for vocabulary and reading comprehension were assessed between the midterm and final exam. Therefore, the fact that the language performance of the postactional phase was measured after the preactional and actional phase surveys conforms to the process-oriented model of this study.

To answer the research questions, a correlational analysis was conducted first to establish the relationship between the motivation orientation variables, expectancy variables, and languages performance variables for English and Chinese, respectively. The survey results were examined for alignment against the basic assumptions of the proposed model using reliability analysis followed by exploratory factor analysis. Three phases of process models were examined using Mplus 6.11 and Amos 17.0 software programs, followed by two sets of structural equation models. First, SEM was employed to examine the mediating effect of expectancy from motivation orientation to language performance using the Mplus indirect effect test based on the basic three-phase process-oriented model in Figure A-2. However, the second SEM, which was based on the conceptual model in Figure A-4, found that the model best represented data with Amos's specification search due to that program's comparison of numerous candidate models.

Thus, SEM is able to examine any number of relationships simultaneously by allowing a given variable to be dependent in relation to certain variables and independent in relation to others (Hair, Anderson, Tatham, & Black, 1998; Kline, 2011; Maruyama, 1998).

## **Results**

The descriptive statistics for motivation level revealed that integrative motivation (3.89 for English and 3.36 for Chinese) was moderately high for both languages, compared to instrumental motivation (3.80 for English and 3.11 for Chinese) and required motivation (3.75 for English and 3.24 for Chinese) (see Tables B-8 and B-9). Furthermore, integrative motivation had the highest language learning motivation levels for English and Chinese as a result of the frequency of overseas travel by students.

Overall, examination of the items resulted in Cronbach's alphas of .90 for English and 0.90 for Chinese regarding the preactional phase and Cronbach's alphas of 0.89 for English and 0.87 for Chinese regarding the postactional phase. The WLPB-R-based English assessments of vocabulary and reading comprehension had a reliability ranging from 0.73 to 0.76, while the Chinese instruments' reliability for vocabulary and reading comprehension ranged from 0.74 to 0.75 (see Tables B-8 and B-9).

Factor analysis with the orthogonal VARIMAX rotation was employed to test the validity of the survey responses in the hypothesized model (see Figure A-4), accounting for 58.85% of the variance in English motivation, and 56.80% of the variance in Chinese motivation. The results shown in Table B-10 confirm that the survey responses and task performances harmonize with the predicted three-stage variable model, with the exception of "passing a job exam" for motivation orientation in the case of English. This

discrepancy can easily be explained, however, as the participants in the current study were 9<sup>th</sup> graders who were likely too young to cultivate interest in passing a job exam. In addition, subscale factor loadings in Table B-11 confirm the survey instrument's accurate assessment of the three types of motivation orientation (integrative, instrumental, and required) and two types of expectancy (past and future), with the exception of "passing a job exam" for required motivation orientation in the case of English.

Two sets of structural equation models were then established to investigate the motivation for learning English and Chinese, respectively, as well as to determine the existence of a mediating effect and to thoroughly detail the relationship between motivation orientation and language performance.

### **Participants' Response to English and Chinese Learning Motivation**

Through data analysis, this study examined students' English and Chinese learning motivation and expectancy. Some noticeable similarities and differences surfaced in the findings of the English and Chinese questionnaires, which was ultimately indicative of the study participants' perceptions towards the two languages. Even while using the same format for the English and Chinese surveys, the average level of second/foreign language learning motivation for English was higher than that for Chinese (3.81 and 3.23, respectively). Specifically, all three motivational orientations for English were higher than those for Chinese: the average level of instrumental orientation for English and Chinese was 3.80 and 3.12, respectively; the average level of required

orientation was 3.75 and 3.24, respectively; and the average level of integrative orientation was 3.89 and 3.36, respectively.

In addition, the average level of expectancy for English was also higher than that for Chinese (2.84 and 2.23, respectively). Specifically, the average level of previous expectancy for English was lower than that for Chinese (3.01 and 3.09, respectively), but the average level of future expectancy for English was higher than that for Chinese (2.68 and 1.37, respectively). Overall, English motivational orientation and expectancy were higher compared to Chinese motivational orientation and expectancy. A more detailed explanation of the motivation levels within each language follows below.

### **Motivation for English learning**

With respect to the kind of motivation students cultivate most strongly in English learning, integrative orientation was found to be the highest motivation orientation, followed by instrumental and required orientations (3.89 for integrative orientation, 3.80 for instrumental, and 3.75 for required). Among the nine motivation orientation-related categories, “Travel overseas” was rated the highest (4.09), and “Pass job exam” was rated the lowest (3.47). In addition, “Pass the entrance exam” (3.92), “Make social connections” (3.91), “Pass the required class” (3.87), and “Change jobs easily” (3.86) all scored higher than average motivational orientation levels (3.81).

In terms of the motivational expectancy questions, the previous expectancy average level was higher than the future expectancy average level (3.01 and 2.68, respectively). In addition, the average gap between previous and future expectancy was a

mere 0.33. Among the four sub-questions on expectancy, “previous success” scored the highest with 3.37, and “future success” was the lowest with 2.57.

### **Motivation for Chinese learning**

With respect to the kind of motivation students cultivate most strongly in Chinese learning, integrative orientation was found to be the highest motivation orientation, followed by required and instrumental orientations (3.36 for integrative orientation, 3.24 for required, and 3.12 for instrumental). Among the nine motivation orientation-related categories, “Travel overseas” was rated the highest (3.70), and “Change jobs easily” was rated the lowest (3.02). In addition, “Pass the entrance exam (3.44),” and “Make social connections (3.29),” scored higher than average motivational orientation level (3.23).

Concerning motivational expectancy questions, the previous expectancy average level was higher than the future expectancy average level (3.09 and 1.37, respectively). In addition, the average gap between previous and future expectancy was just 1.72. Among the four sub-questions on expectancy, “previous success” scored the highest (3.37), and “future effort” the lowest (1.22).

### **Correlation between Motivation Measures and Language Skill**

For both English and Chinese, an examination of the Pearson correlation coefficients in Table B-12 suggests that the motivation orientation variables were not highly correlated with language performance, but that expectancy variables were. This finding supports a possible mediating effect of the expectancy variables and indicates that a high level of motivation may not translate directly into language achievement. A

more detailed understanding of exactly which motivation orientations relate to the actional phase required the use of SEM analysis, which was undertaken next.

### **Correlation among English variables**

For English, the actional phase variables (expectancy) were highly correlated with the postactional phase variables (language performance), while the preactional phase variables (motivation orientation) were not highly correlated with the postactional phase variables. Regarding the correlation between expectancy and language performance, past expectancy (as compared to future expectancy) was relatively more correlated with language performance (95% significance level for average correlation value, with 0.52 for past expectancy and 0.36 for future expectancy). With regard to the correlation between motivation orientation and language performance, instrumental orientations (as compared to required and integrative orientations) were relatively more correlated with language performance (95% significance level for average correlation value, with 0.23 for instrumental orientation, 0.20 for required orientation and no significant correlation value for integrative orientation).

When language performance was divided into language skills and school grades, school grades (as opposed to language skills) were more highly correlated with both motivation orientation variables (95% significance level for average correlation value with 0.24 for school grades and 0.17 for language skills) and expectancy (95% significance level for average correlation value, with 0.48 for school grades and 0.41 for language skills).



### **Correlation among Chinese variables**

For Chinese, the actional phase variables (expectancy) were highly correlated with the postactional phase variables (language performance), while the preactional phase variables (motivation orientation) were not highly correlated with the postactional phase variables. Regarding the correlation between expectancy and language performance, past expectancy (as compared to future expectancy) was relatively more correlated with language performance (95% significance level for average correlation value, with 0.37 for past expectancy and 0.20 for future expectancy). With regard to the correlation between motivation orientation and language performance, the required orientation (as compared to instrumental and integrative orientations) was relatively more correlated with language performance (95% significance level for average correlation value, with 0.26 for the required orientation, 0.23 for instrumental orientation and 0.17 for integrative orientation).

When language performance was divided into language skills and school grades, school grades (as opposed to language skills) were more highly correlated with both motivation orientation variables (95% significance level for average correlation value, with 0.25 for school grades and 0.24 for language skills) and expectancy (95% significance level for average correlation value, with 0.31 for school grades; and 0.27 for language skills).

### **Structural Equation Model Results for Mediating Effect**

The conceptual mediation model, as shown in Figure A-3, was incorporated separately into this study's English and Chinese mediating models in Figures A-5 and A-

6. The model's assessment criteria conforms to Hu and Bentler's (1999) suggestions, which describe an excellent model fit as one where Comparative Fit Index (CFI)  $\geq 0.95$  and Root Mean Squared of Approximation (RMSEA)  $\leq 0.06$ , and an adequate model fit as one where CFI  $\geq 0.90$  and RMSEA  $\leq 0.08$ . Despite the significant overall chi-square test (and CFI of 0.92), both English and Chinese mediation models still fit the data adequately based on the model fit statistics in Tables B-13 and B-14 (CFI of .097 for English and .92 for Chinese; RMSEA of 0.06 for English and .08 for Chinese). All coefficients for the path were statistically significant ( $p < 0.05$ ), except for the direct effects with mediator of motivation orientation as they relate to English language proficiency and school grades. This study tested the hypothesized mediation effects for the English and Chinese models with the "Model Indirect" option in Mplus (v.6.11, Muthén & Muthén, 1998-2011), which adopts Sobel's (1982) test of mediation effects.

#### **Full mediating effect in English acquisition motivation**

All coefficients presented in Table B-13 are standardized. The coefficient (or the  $\alpha$  path in Figure A-3) for the relationship between the predictor variable (motivation orientation) and mediator variable (expectancy) was significant: 0.52 in Figure A-5 and  $\alpha$  (motivation orientation  $\rightarrow$  expectancy) in Table B-13. This result indicates that motivation orientation exerted a significant positive effect on expectancy. The coefficients (or the  $\beta$  path in Figure A-3) for the relationship between the mediator variable (expectancy) and targeted output variables (language proficiency and school grade) were significant: 0.74 for language proficiency and 0.83 for school grade in Figure A-5 and  $\beta$ s (expectancy  $\rightarrow$  proficiency and expectancy  $\rightarrow$  school grade) in Table

B-13. The mediation effect of expectancy between the motivation orientation and the two language performances were statistically significant ( $\alpha\beta$  in Table B-13; 0.38 for language proficiency and 0.43 for school grade).

The indirect effects were further tested based on the recommendations and steps proposed by MacKinnon (2008). Prior to this round of testing, I estimated the direct effect without mediator from the predictor variable, i.e., motivation orientation, and outcome variables, i.e., language proficiency, and language school grades. The results of the direct effect estimation without mediator are shown in Table B-13. The coefficients  $\tau$  found in the table represent the significant direct effects of motivation orientation, which functioned as the predictor, on language proficiency and language school grades, which functioned as the outcome variables (0.24 for motivation orientation  $\rightarrow$  proficiency, and 0.36 for motivation orientation  $\rightarrow$  school grade). According to the recommendations of Shrout and Bolger (2002; also see MacKinnon, Krull & Lockwood, 2000), this significant direct effect without mediator is not a prerequisite step for testing the mediation effect. However, the coefficients  $\hat{\tau}$  in Table B-13 indicate that the direct effects with mediator of the predictor on the outcome variables for both proficiency and school grades are not significant. Therefore, expectancy fully mediated the relationship between motivation orientation and language performance in the case of English, based on the testing specifications of MacKinnon (2008).

As the total effect of the predictor on the outcome variable was  $\hat{\tau} + \alpha\beta$  with significant estimates in Figure A-3, and  $\hat{\tau}$  for the two outcome variables where it was not significant, the total effect of motivation orientation on language proficiency was

assessed at 0.38, while the total effect of motivation orientation on language school grades was 0.43. Table B-13 shows how the total effect with expectancy (as compared with direct effect without expectancy) was much higher for both proficiency and school grade: 0.24 for direct effect and 0.38 for total effect for proficiency; 0.36 for direct effect and 0.43 for total effect for grade. In addition, the total effect of the students' motivation orientation in English performance was slightly stronger in the case of their school grades as compared to the case of language proficiency.

### **Partial mediating effect in Chinese acquisition motivation**

All of the coefficients presented in Table B-14 are standardized. The coefficient (or the  $\alpha$  path in Figure A-3) for the relationship between the predictor variable (motivation orientation) and mediator variable (expectancy) was significant: 0.65 in Figure A-6 and  $\alpha$  (motivation orientation  $\rightarrow$  expectancy) in Table B-14. This result indicates that there was a significant positive effect of motivation orientation on expectancy. The coefficients (or the  $\beta$  path in Figure A-3) for the relationship between the mediator variable (expectancy) and the targeted output variables (language proficiency and school grade) were also significant: 0.84 for language proficiency and 0.96 for school grade in Figure A-6 and  $\beta$ s (expectancy  $\rightarrow$  proficiency and expectancy  $\rightarrow$  school grade) in Table B-14. The mediation effect of expectancy between motivation orientation and the two language performances was statistically significant:  $\alpha\beta$  in Table B-14; 0.55 for language proficiency and 0.63 for school grade.

Table B-14 lists the results of the direct effect estimation without mediator. The coefficient  $\tau$  in Table B-14 represents the significant direct effects of predictor

(motivation orientation) on outcome variable (language proficiency): 0.19 for motivation orientation  $\rightarrow$  proficiency, and no significant direct effect for motivation orientation  $\rightarrow$  school grade. Meanwhile, the results of the direct effect estimation with mediator (i.e., the direct effect of predictor on outcome variables) are explained by the coefficient  $\hat{\tau}$  in Table B-14. Both coefficients of proficiency and school grade are within a 95% significance level. Therefore, expectancy partially mediated the relationship between motivation orientation and language performance in the case of Chinese, based on MacKinnon's (2008) testing specifications.

As the total effect of predictor on outcome variable is  $\hat{\tau} + \alpha\beta$ , with significant estimates in Figure A-3 and a  $\hat{\tau}$  coefficient within a 95% significance level for two outcome variables, the total effect of motivation orientation on language proficiency is assessed at 0.19 and the total effect of motivation orientation on language school grade at 0.16. Comparing the direct effect without expectancy and the total effect with expectancy in Table B-14, both effects are very similar for proficiency and grade (0.18 for direct effect and 0.19 for total effect for proficiency; 0.16 for direct effect with a significance level within 94% and 0.16 for total effect for grade). Overall, the total effect of motivation on language performance is higher for language proficiency than for school grade. In addition, the total effect of motivation orientation for students in Chinese performance is relatively lower than the motivation case for English (0.24 for proficiency and 0.36 for school grade in English; 0.19 for proficiency and 0.16 for school grade in Chinese).

## **Structural Equation Model Results for Mediating Path**

Based on Chen et al.'s (2005) research framework for determining the best-fitting model of the three motivational orientations' path to language performance with mediating expectancy, this study investigated the mediating path from the preactional phase through the actional and postactional phases for English and Chinese. In Table B-15, analysis of the maximal SEM models resulted in CFI values (0.97 for English and 0.95 for Chinese), RMSEA values (0.057 for English and 0.066 for Chinese), and GFI values (0.91 for English and 0.90 for Chinese) that were all within the acceptable range of an adequate fit. In Figures A-7 and A-8, the numbers adjacent to straight lines represent standardized estimates, which are similar to coefficients in terms of explaining the relationship between constructs. The numbers adjacent to curved lines, meanwhile, represent covariances. In both figures, statistically significant estimates ( $p < 0.05$ ) were indicated with bold lines.

### **Motivational path to English language performance**

In Figure A-7, three motivational orientations of the preactional phase display very different relationships with actional constructs. Instrumental motivation orientation exhibited a significant positive relationship with past expectancy (0.61), while neither the required nor integrative orientations showed any significant relationship with either past or future expectancy. Only the past expectancy variable demonstrated a strong relationship with both English proficiency and school grades (2.14 for proficiency and 1.38 for school grades), while future expectancy demonstrated no significant relationship with either English proficiency or school grades. However, future anticipated success

and effort were noticeably tied to past success and effort (0.85), suggesting a significant relationship between the two temporal constructs. The resulting mediating path model indicated the mediating role of the expectancy variable between motivational orientation and language performance.

### **Motivational path to Chinese language performance**

In Figure A-8, only the required motivation orientation indicated a significant positive relationship with past expectancy (2.08), while neither the instrumental nor integrative orientation exhibited any significant relationship with either past or future expectancy. In addition, the past and future expectancy variable demonstrated no relationship with either Chinese proficiency or school grades, while future expectancy likewise showed no significant relationship with either English proficiency or school grades. The resulting mediating path model in Chinese did not explain the mediating role of the expectancy variable between motivational orientation and language performance.

## **Discussion**

### **Motivation Comparison between English and Chinese**

To date, there have been no empirical studies that simultaneously compare the motivational levels of second/foreign languages with the same research participants. With this in mind, the current study targeted Korean 9<sup>th</sup> graders' second- and foreign-language learning motivation in the EFL context. From the results of the surveys regarding motivation in English and Chinese learning, it was found that the overall motivational orientation and expectancy in English learning was higher when compared to that in Chinese learning. This finding was in line with expectations, as the study

participants had only received one year of Chinese schooling, compared with more than seven years of English schooling due to the exigencies of Korean public education. In addition, even though the Korean government has not designated English as an official second language, most Koreans perceive it as their second tongue. Therefore, it is reasonable that students in this study perceived English as their L2 and Chinese as their L3. This instinctive categorization naturally widens the motivation level gap between learning English and Chinese in Korea.

A comparison of the details between English and Chinese learning motivation reveals a number of other interesting findings. First, students are motivated with a relatively high level of integrative orientation for both English and Chinese, as they have a strong common motivation to “travel overseas,” one of the factors directly assessed in the integrative orientation questions. Recently, many Korean middle schools have developed plans for fieldtrips to neighboring countries, including China, Hong Kong, Taiwan, Thailand, and Japan. Another recent trend saw many Korean middle school students visiting English instruction camps in the U.S., the Philippines, and Malaysia during their summer or winter vacation. Such opportunities for students to visit other countries may be strongly related to their high motivation regarding travel overseas. Second, when comparing instrumental and required orientations, the students are more instrumentally motivated towards English learning, but they have a more required orientation towards Chinese learning. This supports the point that learners are motivated in different ways and to different degrees depending on their target language, especially for students who are more likely to associate learning Chinese (as opposed to English)



with exams or courses. To many participants, learning Chinese was perceived as a new required course, as 9<sup>th</sup> graders in Korean middle school are required to start learning another foreign language in addition to English. Third, past expectancy of success and effort for learning Chinese is slightly higher than (but nearly equal to) past expectancy for English, while future expectancy for Chinese is evidently much lower than future expectancy for English and past expectancies for both languages. Though expectancy variables in this study were introduced as the mediating variable for the relationship between motivation orientation and language performance, the students in this study also had different expectancies related to success and effort, whose variance largely hinged on the target language. Low levels of future expectancy for learning Chinese may be interpreted as a lack of either students' confidence in their potential success or effort towards the future learning of Chinese. As many of the students expected to encounter mounting difficulty with Chinese lessons in school with each passing year, learning a new language as a required course might be perceived increasingly as a burden and not a boon.

However, the above analysis linking motivation level to orientation and expectancy needs to be interpreted in a limited manner, because it only considers the motivation level of each discrete language. This accounts for why previous researchers (Chen et al., 2005) did not include an analysis of motivational level per se. Therefore, the motivation level analysis in this study simply focused on the relative comparison between the L2 (English) and L3 (Chinese) motivation levels. As underscored throughout this paper, the purpose of this study wasn't to define a general concept of

“motivation” but rather to determine “how it works.” Alternatively, this study was designed to be more than simply a narrow examination of the motivation level of Korean students as it relates to their L2 (English) and L3 (Chinese); it also comprises a more generalized inquiry into the relationship between motivation and language performance in L2 and L3, respectively. The relationship between motivation and language skill was examined in detail using the Structural Equation Model (SEM) analysis in the following sections.

### **Mediating Effect of Expectancy in English and Chinese**

Based on the process-oriented motivation model (Dörnyei & Otto, 1998) and a single mediator model (McKinnon et al., 1995), the mediating effect of the actional phase (expectancy), which falls between the preactional (motivation orientation) and the postactional phase (language performances), was examined for English and Chinese, respectively. Whereas some research in this vein has already documented the existence of the mediating effect of expectancy within indirect ways of the mediation model by finding the best fitting SEM model (Chen et al., 2005), this study investigated the existence and degree of the mediating effect within the direct mediation SEM model. The results of this SEM analysis uphold the thesis that students’ expectancy of success and effort towards learning a second/foreign language could mediate the language motivation orientation into language performance. However, language performance was measured not by a self-evaluation questionnaire, such as the Likert scale (Chen et al., 2005), but by a standardized battery of English proficiency tests (WLPB-R, Woodcock,

1991) and a modified version adapted for Chinese proficiency assessment, as well as by school grades in English and Chinese.

Based on direct mediation analysis using the SEM, the results for both L2 (English) and L3 (Chinese) showed that expectancy mediated the effect of motivation orientation on objectively measured language performance. Consistent with the action control theory that the actional stage corresponds to the “executive motivation” and translates into an individual’s intention to action (Dörnyei, 2001; Heckhausen, 1991), the motivation orientation of participants in this study affected individual participant’s expectancy for success in a given task and the values he or she attached to successfully performing that task. The action control system, or self-regulation, is what enables learners to persevere until the action is eventually completed (Dörnyei, 2002). As reported in previous studies with the same process-oriented sample (Chen et al., 2005), the expectancy of the actional phase also had a positive impact on language performance. The factors that influence the postactional stage of the motivation process are most likely linked to theories dealing with self-concept beliefs (i.e., expectancy-value theory, self-worth theory, self-confidence theory, and self-efficacy theory).

However, and perhaps more importantly, the mediating effects of expectancy on motivation orientation and language performance differed, depending on the target languages. Based on Figures A-5 and A-6, expectancy fully mediated the relationship between motivation orientation and language performance in the case of English, while expectancy was only partially mediated in the case of Chinese. These results were highly related to the difference between direct effect and total effect in the case of English

proficiency and English school grades. Since the mediating variable role in learning English is very strong, the outcome of the research, without considering expectancy in the case of English learning, may not sufficiently explain the relationship between motivation orientation and language performance. Chen et al.'s (2005) findings, which emphasized the importance of the mediator variable in learning English in the Taiwanese EFL context, provide an apt point of reference for the situation of Korean EFL students. Namely, understanding not only the motivation orientation but also its expectancy of success and effort for Korean EFL students is crucial to enhancing English skills throughout life and in school. Indeed, this observation contains important pedagogical implications for Korean EFL's English learning environment.

With regard to Chinese learning, however, expectancy was partially mediated. A more detailed accounting of this relationship can be provided based on the mediating path-finding model. In this approach, mediation is defined in such a way that the motivation orientation indirectly influences the growth of the outcome process by influencing the growth of the mediator process. Thus, any presence of significant mediation depends on whether the change in motivation orientation changes the growth trajectory of the mediator; the change in growth trajectory of the mediator, in turn, relates to the change in growth trajectory of the outcome variable (Cheng, MacKinnon, & Khoo, 2003). The current study found that motivation orientation in English significantly increased both the expectancies of success and effort (mediator) and language skills (outcome) over time. Conversely, Korean EFL students' expectancy

related to Chinese did not fully mediate motivation orientation and language performance.

As a mediator variable, the expectancy variable in Chinese was not as effective as that of English. There are three possible explanations for this outcome. First, the participants in the current study had only been instructed in Chinese for one year, so their language interests were not as well developed as those they cultivated for English. Second, as the expectancy for Chinese was not as strong as for English, the mediating role was limited to the motivational level. Third, the students' language proficiency in Chinese was not fully developed due to the relatively shorter learning period.

#### **Mediating Path from Motivation to Language Performance**

The mediation model was estimated using the single mediator model in the preceding subsection in order to investigate the existence and degree of the mediating effect. In the interest of obtaining a more detailed look at “how second/foreign language learning motivation works for those languages' performance,” the SEM approach to finding the best fitting model was applied to the Korean EFL participants.

Above all, the results of the English SEM model revealed that only instrumental motivation had a significant relationship with past expectancy, which, in turn, had a significant relationship with English performance. Meanwhile, required and integrative motivational orientations were shown to have no significant correlation to either expectancy or language performance variables. Therefore, past expectancy of success and effort in English mediated the effect between instrumental motivation and language performance. This result is in accordance with the overall EFL language-learning

context in Asia. English is studied as a foreign language mainly in classroom settings in the Asian milieu; students thus have limited opportunities to get in touch with the target community and overseas country, which makes it difficult for them to learn English through integrative motivation (Zhao, 2012). The evident mediating path from instrumental orientation to language performance in this SEM model is consistent with the findings of the fully mediating effect in the direct mediation model. In addition, the results are in line with the findings of previous research on English motivation in the case of EFL learners (e.g., Chen et al., 2005). Due to the preeminent status of English as a world language and medium for global communication, English acquisition is more important than ever in Korea. In fact, sociolinguists have recently identified a trend in Korean society wherein people are treated differently based on their level of English proficiency (Nam, 2011). Similarly, this study found that the participants perceived English proficiency as one of the decisive factors for defining their social status in Korea.

In the case of the Chinese SEM model, however, an examination of competing models revealed a significant path only from the required motivation to the past expectancy variable, while other motivations did not play significant roles in either the past-future expectancies or language performance variables. One possible explanation is that Chinese education in Korea must be viewed through the lens of the country's educational policy on second foreign languages. In the current Korean educational system, Korean is the only official language, English is the first foreign language taught from primary school onward, and Chinese is one of seven other foreign languages that may be selected as a second foreign language in secondary school (Statistical Yearbook

of Education, 2010). Therefore, for the vast majority of native Korean speakers, English is the first foreign language they encounter; none of the other seven foreign languages will attain an equal standing with English in their consciousness. Also, English is strongly linked to social status in Korea, while the other languages are not. Based on the results of this mediating effect on Chinese, only a partial mediating effect of expectancy was observed. Combining the results of the partial mediating effect and the limited mediating path for Chinese, the overall expectancy level in Chinese exhibited a limited mediating effect between motivation orientation and language performance. This may explain which motivation has a relatively important effect on language performance through expectancy.

As a mediator variable, expectancy in Chinese was not as effective as expectancy in English. The results can be interpreted as stemming from the differing influences of the required and instrumental motivations: the influence of required motivation in Chinese is limited, while instrumental motivation in English can be easily linked to language skill through past expectancy. The divergent results in finding a mediating path model between English and Chinese may be interpreted through four possible explanations including: (a) learning periods (seven years for English, one year for Chinese); (b) developed levels of past-future expectancy (high past-future expectancy of success and effort for English, low future expectancy for Chinese); (c) language proficiency (mostly intermediate level for English, mostly beginning level for Chinese); and (d) the most influential factor among three motivational orientations to language acquisition (instrumental motivation orientation for English, required motivational

orientation for Chinese). To summarize, the results of this study indicated that instrumental motivation appeared to be a significant factor in English learning, while required motivation was potentially a significant factor for Chinese learning, with a limited effect; however, integration motivation did not appear to be a significant factor for either English or Chinese. In addition, past expectancy was found to be a significant mediator in English learning in the current EFL Korean context.

The results of this study differ greatly from the findings of motivation research in an ESL setting, where integrative motivation orientation has been shown to play a more central role in English learning. One possible reason that motivation operates differently between ESL and EFL settings is that language learners immersed in the former environment are widely exposed to the target culture and, consequently, to integrative motivation matters. If learners do not have strong integrative motivation, they will have less contact with the people of the target culture. In the EFL setting, the opportunities for exposure to the target language/culture are severely limited in comparison. Once students walk out of the language classroom, they become immediately distanced, physically and psychically, from the processes of linguistic acquisition and cultural familiarization. Moreover, they have few chances to communicate with people of the target language's culture, and there may be other reasons they desire to become a member of the target culture. Integrative motivation becomes to have little room in EFL setting.

Finally, the results of this study encompass a number of pedagogical implications for the English language educators of the Korean EFL 9<sup>th</sup> graders. In addition to



inculcating student interest that is not strictly instrumental motivation-orientated, instructors also need to consider the learners' expectancy of past success and effort in order to effectively link student language motivation to language skills. In this regard, Korean middle school educators should try to promote various types of motivation, help students build positive perceptions and expectations of themselves, and maximize the effects of motivational factors to encourage language performance. As this study has shown, most students have their own motivation to learn English, but they voice a low expectancy for future success and effort, which may stem from a lack of self-confidence in their high school English studies. As a result, teachers are recommended to enhance students' expectancy for success or goal attainment by guiding them towards valuing their own attainable objectives, designing their study plans, and developing realistic expectations about learning English. However, the results of this study as it relates to Chinese learning motivation necessarily curtail the scope of suggestions for optimizing effective educational methods. An evident mediating path from motivation to language skill was not found for various reasons (e.g., low expectancy of future success and effort, strong required motivation in Chinese classes due to its status as a newly added subject in the 9<sup>th</sup> grade, occupation of the beginning stage of learning a new foreign language, etc.). In consideration of the initial stage of learning that these students occupy vis-à-vis their Chinese schooling, perhaps the most applicable recommendation would be for teachers to steer students towards experiencing success and attaining a sense of achievement in their studies in order to convert their interests and curiosities about learning a new foreign tongue into a successful acquisition of that target language.

## **Summary and Concluding Remarks**

There remains a need for more empirical evidence in the literature concerning language-learning motivation among EFL learners who simultaneously acquire second and third languages. This study sought to at least partially fill that evidentiary gap while advancing the understanding of different motivational orientations for language learning, contingent on the target language and socio-educational context. Furthermore, it is hoped that the study's cataloguing of the effect of discrete motivations on language performance and the mediating role of expectancy for the acquisition of both L2 and L3 will enrich the pedagogic and scholarly knowledge base regarding the importance of motivation in learning English and Chinese.

While most research on motivation for language learning is based on L2, this study simultaneously expanded its scope to L2 and L3, wherein L2 is based on Western cultural values and L3 on East Asian values. By comparing the motivation for the two linguistic categories, this study showed how motivation to learn L2 and L3 differed in the case of the study participants; it also suggested how such motivation may affect language learning. Furthermore, this study posited that the learning motivation orientations for L2 and L3 differ across the categories of instrumental, required, and integrative motivation, and that these language motivations also exert divergent effects on expectancy and objectively evaluated language performance.

In the current EFL Korean cultural context, the findings of the current study point to instrumental motivation as being a significant factor for English learning, while required motivation might be a significant factor in Chinese learning with a limited

effect; however, integration motivation did not appear to be a significant factor in either English or Chinese learning. In addition, past expectancy was found to be a significant mediator in English learning, while no significant mediator was found in Chinese learning. The results of this study further emphasize the pedagogical implications for developing students' motivations, contingent on the target language, and more effectively teaching L2 and L3 by enhancing students' expectancy for success and effort in both languages within an L1-dominant environment.

## **CHAPTER IV**

### **CONCLUSIONS**

The goal of this dissertation was to closely examine the Korean EFL context's L2 and L3 learning in the advent of multilingual trends in Asian countries. To this end, this study investigated cross-language morphological transfer between L1, L2, and L3 while simultaneously analyzing motivation in L2 and L3 learning.

Consequently, this dissertation focused on Korean learners who learned English as a second language (L2) and Chinese as a third language (L3). The first article (Chapter II) studied the nature of morphologically-based cross-language transfer from Korean to reading and writing acquisition in English and Chinese among Korean 9<sup>th</sup> graders. The second article (Chapter III) uncovered the role of motivational expectancy factors for English and Chinese acquisition and the possible relationship between motivation orientation, expectancy, and language performance in the process of learning English and Chinese. This study also investigated the way various factors affected second/foreign language acquisitions in English and Chinese in the Korean middle school context. With this in mind, Chapter III analyzed the within-language acquisition effect in L2 and L3, with a focus on motivational variables. Chapter II, meanwhile, examined both within-language and cross-language transfer/acquisition effects for L2 and L3, with an emphasis on linguistic variables combined with the addition of L1 linguistic variables.

Chapter II provided a model for cross-language transfer between three typologically distant languages, documenting the contribution of morphological awareness in a two-language model and incorporating the two hypotheses of cross-language transfer in the case of a three-language model. Based on the correlation and hierarchical regression analysis, the study identified the unique morphology-based transfer that facilitated reading comprehension across different orthographies and highlighted the importance of proficiency in the target language, which determines the occurrence of such transfer in third-language acquisition. The results of this study suggest that learners in an L1-dominant setting are able to apply their general knowledge about shared morphological structure from L1 to reading in both L2 and L3.

Chapter III expanded the L2 learning motivation study into an L2 and L3 learning motivation model in the framework of process-oriented specifications. The findings in this chapter represent a step forward in understanding the different motivational orientations in language learning, contingent upon the target language and socio-educational context. In addition, the mediating effect of expectancy variables between motivation orientation and language performance was compared in L2 and L3 acquisition. Two SEM models with a mediation model and the best mediating path model were used to analyze the L2 and L3 learning motivation.

In exploring the realm of simultaneous L2 and L3 acquisition, both articles anticipated building on the understanding of diverse linguistic issues, such as cross-language transfer, motivational effect, and the mediating role of variables related to expectancy. In addition, this dissertation analyzed the multilingual research agenda by

incorporating diverse empirical models with correlation analysis, hierarchical regression, and the Structural Equation Modeling (SEM). The empirical results sought to obtain a more accurate understanding of the diverse modes of multilingual research modeling and analysis in this field while providing constructive recommendations aimed at enhancing the efficacy of pedagogical practices regarding second- and third-language acquisition in a broader EFL context.

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## APPENDIX A

Cross-Language Transfer (L1 → L2, L1 & L2 → L3)

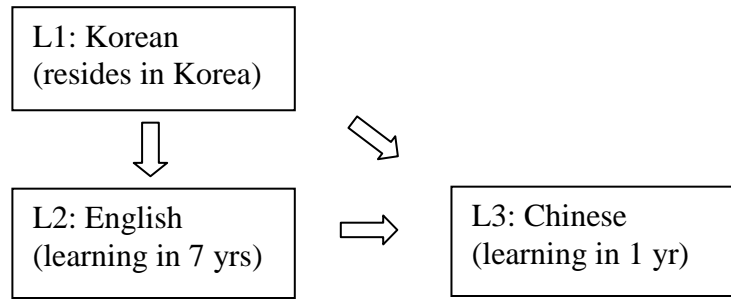


Figure A-1. Research Model of Cross-Language Transfer.

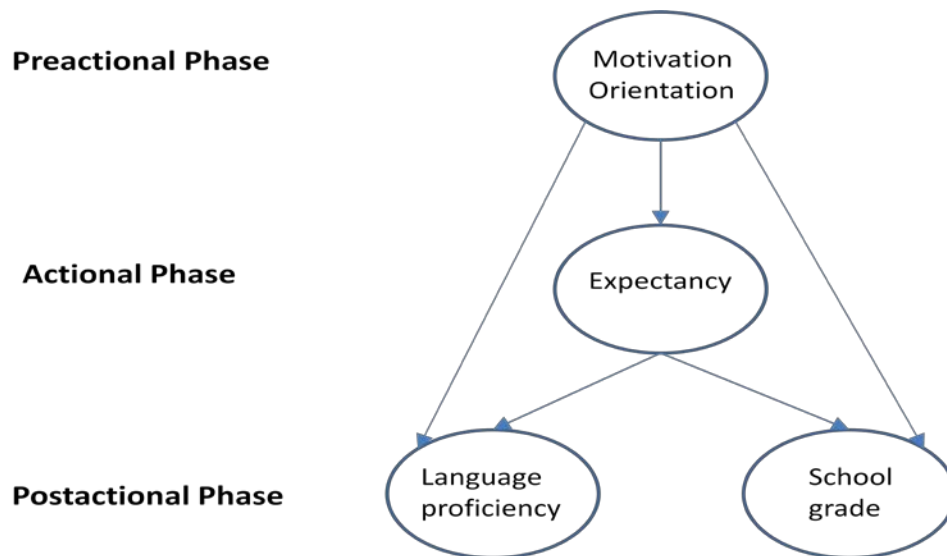
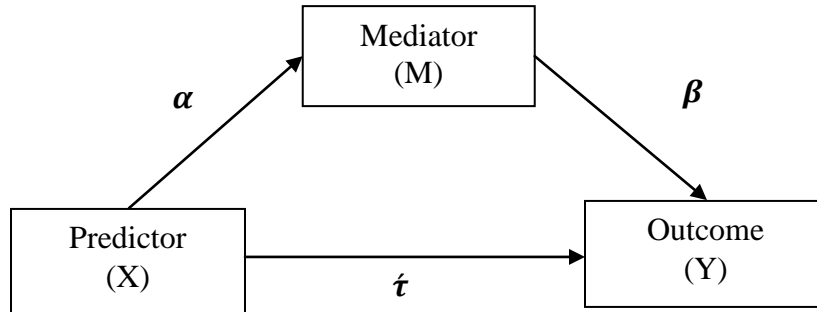


Figure A-2. Research Model on Mediating Effect based on Dörnyei-Otto's Process-Oriented Model (1998).



Direct Effect =  $\tau$

Indirect Effect =  $\alpha\beta$

Total Effect =  $\tau + \alpha\beta$

*Figure A-3. A Single Mediator Model (Cheong et al., 2003).*

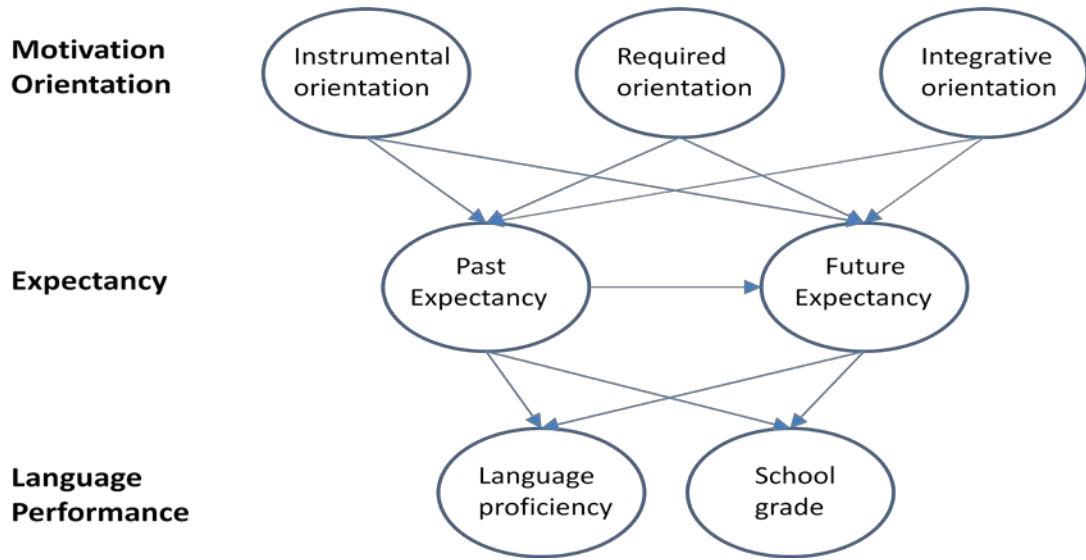


Figure A-4. Research Model on Mediating Path based on Chen et al.'s Model (2005).

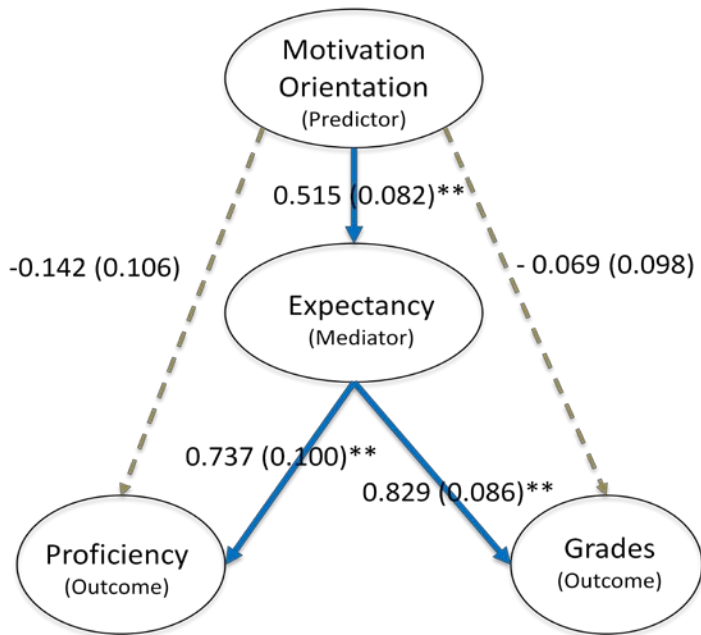


Figure A-5. Mediating Effect of Expectancy in English Learning.

Note. \*  $P < 0.05$ , \*\*  $P < 0.01$

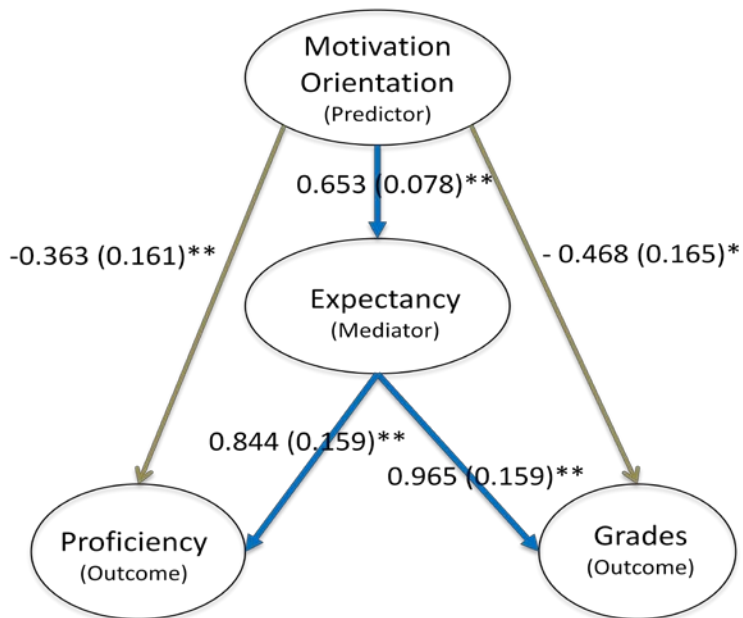


Figure A-6. Mediating Effect of Expectancy in Chinese Learning.

Note. \*  $P < 0.05$ , \*\*  $P < 0.01$

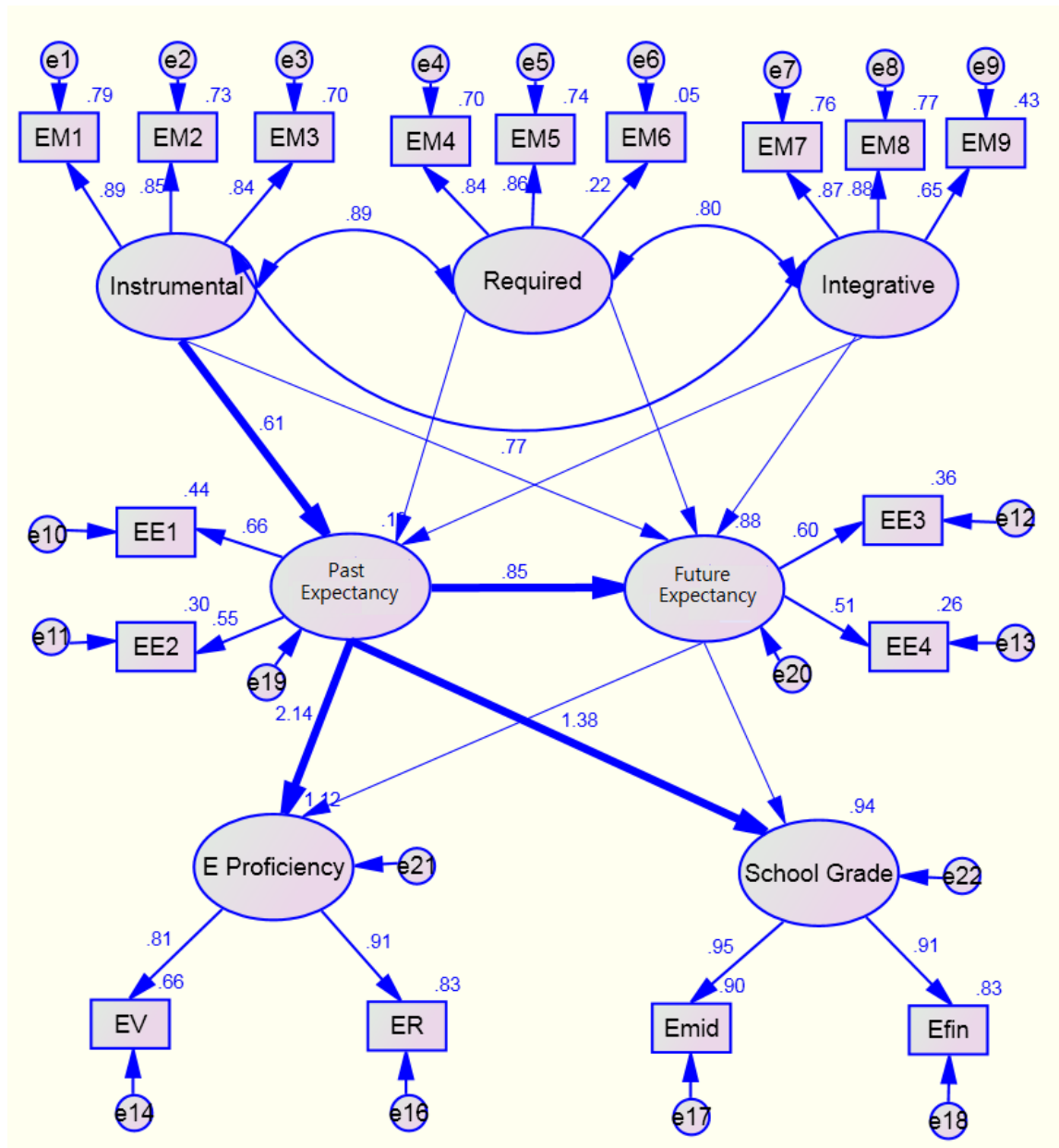


Figure A-7. Mediating Path from Motivation to English Performance.

Note. Bold lines indicate significant constructs and relationships from the final model with a 95% confidence interval.



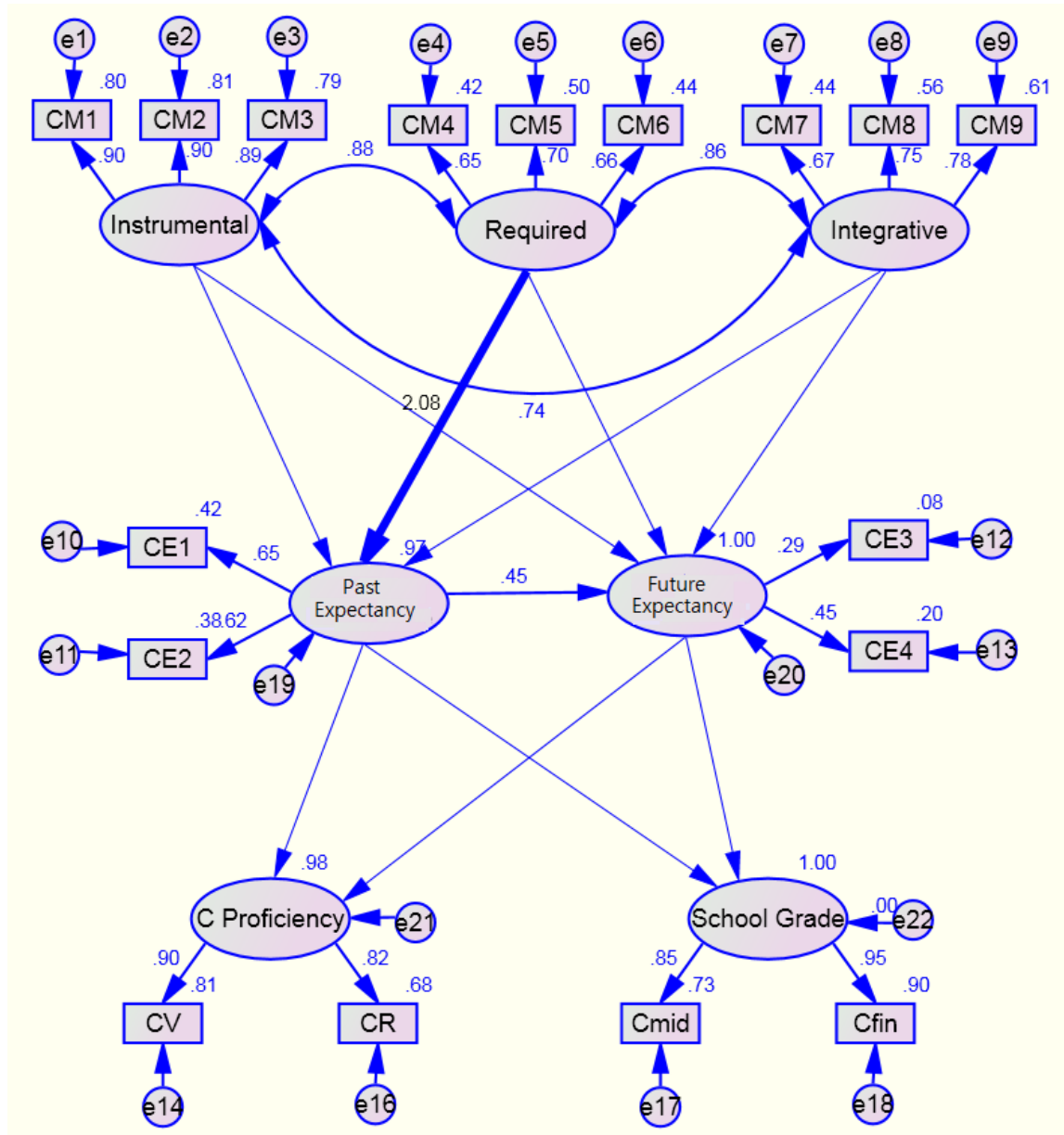


Figure A-8. Mediating Path from Motivation to Chinese Performance.

Note. Bold lines indicate significant constructs and relationships from the final model with a 95% confidence interval.

## APPENDIX B

Table B-1

*Number of Students on a Second Foreign Language in Middle/High School in South Korea*

Language (year introduced)	1991	1995	2000	2005	2010
German (1955)	570,159 (43%)	493,349 (42%)	317,953 (36%)	50,482 (8%)	21,841 (4%)
French (1955)	318,345 (24%)	292,174 (25%)	199,087 (22%)	41,736 (7%)	25,025 (4%)
Chinese (1955)	40,989 (03%)	57,645 (05%)	80,606 (09%)	137,768 (22%)	169,312 (28%)
Spanish (1969)	14,403 (01%)	10,142 (01%)	12,792 (01%)	6,092 (1%)	4,158 (1%)
Japanese (1972)	391,911 (29%)	310,583 (27%)	275,649 (31%)	374,857 (61%)	374,576 (63%)
Russian (1997)	-	-	-	1,837 (0%)	1,132 (0%)
Arabic (2000)	-	-	-	-	-

Table B-2

*Reliabilities, Means, and Standard Deviations (SDs) of All Measures for Korean, English, and Chinese*

Variables	Reliability (alpha)	Total Possible Score	<i>M</i>	<i>SD</i>
Korean Tasks				
Vocabulary	.52	8	6.01	1.42
Morphology	.44	8	6.15	1.38
Reading	.53	8	5.47	1.68
Writing	.65	10	8.45	1.24
English Tasks				
Vocabulary	.73	8	4.48	2.24
Morphology	.67	8	4.48	2.06
Reading	.76	8	5.56	2.19
Writing	.62	10	8.40	1.21
Chinese Tasks				
Vocabulary	.75	8	5.24	2.26
Morphology	.63	8	3.82	1.97
Reading	.74	8	5.51	2.15
Writing	.68	10	7.82	1.70

Table B-3

*Correlations among Korean, English, and Chinese Tasks*

Variables	1	2	3	4	5	6	7	8	9	10	11	12
Korean Tasks												
1. Vocabulary	-											
2. Morphology	.51***	-										
3. Reading	.63***	.53***	-									
4. Writing	.35***	.45***	.32***	-								
English Tasks												
5. Vocabulary	.33***	.63***	.39***	.37***	-							
6. Morphology	.38***	.68***	.37***	.40***	.67***	-						
7. Reading	.45***	.72***	.44***	.38***	.74***	.71***	-					
8. Writing	.54***	.62***	.55***	.56***	.66***	.66***	.69***	-				
Chinese Tasks												
9. Vocabulary	.43***	.67***	.42***	.55***	.60***	.68***	.67***	.64***	-			
10. Morphology	.36***	.60***	.31***	.42***	.52***	.62***	.55***	.49***	.64***	-		
11. Reading	.39***	.71***	.40***	.49***	.51***	.60***	.55***	.56***	.74***	.59***	-	
12. Writing	.40***	.49***	.37***	.51***	.36***	.38***	.47***	.49***	.52***	.56***	.45***	-

Note. \*\*\*  $p < .001$

Table B-4

*Hierarchical Regression Analysis Predicting English Reading and Writing Skills Using English and Korean Tasks*

Variables	Multi <i>R</i>	Adjusted Mult <i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> change	<i>F</i> change
Predicting English Reading				
Step 1: E vocabulary	.74	.55	.55	192.44***
Step 2: E morphology	.80	.63	.08	36.15***
Step 3: K vocabulary	.81	.65	.02	10.89**
Step 4: K morphology	.83	.68	.03	15.25***
Predicting English Writing				
Step 1: E vocabulary	.65	.42	.42	114.23***
Step 2: E morphology	.71	.50	.08	27.49***
Step 3: K vocabulary	.77	.58	.08	31.14***
Step 4: K morphology	.77	.58	.00	1.67

*Note.* Multi *R* = multiple correlation, \*\*\**p*<.001; \**p*<.05; \*\**p*<.01

Table B-5

*Hierarchical Regression of English Reading by Comparing Two Groups (High- and Low-Level English Reading Skills)*

Variables	Multi <i>R</i>	Adjusted Mult <i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> change	<i>F</i> change
Predicting English Reading (High English reading skills, <i>n</i> = 99)				
Step 1: E vocabulary	.48	.22	.22	29.28***
Step 2: E morphology	.62	.38	.16	24.57***
Step 3: K vocabulary	.62	.37	-.01	.00
Step 4: K morphology	.65	.40	.03	6.48*
Predicting English Reading (Low English reading skills, <i>n</i> = 61)				
Step 1: E vocabulary	.50	.23	.23	19.28***
Step 2: E morphology	.60	.33	.10	9.70**
Step 3: K vocabulary	.63	.36	.03	3.64
Step 4: K morphology	.63	.35	-.01	.33

*Note.* Multi *R* = multiple correlation, \*\*\**p*<.001; \**p*<.05; \*\**p*<.01

Table B-6

*Hierarchical Regression Analysis Predicting Chinese Reading and Writing Using Chinese, Korean, and English Tasks*

Variables	Multi <i>R</i>	Adjusted Mult <i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> change	<i>F</i> change
<b>Predicting Chinese Reading</b>				
Step 1: C vocabulary	.74	.55	.55	195.21***
Step 2: C morphology	.76	.57	.02	8.98**
Step 3: K vocabulary	.76	.57	.00	1.52
Step 4: K morphology	.80	.63	.06	27.12***
Step 5: E vocabulary	.80	.63	.00	1.03
Step 6: E morphology	.80	.63	.00	.05
<b>Predicting Chinese Writing</b>				
Step 1: C vocabulary	.52	.27	.27	58.50***
Step 2: C morphology	.60	.35	.08	22.17***
Step 3: K vocabulary	.62	.37	.02	6.28*
Step 4: K morphology	.62	.37	.00	.67
Step 5: E vocabulary	.62	.37	.00	.40
Step 6: E morphology	.63	.38	.01	2.52

*Note.* Multi *R* = multiple correlation, \*\*\* $p < .001$ ; \* $p < .05$ ; \*\* $p < .01$

Table B-7

*Hierarchical Regression of Chinese Reading by Comparing Two Groups (High- and Low-Level Chinese Reading Skills)*

Variables	Multi <i>R</i>	Adjusted Mult <i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> change	<i>F</i> change
Predicting Chinese Reading (High Chinese Reading Skills, <i>n</i> = 75)				
Step 1: C vocabulary	.50	.24	.24	24.51***
Step 2: C morphology	.54	.27	.03	4.17*
Step 3: K vocabulary	.55	.27	.00	.73
Step 4: K morphology	.63	.36	.09	11.00**
Step 5: E vocabulary	.63	.35	-.01	.23
Step 6: E morphology	.63	.34	-.01	.05
Predicting Chinese Reading (Low Chinese Reading Skills, <i>n</i> = 85)				
Step 1: C vocabulary	.49	.24	.23	27.32***
Step 2: C morphology	.49	.23	-.01	.25
Step 3: K vocabulary	.51	.24	.01	1.38
Step 4: K morphology	.60	.32	.08	11.49**
Step 5: E vocabulary	.60	.32	.00	.30
Step 6: E morphology	.60	.31	-.01	.18

*Note.* Multi *R* = multiple correlation, \*\*\**p*<.001; \**p*<.05; \*\**p*<.01



Table B-8

*Means, Standard Deviations (SD), and Reliabilities of All Measures for English*

	Variables	Total Possible Score	Mean	SD	Reliability (alpha)	Reliability-Overall
Motivation Orientation	Get higher paying job	5	3.79	1.11		
	Obtain raise	5	3.75	1.06		
	Change job easily	5	3.86	1.00	.90	
	Pass entrance exam	5	3.92	1.02		
	Pass required class	5	3.87	1.01		
	Pass job exam	5	3.47	1.04	.61	
	Travel overseas	5	4.09	.92		
	Make social connections	5	3.91	1.01		
	Understand movies, books, and magazines	5	3.68	1.00	.84	.90
Expectancy	Success (previous success)	5	3.37	1.12		
	Effort (previous effort)	5	2.64	1.16	.56	
	Success (future success)	5	2.57	.89		
	Effort (future effort)	5	2.78	1.21	.57	.63
Language Performance	Vocabulary	8	4.48	2.24	.73	
	Reading comprehension	8	5.56	2.19	.76	
	Mid-term exam	10	5.89	2.66	.85	
	Final exam	10	5.47	2.76	.93	.89

Table B-9

*Means, Standard Deviations (SD), and Reliabilities of All Measures for Chinese*

	Items	Total Possible Score	Mean	SD	Reliability (alpha)	Reliability-Overall
Motivation Orientation	Get higher paying job	5	3.19	1.07		
	Obtain raise	5	3.14	1.08		
	Change job easily	5	3.02	1.14	.92	
	Pass entrance exam	5	3.44	1.06		
	Pass required class	5	3.16	1.05		
	Pass job exam	5	3.12	1.03	.70	
	Travel overseas	5	3.70	1.04		
	Make social connections	5	3.29	1.13		
	Understand movies, books, and magazines	5	3.09	.97	.78	.90
Expectancy	Success (previous success)	5	3.37	1.18		
	Effort (previous effort)	5	2.81	1.03	.59	
	Success (future success)	5	1.52	.98		
	Effort (future effort)	5	1.22	.66	.52	.56
Language Performance	Vocabulary	8	5.25	2.19	.75	
	Reading comprehension	8	5.49	2.09	.74	
	Mid-term exam	10	7.34	2.20	.85	
	Final exam	10	5.66	2.59	.88	.87

Table B-10

*Overall Factor Analysis Results*

	Items	English			Chinese		
		Factor 1	Factor 2	Factor 3	Factor 1	Factor 2	Factor 3
Motivation Orientation	Get higher paying job	.73			.72		
	Obtain raise	.67			.73		
	Change job easily	.71			.72		
	Pass entrance exam	.66			.45		
	Pass required class	.70			.51		
	Pass job exam	.08			.50		
	Travel overseas	.66			.42		
	Make social connections	.64			.46		
	Understand movies, books, and magazines	.45			.58		
Expectancy	Success (previous success)		.51			.69	
	Effort (previous effort)		.44			.72	
	Success (future success)		.57			.74	
	Effort (future effort)		.43			.66	
Language Performance	Vocabulary			.76			.85
	Reading comprehension			.86			.79
	Mid-term exam			.90			.81
	Final exam			.86			.88

Table B-11

*Factor Analysis Results for Each Phase*

		Items	English			Chinese		
			Factor 1	Factor 2	Factor 3	Factor 1	Factor 2	Factor 3
Motivation Orientation	Instrumental Orientation	Get higher paying job	.92			.87		
		Obtain raise	.92			.87		
		Change job easily	.89			.86		
	Required Orientation	Pass entrance exam		.83			.54	
		Pass required class		.82			.70	
		Pass job exam		.14			.65	
	Integrative Orientation	Travel overseas			.78			.64
		Make social connections			.85			.78
		Understand movies, books, and magazines			.64			.66
Expectancy	Past Expectancy	Success (previous success)	.70		-		.71	-
		Effort (previous effort)	.70		-		.71	-
	Future Expectancy	Success (future success)		.71	-		.69	-
		Effort (future effort)		.71	-		.69	-
Language Performance	Proficiency	Vocabulary	.87		-	.87		-
		Reading comprehension	.87		-	.87		-
	School Grade	Mid-term exam		.93	-		.90	-
		Final exam		.93	-		.90	-

Table B-12

*Correlations between Motivation and Language Performance and between Expectancy and Language Performance*

	Items	English Performance				Chinese Performance			
		Voca	Reading	Mid	Final	Voca	Reading	Mid	Final
Motivation Orientation	Get higher paying job	.16*	.20**	.33***	.28***	.24**	.24**	.25**	.20**
	Obtain raise	.16*	.17*	.29***	.26***	.12	.14	.13	.12
	Change job easily	.12	.14	.21**	.20**	.12	.10	.12	.10
	Pass entrance exam	.15*	.14	.24**	.22**	.27***	.28***	.28**	.31***
	Pass required class	.10	.15	.21**	.20**	.30***	.21**	.18*	.26**
	Pass job exam	.19*	.17*	.21**	.20**	.10	.07	.11	.13
	Travel overseas	.04	.09	.13	.13	.04	.10	.04	.03
	Make social connections	.06	.09	.13	.12	.11	.10	.12	.07
	Understand movies, books, and magazines	.06	.08	.10	.13	.15	.17*	.10	.13
	Expectancy	Success (previous success)	.55***	.55***	.57***	.63***	.34***	.36***	.40***
Effort (previous effort)		.44***	.44***	.49***	.50***	.37***	.33***	.35***	.39***
Success (future success)		.33***	.41***	.50***	.46***	.15*	.16*	.17*	.20**
Effort (future effort)		.24***	.28***	.37***	.31***	.24**	.17*	.22**	.32**

*Note.* \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

Table B-13

*Standardized Parameter Estimates for Direct and Indirect Effect of Expectancy in Mediating Model for English*

Outcomes	Estimates (SE)	<i>p</i> value
<b><i>Direct Effect Without Expectancy</i></b>		
$\tau$ (Motivation Orientation $\rightarrow$ Proficiency)	0.237 (0.081)	0.003
$\tau$ (Motivation Orientation $\rightarrow$ Grade)	0.359 (0.0703)	< .001
<b><i>Direct Effect With Expectancy</i></b>		
$\acute{\tau}$ (Motivation Orientation $\rightarrow$ Proficiency)	-0.142 (0.106)	0.178
$\acute{\tau}$ (Motivation Orientation $\rightarrow$ Grade)	-0.069 (0.098)	0.482
$\alpha$ (Motivation Orientation $\rightarrow$ Expectancy)	0.515 (0.082)	< .001
$\beta$ (Expectancy $\rightarrow$ Proficiency)	0.737 (0.100)	< .001
$\beta$ (Expectancy $\rightarrow$ Grade)	0.829 (0.086)	< .001
<b><i>Indirect Effect<sup>†</sup> (<math>\alpha\beta</math>)</i></b>		
Proficiency	0.380 (0.092)	< .001
Grade	0.427 (0.095)	< .001
<b><i>Model Fit</i></b>		
Chi-Square ( <i>d.f.</i> )	169.420 (110)	
CFI	0.967	
RMSEA	0.056	
SRMR	0.058	

Table B-14

*Standardized Parameter Estimates for Direct and Indirect Effect of Expectancy in Mediating Model for Chinese*

Outcomes	Estimates (SE)	<i>p</i> value
<b><i>Direct Effect Without Expectancy</i></b>		
$\tau$ (Motivation Orientation $\rightarrow$ Proficiency)	0.185 (0.086)	0.031
$\tau$ (Motivation Orientation $\rightarrow$ Grade)	0.159 (0.084)	0.058
<b><i>Direct Effect With Expectancy</i></b>		
$\hat{\tau}$ (Motivation Orientation $\rightarrow$ Proficiency)	-0.363 (0.161)	0.024
$\hat{\tau}$ (Motivation Orientation $\rightarrow$ Grade)	-0.468 (0.165)	0.005
$\alpha$ (Motivation Orientation $\rightarrow$ Expectancy)	0.653 (0.078)	<.001
$\beta$ (Expectancy $\rightarrow$ Proficiency)	0.844 (0.159)	<.001
$\beta$ (Expectancy $\rightarrow$ Grade)	0.965 (0.159)	<.001
<b><i>Indirect Effect<sup>†</sup> (<math>\alpha\beta</math>)</i></b>		
Proficiency	0.551 (0.151)	<.001
Grade	0.630 (0.164)	<.001
<b><i>Model Fit</i></b>		
Chi-Square ( <i>d.f.</i> )	232.232 (110)	
CFI	0.919	
RMSEA	0.081	
SRMR	0.070	

Table B-15

*Values of Fit Statistics for Two SEM Mediating Path Models*

SEM Models	$\chi^2$	df	$\chi^2/df$	GFI	CFI	SRMR	RMSEA
English Motivation	163.6	105	1.6	.91	.97	.087	.057
Chinese Motivation	182.2	105	1.7	.90	.95	.085	.066



## APPENDIX C

Instrument Forms of Language Skill Measures for English, Chinese, and Korean, and  
Survey Forms of Motivation Measures for English and Chinese

### Part I: English

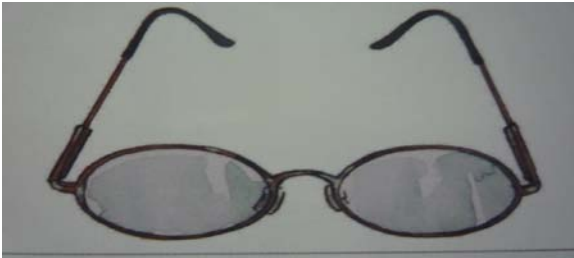
※ Vocabulary [1-8]: You will see a picture. Please write the word in English.

1.



(            )

2.



(            )

3.



(            )

4.



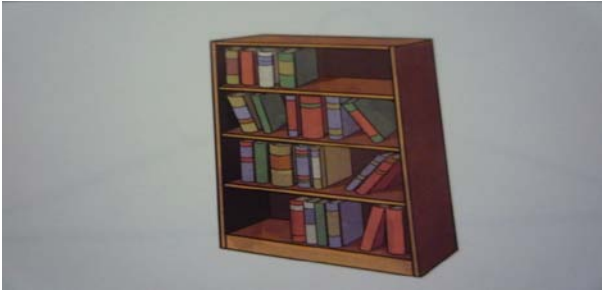
(            )

5.



(       )

6.



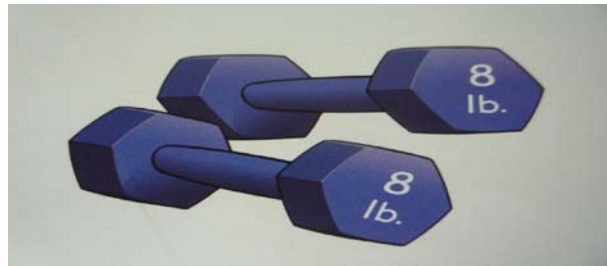
(       )

7.



(       )

8.



(       )

※ **Morphological awareness [9-16]**

You will see a key word followed by an incomplete sentence. Please complete each sentence by filling in the blanks with words associated with the key words.

Practice. **Driver** Children are too young to \_\_\_\_\_. Answer: drive

9. **growth** She wanted her plant to \_\_\_\_\_.

10. **runner** How fast can she \_\_\_\_\_?

11. **beauty** She was so \_\_\_\_\_ in the past, but now she is not.

12. **famous** The actor would achieve much \_\_\_\_\_.

13. **warm** He chose the jacket for its \_\_\_\_\_.

14. **assist** The teacher will give you \_\_\_\_\_.

15. **adventure** The trip sounded \_\_\_\_\_.

16. **profit** Selling lemonade in summer is \_\_\_\_\_.

※ **Reading [17-24]**

**Read the sentence to yourself and write one word that goes in the blank space. [17-19]**

17. A bird has two \_\_\_\_\_.

18. Bill went back to school the next day. His \_\_\_\_\_ asked him if he felt better.

19. There was a big fire in this town. Some houses were \_\_\_\_\_.

**Read the sentence and select the most appropriate word that goes in the blank space. [20-21]**

20. There has been, throughout history, a man who was swallowed by a whale and lived to tell the tale. The record that proves his unusual \_\_\_\_\_ occurred in England.

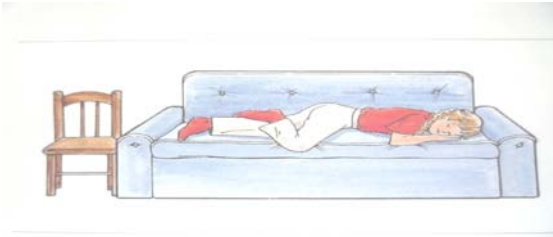
① experience    ② whale    ③ dream    ④ investment

21. How about exploring one of our many islands? Some are \_\_\_\_\_ and others are strictly nature in the raw.

① artificial    ② huge    ③ refined    ④ developed

※ [22-24] Look at each picture and complete the following sentences.

22.



She fell asleep on the \_\_\_\_\_.

23.



I go to bed \_\_\_\_\_ night.

24.



The girl is taller than \_\_\_\_\_.

※ Writing [25-26]

25. Read the following paragraph and complete the sentence using the words, **[I, tell, the other kids, to worry]**.

He dug for 8 hours... 12 hours... 24 hours...then, in the 38th hour, he pulled back a huge rock and heard his son's voice. He shouted his son's name, "Armand!" He heard back, "Dad? It's me, Dad! \_\_\_\_\_ . I told them that you would save me and when you would come to save me. You promised. You did it, Dad!" "What's going on in there? How is it?" the father asked. "We're scared, hungry, thirsty, and thankful you're here. When the building fell down, it made a triangular shape, and it saved us. "

( \_\_\_\_\_ )

26. Read the following conversation and answer the question in the box.

Cathy: What's wrong with this thing? It never works.  
Michael: Are you having trouble?  
Cathy: Oh, Michael. You're a computer wizard. Can you give me a hand?  
Michael: Sure! What's the problem?  
Cathy: I'm trying to download this song, but it doesn't work.  
Michael: OK. I will take a look. Oh. This song is copyrighted.  
Cathy: Copyrighted? What does that mean?  
Michael: It means you can listen to it, but you can't download it.  
Cathy: Do you think I should buy the CD?  
Michael: I think you have to. You can't save this song on your MP3 player.

Q : What does Michael suggest to Cathy to solve her problem?

A : He suggests that \_\_\_\_\_.

( )

## Part II: Chinese

### ※ Vocabulary [1-8]

You will see a picture. Please choose the correct Pinyin.

(그림에 알맞은 한어병음을 고르시오.)

1.



① dǎ

② qú

③ tī

④ piú

⑤ qiú

2.



① qīn

② huán

③ qián

④ tián

⑤ zhāng

3.



① bǐ

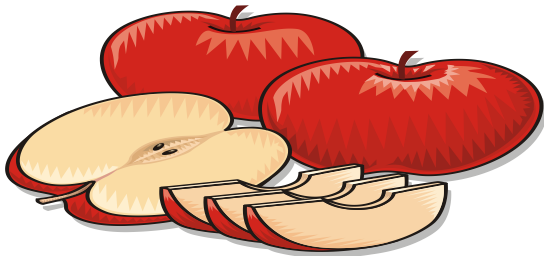
② sù

③ běn

④ shū

⑤ shūbāo

4.



① lí

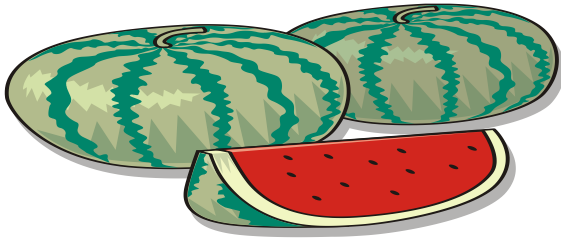
② chī

③ shìzi

④ hǎochī

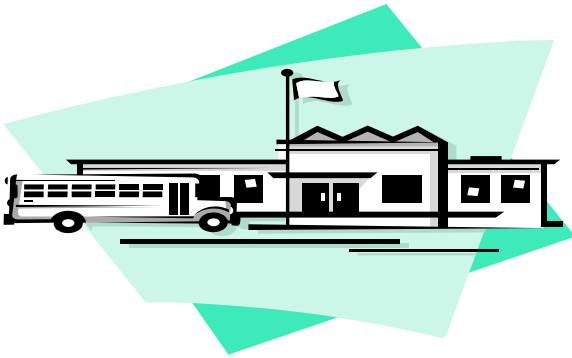
⑤ píngguǒ

5.



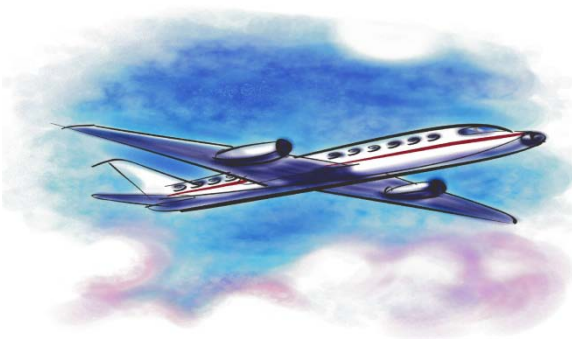
- ① xī
- ② dōng
- ③ shuǐ
- ④ bāozi
- ⑤ xīguā

6.



- ① xué
- ② xuéxí
- ③ lǎoshī
- ④ tóngxué
- ⑤ xuéxiào

7.



- ① fēijī
- ② huǒchē
- ③ cāochǎng
- ④ fēicháng
- ⑤ gōnggòngqìchē

8.



- ① mǎ
- ② qí
- ③ zuò
- ④ dìtiě
- ⑤ zìxíngchē

※ **Morphological Awareness** [9-16]

On each line, there is one target word followed by three choices. Your task is to circle the choice that is most similar to the target word. Let's practice with the two examples.

(왼쪽의 중국어 제시어와 비교하였을 때 낱말구조(명사+명사, 동사+명사)가 가장 비슷한 단어를 오른쪽에서 찾아 동그라미 하세요. 먼저 아래 예제를 참고하세요.)

예제 (Examples)	보기(Target)	선택(Choices)			답(Answer)
	客人	(A)说话	(B)电影	(C)找人	(B)
喝茶	(A)回家	(B)季节	(C)春天	(A)	

If you understand the task now, let's start to solve the following questions. (자, 이제 문제유형을 이해하였으면 아래 문제들을 풀어보세요).

	보기(Target)	선택(Choices)			답(Answer)
9.	电脑	(A)铅笔	(B)做菜	(C)写字	
10.	弟弟	(A)喜欢	(B)好吃	(C)妹妹	
11.	火车	(A)坐车	(B)起来	(C)爸爸	
12.	朋友	(A)睡觉	(B)哥哥	(C)唱歌	
13.	吃鱼	(A)骑马	(B)汽车	(C)机场	
14.	地铁	(A)水果	(B)知道	(C)做饭	
15.	上课	(A)早上	(B)晚上	(C)下课	
16.	吃饭	(A)本子	(B)看字	(C)书包	



※ Reading [17-24]

17. Which is consistent with the following dialogue? (대화 내용과 일치하는 것은?)

A : Nǐ jiā yǒu jǐ kǒu rén?  
B : Wǒ jiā yǒu sì kǒu rén, bàba, māma, jiějie hé wǒ. Nǐ ne?  
A : Wǒ jiā yǒu wǔ kǒu rén, bàba, māma, mèimei, dìdi hé wǒ.

- ① A는 누나가 있고, 여동생은 없다(A has an elder sister, but no younger sister).
- ② A는 아빠, 엄마, 여동생, 남동생이 있다(A has a father, mother, younger sister, and a younger brother).
- ③ B는 아빠, 엄마, 여동생이 있고, 가족이 모두 넷이다(B has a father, mother, and younger sister, and all four are members of the family).
- ④ B는 아빠, 엄마, 누나가 있고, 가족이 모두 다섯이다(B has a father, mother, and older sister, and all are members of a family of five).
- ⑤ A와 B는 모두 아빠, 엄마와 여동생이 있고, 가족이 모두 다섯이다(Both A and B have a father, mother, and younger sister, and all are members of a family of five).

18. Which is the best expression for “Does your friend see or not?”  
(‘너의 친구는 보니, 안 보니?’의 표현은?)

- ① 你的朋友看不看?
- ② 看不看你朋友?
- ③ 你的朋友看不看吗?
- ④ 看不看你朋友吗?
- ⑤ 看不看你朋友吧?

19. Which is the best answer for the underlined expression?  
(밑줄 친 곳에 들어갈 알맞은 말은?)

A : Nǐ qù nǎr?  
B : Wǒ qù huǒchēzhàn.  
A : Nǐ zěnme qù?  
B : 나는 지하철을 타고 갑니다 (I go there by a subway).

- ① Wǒ qù dìtiě.
- ② Wǒ lái dìtiě.
- ③ Wǒ zuò dìtiě.
- ④ Wǒ zuò dìtiě qù.
- ⑤ Wǒ zuò dìtiě lái.

20. Which is the best answer for the underlined expression?  
(밑줄 친 곳에 들어갈 알맞은 말은?)

A : 공항에 무엇하러 갑니까 (Why do you go to the airport)?  
B : Qù jiē tā de péngyou.

- ① Lái jīchǎng zuò shénme?
- ② Qù jīchǎng zuò shénme?
- ③ Lái jīchǎng zuò shénme ma?
- ④ Qù jīchǎng zuò shénme ma?
- ⑤ Zuò shénme lái jīchǎng ma?

21. Choose which is the best expression for saying, "Let's go outside for a walk."  
(‘우리 나가서 좀 걸자.’라는 표현은?)

- ① Wǒmen chūqù zǒu zou.
- ② Wǒmen chūqù zóu zou.
- ③ Wǒmen chūlái zóu zou.
- ④ Wǒmen chūlái zǒu zou ba.
- ⑤ Wǒmen chūqù zóu diǎnr ba.

22. Read the following dialogue and solve the problem.  
(다음 글을 읽고 물음에 답하십시오).

Déchāng : Bàba, chīfàn le.  
Bàba : Nǐ mā zuò le zhème duō cài!  
Déchāng : Shì a! Jīntiān de cài zhēn duō.  
Bàba : Zhè ge cài, zhēn hǎochī!

When is the dialogue done? (위의 대화의 시간적 배경으로 가장 알맞은 것은?)

- ① (night)
- ② (early morning)
- ③ (afternoon)
- ④ (mealtime)
- ⑤ (bedtime)

23. Which is the best answer to fill in the blank?  
(밑줄 친 곳에 들어갈 말로 알맞은 것은?)

A : Zhè jiào \_\_\_?  
B : Nà shì diànnǎo.

- ① ma
- ② nà
- ③ ne
- ④ míngzi
- ⑤ shénme

24. Which is a suitable answer when saying, "She is also my friend."

(‘그녀도 나의 친구입니다.’의 의미로 맞은 것은?)

- ① Tā shì wǒ de péngyou.
- ② Tā shì yě wǒ de péngyou.
- ③ Tā yě shì wǒ de péngyou.
- ④ Tā méi shì wǒ de péngyou.
- ⑤ Tā yě méi shì wǒ de péngyou.

※ **Writing [25-26]**

25. Read the following conversation and complete the sentence using the following words, [欢迎/ 都/ 时候/ 来/ 什么].

东 浩：喂，您好！请问，王老师在吗？  
王 老师：我就是。你是谁？  
东 浩：我是东浩，韩国学生。  
王 老师：哦，你好！什么事？  
东 浩：下星期我可以去找您吗？  
王 老师：可以。\_\_\_\_\_。

(위 글의 밑줄 친 빈칸에 [欢迎/ 都/ 时候/ 来/ 什么]을 내용에 맞게 다시 써서 바른 문장을 완성하십시오.)

( )

26. Read the following conversation and write a sentence in the box.

明华：你学什么？  
东浩：我学汉语。  
明华：你学了多长时间？  
东浩：我学了六个月。

(밑줄 친 빈칸에 들어갈 질문을 위 글에서 찾아 문맥에 맞게 단어를 고쳐 알맞게 완성하십시오.)

A: \_\_\_\_\_?  
B: 我看了一个小时。

( )

**Part III: Korean**

※ **Vocabulary [1-8]**

1. Which of the followings is most appropriate for filling in the blank?

(다음 ( )에 알맞은 것을 고르십시오.)

우리 학교는 전교생을 다 합쳐도 ( ) 열 명밖에 안 된다.

- ① 자칫            ② 불과            ③ 무려            ④ 차마

2. Which of the following is the closest meaning to the underlined word. (밑줄과 의미가 비슷한 것은?)

오늘은 공원을 산책하기에 가장 좋은 날씨이다.

- ① 하는 수 없이   ② 어쩔 수 없이   ③ 더할 나위 없이   ④ 두말할 나위 없이

[3-4] Which of the following words can be commonly used in the blank?

(다음에 공통으로 들어갈 단어를 고르십시오.)

3. ( ) ( ) ( ) ( )

- ① 나다            ② 붙다            ③ 번지다            ④ 감돌다

4. ( ) ( ) ( ) ( )

- ① 배다            ② 찌다            ③ 잡히다            ④ 나오다

[5-6] Read the following paragraph and answer the question. (다음 글을 읽고 물음에 답하십시오.)

(A) / (B)

5. Which of the following words is appropriate for A? (A 에 알맞은 말을 고르십시오.)

- ① 고층            ② 곤욕            ③ 역경            ④ 특수

6. Which of the following words is appropriate for B? (B 에 알맞은 말을 고르십시오.)

- ① 없을진대      ② 없다손 치고    ③ 없기는커녕    ④ 없다면서도

[7-8] Read the following paragraph and answer the question. (다음 글을 읽고 물음에 답하십시오.)

(A) (B)

7. Which of the following is appropriate for A? (A 에 알맞은 말을 고르십시오.)

- ① 희생한됐다    ② 희생한다던데    ③ 희생한다느니    ④ 희생한다는지라

8. Which of the following is appropriate for B? (B 에 알맞은 말을 고르십시오.)

- ① 누워서 침 빨기            ② 땅 짚고 헤엄치기  
③ 계란으로 바위 치기        ④ 닭 쫓던 개 지붕 쳐다보기

※ **Morphological awareness [9-16]**

You will see a key word followed by an incomplete sentence. Please complete each sentence by filling in the blank with a word associated with that key word.

Example **지우다 (erase)**

선미는 칠판을 \_\_\_\_\_로(으로) 지웠다.

Sunmi cleans the board with an \_\_\_\_\_. 정답: 지우개 (eraser)

9. **빠다** 재현이는 더하기와 \_\_\_\_\_을(를) 잘 할 수 있다.
10. **춥다** 지민이는 올 겨울의 \_\_\_\_\_을(를) 견딜 수가 없다.
11. **힘**이 상자를 들어올리기가 \_\_\_\_\_.
12. **발**철수는 신발도 신지 않고 \_\_\_\_\_로(으로) 길을 걸었다.
13. **졸리다**영희는 늦잠을 자서 수업시간에 \_\_\_\_\_를(을) 참을 수 없었다.
14. **앓다**지현이는 감기가 걸려서 몸이 \_\_\_\_\_.
15. **슬프다**주호는 할머니가 아파서 \_\_\_\_\_을(를) 느낀다.
16. **떨어짐**설령 이번 시험에 \_\_\_\_\_최선을 다했으니 후회는 없다.

※ **Reading [17-24]**

[17-18] The sentence in the box is the title of a newspaper. Which of the following best describes the title? (다음은 신문 기사의 제목입니다. 가장 잘 설명한 것을 고르십시오.)

17. **경기도, ‘도라산 평화 공원’ 역사적인 첫 삽**

- ① 경기도는 도라산 평화 공원의 건설을 시작했다.
- ② 경기도가 주관한 도라산 평화 공원이 문을 열었다.
- ③ 경기도는 도라산에 평화 공원을 만드는 안을 검토 중이다.
- ④ 경기도의 도라산 평화 공원이 역사적인 관광지로 개발되었다.

18. **최희철 감독 역대 최고 대우, 삼일 은행으로**

- ① 삼일 은행은 최 감독을 해임하고 새로운 감독을 물색하고 있다.
- ② 최 감독은 역대 최고 연봉을 받기 위해 삼일 은행과 협상 중이다.
- ③ 최고 대우를 받고 삼일 은행의 감독을 맡았던 최 감독이 은퇴했다.
- ④ 최 감독이 최고의 연봉을 받으며 삼일 은행의 감독으로 가게 됐다.







26. Referring to the following example, write down the appropriate sentence in the blank.

(다음 예제의 방식을 참고하여 다음 글을 읽고 ( ) 안에 알맞은 말을 쓰십시오.)

Example  
(예제)

‘ . ( . ) . , . ’

(답안: 광고업계에 큰 변화의 파도가 칠 것을 예상하고 있다.)

‘ . . ‘ . ’ . ( . ) . . ’

(답안: )

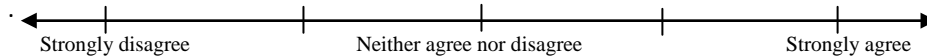
## Part IV: Motivation for Second/Foreign-Language Learning

### English Motivation

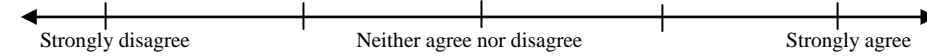
*To what extent do you think about yourself related to English language learning?  
These questions concern only your opinion about yourself.*

[1-3] Instrumental Motivation: This study is your opportunity to gain monetary benefit from your English skills.

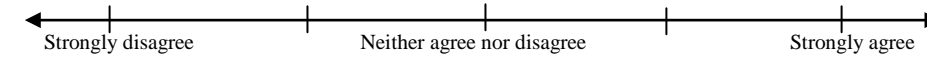
1. You need these skills to help you obtain a higher paying job.



2. You need these skills to help you obtain a raise.

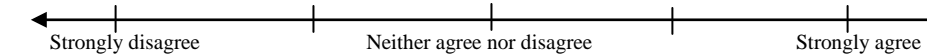


3. You need these skills to help you change jobs more easily.

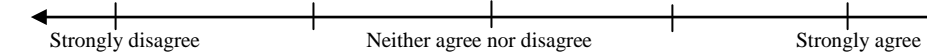


[4-6] Requirement: This study is your opportunity to satisfy the requirements for your English skills.

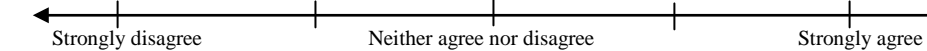
4. You need these skills to help you pass an exam related to further study in high school or at a university.



5. You need these skills to help you pass a required class within your curriculum.

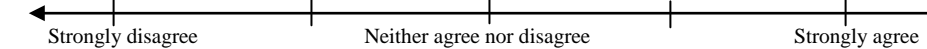


6. You need these skills to help you pass an exam for a job/position in the future.

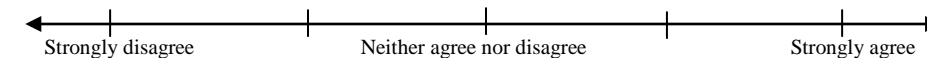


[7-9] Integration: This study is your opportunity to gain cultural integration from your English skills.

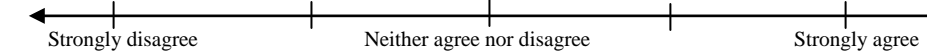
7. You need these English skills to help you travel overseas.



8. You need these English skills to help you understand foreign movies, books, and magazines.

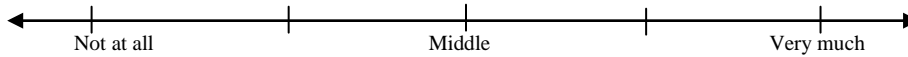


9. You need these English skills to help you make social contacts or gain social prestige.

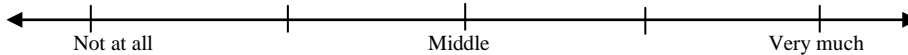


[10-13] Expectancy: This study is your expectation and experience of studying.

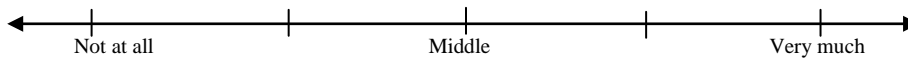
10. How successful were you previously at improving these skills?



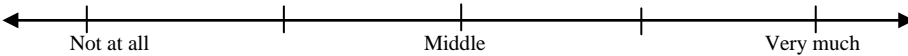
11. How much effort did you put forth previously to improve your language skills?



12. How successful will you be at improving these skills in the future?



13. How much effort do you need to make to improve these skills in the future?

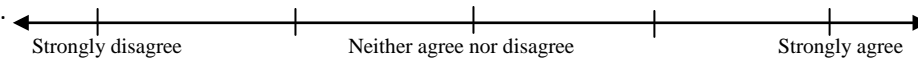


## Chinese Motivation

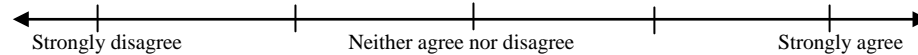
***To what extent do you think about yourself related to learning Chinese?  
These questions regard only your opinion about yourself.***

[1-3] Instrumental: This study is your opportunity to gain monetary benefit from your Chinese skills.

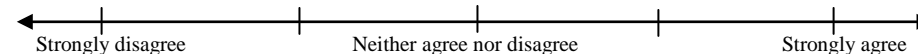
1. You need these Chinese-language skills to help you obtain a higher paying job.



2. You need these skills to help you obtain a raise.

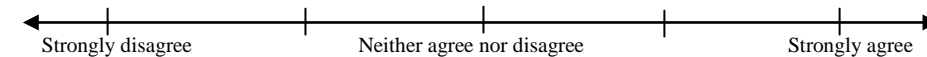


3. You need these skills to help you change jobs more easily.

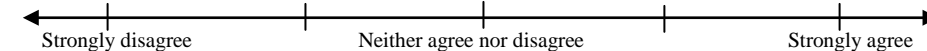


[4-6] Requirement: This study is your opportunity to satisfy the requirements towards your Chinese-language skills.

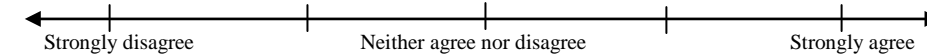
4. You need these skills to help you pass an exam for further study in high school or at a university.



5. You need these skills to help you pass a required class within your curriculum.

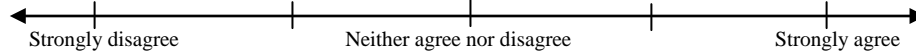


6. You need these skills to help you pass an exam to secure a job/position in the future.

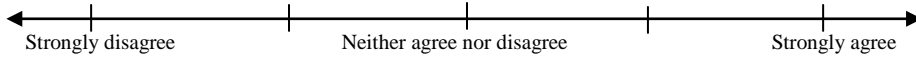


[7-9] Integration: This study is your opportunity to gain cultural integration from your Chinese-language skills.

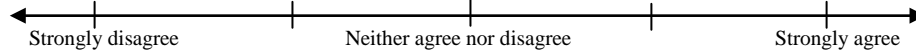
7. You need these skills to help you travel overseas.



8. You need these skills to help you understand foreign movies, books, and magazines.

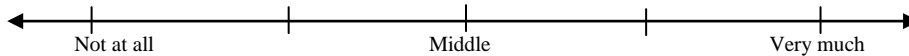


9. You need these skills to help you make social contacts or gain social prestige.

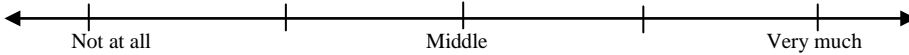


[10-13] Expectancy: This study is your expectation and experience of studying.

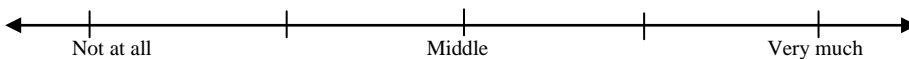
10. How successful were you previously at improving these language skills?



11. How much effort did you previously put forth to improve your language skills?



12. How successful will you be in the future at improving your language skills?



13. How much effort do you need to make to improve your language skills in the future?

