EXPLORING RELATIONS BETWEEN KOREAN TEST TAKERS' ANXIETY

AND PERFORMANCE ON THE TEST OF ENGLISH FOR INTERNATIONAL

COMMUNICATION IN LISTENING AND READING COMPREHENSION

(TOEIC LR)

by

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ABSTRACT

Test anxiety and foreign language anxiety can affect test takers' performance on a high-stakes foreign language proficiency test, such as the Test of English for International Communication in Listening and Reading comprehension (TOEIC LR). As the TOEIC LR is most widely used in South Korea (henceforth, Korea), that country presents a meaningful research context to examine this test. However, despite the TOEIC LR's widespread use, no previous studies have directly examined the relationships between test takers' anxiety and their performance on this test. Therefore, the present study investigated the extent to which test anxiety and foreign language anxiety influenced Korean test takers' performance on the TOEIC LR.

Data were collected from 226 Korean test takers who were university students or graduates in need of TOEIC scores for high-stakes decisions, including graduation and/or employment. Participants completed a questionnaire asking for demographic information and levels of cognitive test anxiety, foreign language reading anxiety, and foreign language listening anxiety. Additionally, they provided their TOEIC scores. Correlational analyses, MANOVA, and multiple regression analyses were conducted to answer the proposed research questions.

The two foreign language anxieties formed greater correlations with each other than either did with cognitive test anxiety, suggesting conceptual overlap between the domains of these foreign language anxieties. In terms of predicting language test scores, foreign language anxieties specific to language skills were more effective than cognitive

test anxiety. The influence of cognitive test anxiety on TOEIC scores was insignificant when foreign language anxieties were included in the regression model.

This study contributes to a finer understanding of the relationship between test anxiety and foreign language anxiety in the Korean context by including all three of the anxiety constructs into a single investigation. Furthermore, this study sheds light on the extent to which Korean test takers' test anxiety and foreign language anxiety affect their performance on a high-stakes English proficiency test. Based on these findings, future research should discuss whether or not test takers' anxiety should be included in test validation and investigate the extent to which test takers' anxiety threatens validity of test score interpretations as possible sources of construct-irrelevant variance.

ACKNOWLEDGMENTS

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CHAPTER 1 – INTRODUCTION

This thesis study examines how anxiety, one of the individual characteristics closely related to test performance and high-stakes test score use, influences Korean students' performance on a high-stakes English language proficiency test, the Test of English for International Communication in Listening and Reading comprehension (TOEIC LR; Choi, 2008).

1.1 Context and Rationale

English as an international language is now perceived as a crucial resource for competition in today's globalized economy (Jeon, 2012). This perception is especially true in South Korea (hence simply Korea) where the nation's economic drive largely depends on international business and human resources (Choi, 2008). In order not to fall behind in this globalized era, Korea has actively invested in English education with various English-focused educational policies, such as inclusion of English education into the elementary curriculum as of 1997 and the implementation of compulsory English courses at the college level (Jeon, 2009; Lim, 2002; Park, 2009). As a result, Korean students are exposed to English education throughout their entire academic career, even though Korea is an English as a Foreign Language (EFL) context.[1] This promotion of more English-heavy education aims to improve Korea's global competitiveness through human capital development (Jeon, 2012). Due to this economic value of English ability in globalized Korea and the Korean government's consequent emphasis on English

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[1] An English as a Foreign Language (EFL) context refers to a context where English is not used as a dominant language (Cheng, Rogers, & Hu, 2004).

education, English proficiency has become one of the most fundamental skills not only to achieve educational success but also to qualify as a member of Korea's competitive workforce (Choi, 2008; Graddol, 2006). As a result, English proficiency test performance plays a critical role in various high-stakes decisions that can directly determine Koreans' future educational, social, professional, and financial success (Cho, 2004; Choi, 2008). One of the most widely used means to make these high-stakes decisions in Korea is the Test of English for International Communication in Listening and Reading comprehension (TOEIC LR; Choi, 2008).

The Educational Testing Service (ETS) in the United States of America first developed the TOEIC LR (Classic TOEIC) in 1979 based on a request from the Japanese Ministry of International Trade and Industry (ETS, 2013). This English proficiency test was designed to assess English listening/reading comprehension of non-native English speakers in international business and professional contexts (ETS, 2013; Powers & Powers, 2015). Although the basic test features of the TOEIC LR, such as testing time, the total number of questions, method of administration (i.e., pencil and paper), range of difficulty, and score scales, have largely remained the same since its inception, there have been revisions on the questions used in the TOEIC LR (Norton, 2015). In 2006, the ETS modified the content and format of the questions of the TOEIC LR (Standard TOEIC) "to better reflect international business language communication scenarios and real language contexts" (In'nami & Koizumi, 2012, p. 133). More recently, in 2016, the ETS announced new updates for the TOEIC LR (New TOEIC) "to reflect the changing use of English and the ways in which individuals commonly communicate in everyday social and workplace situations around the world" (Norton, 2015, p. 1). These revisions

included changes in the number of questions in each part and addition of new types of questions in both the listening and reading sections. In Japan and Korea, the revisions took effect beginning in May 2016 (Norton, 2015).

The TOEIC LR is a norm-referenced multiple-choice examination with 200 items of 2 hours duration. The number of correct responses in each section is converted to scores ranging from 5 to 495 to standardize test takers' degree of proficiency. The detailed test format of the newest version of the TOEIC LR is presented in Table 1.

Table 1

Test Format of the New TOEIC LR (2016)

Section	Part	Content		# of Items	Duration	Scores
Listening Comprehension	1	Photographs		6	45 mins.	495
	2	Question-Response		25		
	3	Conversations		39		
	4	Short Talks		30		
Reading Comprehension	5	Incomplete Sentences		30	75 mins.	495
	6	Text Completion		16		
	7	Reading Comprehension	Single Passages	29		
			Double Passages	25		
Total	7 Parts			200	120 mins.	990

In terms of psychometric properties, both ETS and independent studies have provided evidence for the reliability and validity of the different versions of the TOEIC LR. With respect to reliability, ETS (2013) reported an excellent level of internal consistency of the Standard TOEIC LR based on scores across all forms of their norming

samples (KR-20 reliability index = .90). Other researchers have reported comparably high levels of internal consistency of the Classic and Standard versions of the TOEIC LR (Ito, Shimatani, Norizuki, & Kinoshita, 2009; Liao, Hatrak, & Yu, 2010; Woodford, 1982; Zhang, 2006). Regarding the validity of the TOEIC LR, ETS has reported high correlations between the TOEIC and an in-house English test or other English proficiency tests, such as the Test of English as a Foreign Language (TOEFL), as evidence for criterion-related, concurrent validity (Sewell, 2005). In addition, ETS (2013) has reported moderately strong relationships between test takers' TOEIC LR scores and their self-assessments of their own language skills in listening ($r = .57$) and reading ($r = .52$) as evidence of construct validity.

In the context of Korea, the TOEIC LR was adopted in 1982 as a means to select members for an English-proficient workforce driven by the high economic value for English and heavy dependence on international business (Choi, 2008; ETS, 2009). Although at first multinational corporations constituted most of the major TOEIC LR users in Korea, the spectrum of organizations employing TOEIC LR scores for various purposes has considerably extended over the years (ETS, 2015a; Shin & Im, 2011). For example, Korean universities have been increasingly using their prospective and current students' TOEIC LR scores for admission and graduation decisions in both undergraduate and graduate programs (ETS, 2011a, 2011b, 2014a, 2014b, 2016). In addition, not only private companies but also government agencies and public institutions have integrated TOEIC LR scores into requirement criteria for employment and promotion (ETS, 2011b; Shin & Im, 2011). Due to this substantial demand on TOEIC LR scores in education as well as in the job market, competitive TOEIC LR performance is

now perceived as a necessity for anyone who wishes to pursue higher education or employment in Korea (Shin & Kim, 2012). This strong pursuit of high TOEIC LR scores has resulted in Korea being the biggest market for the TOEIC LR with over 2 million annual test administrations (ETS, 2014a, 2015b). The TOEIC LR, therefore, demonstrates its high-stakes nature in Korea where test takers must strive for high TOEIC LR scores to achieve success in their education as well as in their professional careers.

Due to this position as a high-stakes English language proficiency test in Korea, the TOEIC LR can present potential sources of three types of anxiety, namely cognitive test anxiety, foreign language reading anxiety, and foreign language listening anxiety. The evaluative uses of TOEIC LR scores for high-stakes decisions in Korea may evoke cognitive test anxiety, which represents test takers' worry over their test performance. This type of anxiety interferes with cognitive performance during tests (Cassady & Johnson, 2002). Supported as a relatively universal reaction towards high-stakes evaluation (Connor, 2003; Denscombe, 2000; Jegede, Naidoo, & Okebukola, 1996; McDonald, 2001; Owen-Yeates, 2005), cognitive test anxiety has been reported to affect test performance in a debilitative manner, as shown in lower test scores (Cassady & Johnson, 2002; McIlory, Bunting, & Adamson, 2000).

In addition to TOEIC LR's evaluative nature, use of a foreign language involved in taking the TOEIC LR may elicit foreign language reading anxiety and foreign language listening anxiety in test takers. Identified as distinct types of anxiety specific to foreign language reading and listening, foreign language reading anxiety and foreign language listening anxiety have been shown to adversely influence test performance on

reading (Saito, Horwitz, & Garza, 1999; Tsai & Li, 2012) and on listening (Kim, 2000), respectively. Considering English is a foreign language to Korean test takers, they may experience foreign language reading anxiety and foreign language listening anxiety while taking the TOEIC LR, which in turn may negatively affect their TOEIC LR performance.

Despite these sources of anxiety associated with the TOEIC LR in the Korean context and the empirically supported negative impact of cognitive test anxiety, foreign language reading anxiety, and foreign language listening anxiety on language test performance, research on the relationship between these three types of anxiety and TOEIC LR performance in Korean test takers is surprisingly scarce (Im & Park, 2013; Kim, 2000; Koh & Kim, 2009; Park, 1996). Considering the influence of TOEIC LR scores on various high-stakes decisions in Korea, there is a dire need to investigate the degree to which Korean test takers' cognitive test anxiety, foreign language reading anxiety, and foreign language listening anxiety influence their TOEIC LR performance. In addition, because these three types of anxiety have been conceptually developed and researched in separate research domains, research that includes all of these three types of anxiety and investigates the relationship among them is needed.

1.2 Purpose and Research Questions

The present study aims to fill these literature gaps through examination of how cognitive test anxiety, foreign language reading anxiety, and foreign language listening anxiety are related to each other in the context of English as a Foreign Language testing in Korea and the extent to which these three types of anxiety influence Korean test takers' TOEIC LR performance. The following specific research questions are addressed:

1. What significant differences exist in the levels of cognitive test anxiety,

   foreign language reading anxiety, and foreign language listening anxiety and

   TOEIC LR scores of Korean test takers across gender and the number of

   previous attempts on the TOEIC LR?

2. How are cognitive test anxiety, foreign language reading anxiety, and foreign

   language listening anxiety related to each other?

3. To what extent do age, gender, the number of previous attempts, cognitive test

   anxiety, foreign language reading anxiety, and foreign language listening

   anxiety predict Korean test takers' TOEIC LR scores?

1.3 Definitions of Key Terms

Three key terms are defined for their use in this thesis: anxiety, high-stakes tests, and language proficiency. Anxiety can be defined as the "subjective feeling of tension, apprehension, nervousness, and worry associated with an arousal of the automatic nervous system" (Spielberger, 1983, p. 1). Tests are referred to as high-stakes when the test results are used for important decisions, which in turn could affect stakeholders (Madaus, 1988). The degree of stakes of a given test can vary for different stakeholders, such as test takers, test users, and test developers. In this study, the term high-stakes tests only refers to tests that are high-stakes from the test takers' perspectives. Language proficiency can be defined as "knowledge, competence, or ability in the use of a language, irrespective of how, where, or under what conditions it has been acquired" (Bachman, 1990, p. 16).

1.4 Overview of Thesis

This thesis consists of five chapters. Chapter 1, the present chapter, introduced the research context in which this study is situated, rationale, purposes, research questions to be answered in this study, and definitions of the key terms. In Chapter 2, Literature Review, I provide the conceptual overview of test anxiety and foreign language anxiety. I then review previous empirical studies on the extent to which test anxiety and foreign language anxiety influence test performance and how these anxieties are related to one another. Chapter 3, Methods, includes five main sections: the basic research design, the characteristics and recruitment of participants, the structure and psychometric properties of the questionnaire, the procedure of data collection, and the analyses used in this study. Chapter 4, Results, reports the results of the statistical analysis, namely descriptive statistics, factor analysis, correlational analysis, MANOVA, and regression analysis. In Chapter 5, Discussion and Conclusion, I discuss the results and highlight key research findings. This chapter also presents limitations of the study, directions for future research, and implications of the research findings.

CHAPTER 2 – LITERATURE REVIEW

This literature review investigates the connections between anxiety and performance of students on foreign language tests with a focus on Korean students. The performance of students on foreign language tests can be affected by both their anxiety toward test situations (test anxiety) and their anxiety about using a foreign language (foreign language anxiety). These two types of anxiety have differential effects on test performance with these effects supported by two distinct literature bases. How these types of anxiety interact, while of importance to the field and the current study, has seldom been examined in previous research.

2.1 Test Anxiety

Over 50 years ago, Sarason (1959) stated that "[w]e live in a test-conscious, test-giving culture in which the lives of people are in part determined by their test performance" (p. 26). These words continue to resonate to the present day, which is often described as a test-oriented and test-consuming society (Zeidner & Most, 1992). Due to this role of test performance as a powerful determinant of one's status in education as well as in professional careers in contemporary society, tests and evaluations have been recognized as a potential source of anxiety (Zeidner, 2007). In fact, studies across cultural and educational contexts have reported a distressing degree and prevalence of test-related anxiety among students, substantiating the position of tests as a source of anxiety (Connor, 2001, 2003; Hill & Wigfield, 1984; King & Ollendick, 1989; McDonald, 2001; McGuire, Mitic, & Neumann, 1987; Putwain, 2007; Segool, Carlson, Goforth, von der Embse, & Barterian, 2013).

The anxiety that emerges in test situations is related to yet distinct from situation-general anxiety. While early research on the relationship between general anxiety and test performance found inconsistent findings (e.g., Dana, 1957; Davids & Eriksen, 1955; Goodstein & Farber, 1957), research at this time with the construct of test anxiety found more consistent findings where high test anxious individuals obtained lower performance than did their low test anxious counterparts (e.g., Cowen, 1957; Mandler & Cowen, 1958; Sarason, 1957; Sarason & Mandler, 1952). In addition, test anxiety scores were moderately correlated with general anxiety scores but formed more consistently negative correlations with academic test scores than general anxiety scores did (Sarason, 1959). Based on these findings, Sarason (1960) argued that test anxiety might be a more appropriate construct than general anxiety in examination of how anxiety is related to test performance.

Test anxiety refers to "the set of cognitive, affective, and behavioral reactions that accompany concern over possible negative consequences contingent upon performance in a test or evaluative situation" (Zeidner, 1998, p. 25). Test anxious students are characterized by relatively high sensitivity to potentially anxiety-provoking features inherent in test situations. As a result, when exposed to evaluative situations in general, and test situations in particular, these students tend to exhibit anxiety-related cognitive and affective reactions, such as reduced feelings of self-efficacy, self-derogatory cognitions, negative emotional states, and physiological arousal, which may contribute to test performance decrements (Sarason, 1986; Sarason & Sarason, 1990).

Test anxiety is widely accepted to be a multi-dimensional construct consisting of two related yet distinct facets: the cognitive facet or 'Worry' and the affective facet or

'Emotionality' (Gorsuch, 1966; Liebert & Morris, 1967; Sassenrath, 1964). Of these two facets of test anxiety, the 'Worry' component has been shown to be more consistently and strongly related to lowered test performance (Hembree, 1988; Stöber & Pekrun, 2004; Zeidner, 1998). The 'Worry' component is defined as any cognitive expression of concern about one's own performance in impending or anticipated evaluative events (Flett & Blankstein, 1994; Liebert & Morris, 1967). The 'Worry' cognitions are characterized by fear of failure, task-irrelevant thinking, and negative self-referential cognitions, such as self-blame and self-devaluing thoughts (Eysenck, 1992; Sarason, 1980). The cognitive excesses of these negative self-preoccupations and self-ruminative thoughts act as an extra load on the cognitive system, leading to cognitive deficits where cognitive processes necessary for performance such as attention, memory, and retrieval are reduced (Sarason, 1988; Wine, 1971, 1980).

2.2 Foreign Language Anxiety

In addition to test anxiety, students' performance on foreign language tests may be influenced by their foreign language anxiety. Similar to the case of anxiety literature in relation to test performance, situation-general anxiety was criticized for its lack of conceptual refinement in examination of the role of anxiety in foreign language learning (Horwitz, Horwitz, & Cope, 1986; Scovel, 1978). This conceptual limitation is evident in the inconsistent findings from early literature on the relationship between general anxiety and foreign language learning (e.g., Backman, 1976; Bailey, 1983; Chastain, 1975; Kleinmann, 1977; Swain & Burnaby, 1976; Tucker, Hamayan, & Genesee, 1976). Horwitz et al. (1986) therefore developed a construct of foreign language anxiety to capture the subtle, unique effects of anxiety specifically on foreign language learning.

The authors defined foreign language anxiety as "a distinct complex of self-perceptions, beliefs, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language learning process" (p. 128) and developed the Foreign Language Classroom Anxiety Scale (FLCAS) to measure this situation-specific anxiety in foreign language classroom settings.

In contrast to the conflicting results from the previous studies using the construct of general anxiety, subsequent studies, all of which used the construct of foreign language anxiety as measured by the FLCAS, showed more consistently negative relationships with foreign language achievement (e.g., Aida, 1994; Ganschow & Sparks, 1996; Horwitz, 1986; Park, 1996; Saito & Samimy, 1996; Salehi & Marefat, 2014). However, researchers pointed out that the FLCAS mostly focused on speaking performance in foreign language class settings and suggested an extension of the construct of foreign language anxiety to other language domains such as reading and listening (e.g., Elkhafaifi, 2005; Kim, 2000; Saito et al., 1999).

Foreign language reading anxiety. Saito et al. (1999) argued for a conceptual distinction between general foreign language anxiety and foreign language reading anxiety based on the discrepancy in the sources of each type of anxiety. Citing Horwitz et al. (1986), Saito et al. argued that foreign language general anxiety had its essence in "the threat to an individual's self-concept caused by the inherent limitations of communicating in an imperfectly mastered second language" (p. 202). Thus according to Saito et al., the degree to which foreign language learners experience general foreign language anxiety should be relatively independent of the particular native language-target language pairing. However, in case of foreign language reading, Saito et al. argued that the sources

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of anxiety lay in unfamiliar writing systems and cultural materials in foreign languages, which could respectively disrupt the decoding and meaning-making processes in readers. Due to these linguistic and cultural features associated with foreign language reading, in contrast to general foreign language anxiety, foreign language reading anxiety should vary in degree depending on target languages.

Saito et al. (1999) developed the Foreign Language Reading Anxiety Scale (FLRAS) and employed it along with the FLCAS to measure both general foreign language anxiety and foreign language reading anxiety of American university students in Japanese, French, and Russian courses. Both general foreign language anxiety and foreign language reading anxiety formed negative relationships with course grades in all of the three foreign language courses. Low achievers experienced significantly higher levels of both general foreign language anxiety and foreign language reading anxiety than did their high-achieving counterparts. Although these two types of anxiety both formed negative relationships with foreign language achievement, the two anxieties were only moderately correlated with each other ($r = .64$), indicating shared elements between the two types of anxiety but also relative distinction between the two. In addition, as hypothesized by Saito et al., the levels of foreign language anxiety experienced by language learners were different across the three foreign languages, supporting the differences in sources between general foreign language anxiety and foreign language reading anxiety.

Foreign language listening anxiety. Researchers also have pointed out foreign language listening as a source of anxiety. Foreign language learners can feel anxious about listening when they possess inappropriate beliefs that they must understand every

word they hear and engage in ineffective strategies of fixating on individual words in messages spoken to them (Oxford, 1993). This strategy often leads listeners to process listening tasks too slowly and fail to reach adequate comprehension, which, in turn, results in a sense of failure and fatigue and raises anxiety over listening tasks (Meyer, 1984; Oxford, 1993). In addition, unlike speaking, because listeners have little or no control over listening activities, foreign language learners often experience anxiety over the lack of processing time in foreign language listening (Meyer, 1984). As listening is required for sufficient input on which successful output of further communication relies, listeners feel anxious about whether or not they will be able to effectively perform in foreign language listening (Vogely, 1998).

Kim (2000) developed the Foreign Language Listening Anxiety Scale (FLLAS), a scale based on ESL/EFL learners' descriptions of their listening anxiety and difficulties and other related scales, such as the FLCAS, the FLRAS, and the Receiver Apprehension Test (Wheeless, 1975). The author investigated relationships between foreign language listening anxiety and listening proficiency in Korean university EFL learners. Foreign language listening anxiety significantly negatively predicted scores on a practice English proficiency test, indicating foreign language listening anxiety formed negative relationships with test performance. However, participants' scores on the FLLAS were only moderately correlated with factors of the FLCAS, suggesting foreign language listening anxiety and general foreign language anxiety may be considered conceptually distinct from each other.

2.3 Test Anxiety and Test Performance

Although there has been some contradictory evidence in previous empirical studies, it has been repeatedly documented that individuals high on test anxiety may experience decrements in test performance in various evaluation situations. For example, Hembree (1988) conducted an extensive meta-analysis based on 562 North American studies from 1952 through 1986. Test anxiety was moderately negatively correlated with various performance measures, including IQ and aptitude test scores, laboratory memory and problem-solving tasks, achievement measures, and grade point average. This relationship between test anxiety and performance was consistently present across grade levels (high school and college level) as well as subject areas (mathematics, English, foreign language, natural sciences, and social sciences). Seipp (1991) also conducted a meta-analysis on 125 studies in both European and North American contexts from 1975 through 1988. Similar to Hembree (1988), this analysis showed students with high test anxiety tended to exhibit poor performance in comparison to their peers with low test anxiety. In relation to the components of test anxiety, these meta-analyses demonstrated that the Worry component of test anxiety formed stronger inverse relationships with test performance than the Emotionality component did, supporting the multi-faceted nature of test anxiety and the construct's differential relationships with performance.

This inverse relationship between test anxiety and test performance and the stronger effects of the Worry component have been replicated in more recent empirical studies. Hong (1999) investigated the differential effects of the Worry and Emotionality components of test anxiety on undergraduate students' course final examinations. Although these two components of test anxiety were moderately correlated with each

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other, only the Worry component had a significantly negative effect on students' test performance. Similarly, Chapell et al. (2005) investigated whether or not undergraduate and graduate students' current cumulative GPA and general academic achievement significantly differed across low, moderate, and high test anxious groups. Regardless of the students' gender and study level, students in higher test anxiety groups showed significantly lower GPA and general academic achievement than did students in lower test anxiety groups. In addition, both GPA and general academic achievement were significantly negatively correlated with total test anxiety scores, the Worry scores, and the Emotionality scores. However, the correlations were stronger for the Worry scores than for the Emotionality scores, further supporting the stronger influence of the cognitive component of test anxiety on test performance.

In addition, Thomas, Cassady, and Heller (2017) investigated the debilitative effects of cognitive test anxiety on academic performance of undergraduate students in the United States. Students' cognitive test anxiety was significantly negatively correlated with their 4-year cumulative GPA. In the regression analysis, cognitive test anxiety explained a significant amount of variance in the students' 4-year cumulative GPA and also served as a significantly negative predictor of their 4-year cumulative GPA. These detrimental effects of cognitive test anxiety stayed statistically significant after controlling for previous academic performance (first-year GPA), suggesting the negative influences of cognitive test anxiety on long-term academic outcomes.

As test performance plays an increasingly important role in various high-stakes decisions in the recent educational atmosphere (Cizek & Burg, 2006; Torrance, 2004), students have reported greater levels of anxiety about high-stakes tests than previously

(Abrams, Pedulla, & Madaus, 2003; Barksdale-Ladd & Thomas, 2000; Jones & Egley, 2004; Putwain, 2008; Segool et al., 2013; Triplett & Barksdale, 2005). Due to this greater likelihood of anxiety in high-stakes contexts, researchers have been particularly interested in the extent to which test anxiety influences students' performance specifically on high-stakes tests. Comparable with previous literature, test anxiety has been shown to be moderately negatively correlated with total scores as well as subject scores of various high-stakes accountability tests in the United Kingdom (Putwain, 2008; Putwain, Connors, & Symes, 2010) and the United States (Cassady & Johnson, 2002; von der Embse & Witmer, 2014). In addition to the correlational results, test anxiety and its components explained a significant amount of variance in test performance and acted as significant negative predictors of high-stakes test scores across subject areas (Cassady & Johnson, 2002; Putwain, 2008; Putwain, Daly, Chamberlain, & Sadreddini, 2015; von der Embse & Witmer, 2014).

In contrast to the abundant research on how test anxiety influences general academic achievement and high-stakes accountability test performance, research on the relationship between test anxiety and test performance in the context of language achievement has been relatively scarce with inconsistent findings. Research has reported both positive and negative correlations between test anxiety and foreign language course grades (Chastain, 1975; Horwitz, 1986). Inconsistent findings are also present in relation to language test performance. Test anxiety did not form significant correlations with test performance in foreign language reading in three recent studies (Amiryousefi & Tavakoli, 2011; Birjandi & Alemi, 2010; Javanbakht & Hadian, 2014) and was not a significant predictor of performance in foreign language listening tests (In'nami, 2006).

In contrast, Cheng et al. (2014) showed a component of test anxiety was a significantly negative predictor of high-stakes language test performance in reading, listening, writing, and speaking. The authors investigated the extent to which motivation and test anxiety affected university student test takers' performance on three high-stakes English proficiency tests (two in China and one in Canada) across different social and educational contexts. These three tests had contextual differences in intended purposes, characteristics of test takers, and reported subskills. Skill anxiety, a factor of cognitive test anxiety in this study, significantly negatively predicted performance on all three of the English proficiency tests. Although the degree to which skill anxiety influenced test performance varied across tests, skill anxiety consistently negatively predicted performance on all of the reported subskills, including reading, listening, writing, and speaking.

Notable limitations exist in the current literature on the relationship between test anxiety and language test performance in high-stakes environments. Except for the study by Cheng et al. (2014), studies have investigated the relationship either with an inadequate measure for test anxiety with an insufficient number of items (Chastain, 1975; Horwitz, 1986) or in a test context that was not high-stakes (Amiryousefi & Tavakoli, 2011; Birjandi & Alemi, 2010; In'nami, 2006; Javanbakht & Hadian, 2014). Thus it is possible that these studies did not adequately capture the construct of test anxiety due to the limitation in the scales or that participants' performance in these studies was not adversely affected by test anxiety due to the low-stakes context.

Individuals' gender has been consistently recognized as a factor that influences levels of test anxiety. Females have been repeatedly found to report higher levels of test

anxiety than have males across grade levels and cultural contexts (Cassady & Johnson, 2002; Hembree, 1988; Putwain, 2008; Seipp & Schwarzer, 1996; Sowa & LaFleur, 1986; Volkmer & Feather, 1991; Zeidner, 1990). Although being female has been repeatedly associated with higher levels of test anxiety, the role of gender in the relationship between test anxiety and test performance has been limited and unclear. A few earlier studies reported a stronger inverse relationship between test anxiety and performance in females than in males (e.g., Gjesme, 1972; Payne, Smith, & Payne, 1983). However, more recent studies with more careful research designs and statistical procedures have shown that the inverse relationship between test anxiety and test performance was not differentiated by gender in North America (Crocker, Schmitt, & Tang, 1988; Seipp, 1991), Germany (Seipp, 1991), Israel (Zeidner, 1990), and the United Kingdom (Putwain, 2008). Therefore, although higher levels of test anxiety in females have been relatively supported, the extent to which gender differentiates the negative relationship between test anxiety and test performance requires further clarification.

Test anxiety and language test performance in Korea. Test anxiety research in Korea has been limited. Im and Park (2013) conducted a meta-analysis of studies on test anxiety conducted in the Korean context and found only 11 published journal articles on the topic of test anxiety. However, instead of empirical examination of the effects of test anxiety on test performance, these studies were concerned with other research topics, such as relationships of test anxiety to other psychological, social variables (Bak & Im, 2010; Choi & Moon, 2004; Kim, 1990; Lee & Lee, 2000; Lee & Lee, 2002; Oh, Choo, & Im, 2009; Yum & Park, 2005), conceptual refinement of the test anxiety construct (Bak, Im, & Kim, 2008), cognitive, information-processing aspects of test anxiety (Lee, 1997,

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2001), or treatment of test anxiety (Hwang, 1997). Thus how test anxiety influences Korean students' performance on high-stakes language tests is not clear and requires empirical investigation.

2.4 Foreign Language Anxiety and Foreign Language Test Performance

As the main concern of foreign language anxiety research originally rested in addressing students' anxiety-related difficulties and struggle in language classes (Aida, 1994; Horwitz et al., 1986; Horwitz & Young, 1991), most empirical studies have focused on how foreign language anxiety influences learning outcomes specifically in language classroom settings. Students' anxiety in foreign language classes is one of the major obstacles to successful foreign language learning (Foss & Reitzel, 1988; Krashen, 1975; Lucas, 1984; MacIntyre, 1995; Hadley, 1993). Foreign language anxious students tend to refuse to participate in class due to fear of embarrassment and reluctance to take risks (Stevick, 1980; Young, 1991). They often engage in avoidance behaviours such as skipping classes, failing to prepare for class, and avoiding eye contact with the instructor (Bailey, 1983; Horwitz et al., 1986).

These studies have examined the relationship between learners' anxiety level and some global measure of foreign language achievement, usually language course grades. Foreign language anxiety has been shown to form a moderately negative relationship with grades in high-school-level and college-level courses with various target languages, including French (Bailey, Onwuegbuzie, & Daley, 1998; Gardner, Tremblay, & Masgoret, 1997; Horwitz, 1986; Onwuegbuzie, Bailey, & Daley, 2000; Sparks & Ganschow, 2007), Spanish (Bailey et al., 1998; Horwitz, 1986; Onwuegbuzie et al., 2000; Sparks & Ganschow, 2007), German (Bailey et al., 1998; Onwuegbuzie et al., 2000;

Sparks & Ganschow, 2007), Japanese (Aida, 1994; Onwuegbuzie et al., 2000; Saito & Samimy, 1996), and Arabic (Elkhafaifi, 2005).

Besides general course grades, due to the focus on communication skills in foreign language classes, researchers have been particularly interested in how foreign language anxiety influences students' oral performance (Tóth, 2010). Similar to general course grades, foreign language anxiety has been moderately negatively correlated with students' oral performance (MacIntyre & Gardner, 1994; Phillips, 1992; Scott, 1986; Steinberg & Horwitz, 1986; Young, 1986). Based on research evidence that other language domains may also possess potential for foreign language anxiety in students (Hilleson, 1996), researchers have developed foreign language anxiety constructs specific to particular language domains and investigated how these specialized foreign language anxiety constructs are related to students' performance in corresponding language skills. In the case of reading, researchers have reported moderately negative effects of foreign language reading anxiety on students' performance on coursework (Saito et al., 1999), reading comprehension tasks (Sellers, 2000), and standardized proficiency tests (Tsai & Li, 2012). For example, Lu and Liu (2015) examined the relationships between foreign language reading anxiety and reading performance in first-year and second-year university students in China. The authors used participants' performance on an adapted version of the College English Test Band 4 (CET4) as a measure of their reading performance. Their correlation analysis showed that students' foreign language reading anxiety formed a significantly negative correlation with their reading performance. In addition, foreign language reading anxiety accounted for a significant amount of variance in reading performance and also acted as a significantly negative predictor of reading

performance. However, there have been conflicting findings that do not support this negative relationship between foreign language reading anxiety and reading performance (Matsuda & Gobel, 2004).

Similar negative relationships between foreign language anxiety and listening skills have been reported as well. Students' course grades and listening comprehension in various target languages were moderately negatively related to foreign language listening anxiety (Elkhafaifi, 2005; Kim, 2000). For example, Zhang (2013) investigated the possible causal relationship between foreign language listening anxiety and listening performance in first-year university students majoring English in China. The author used students' performance on a practice test of the International English Language Testing System (IELTS) to assess their listening performance. The results of structural equation modelling showed that foreign language listening anxiety had a significant influence on the students' English listening performance. However, the students' English listening performance did not significantly influence their foreign language listening anxiety levels in a systematic fashion, supporting the author's hypothesis on the causal model between foreign language listening anxiety and listening performance.

Gender may influence an individual's experience of foreign language anxiety and the degree to which language anxiety interferes with language performance. However, existing literature has failed to produce clear-cut relationships. Some studies have reported that being female was associated with greater levels of foreign language anxiety (Onwuegbuzie et al., 2000, Tóth, 2010). In another study, however, it was males who were more anxious about foreign language learning and use (Campbell & Shaw, 1994). More confusing findings have been reported in recent studies. Females scored

significantly higher on a general foreign language anxiety scale but not on a foreign language listening anxiety scale (Elkhafaifi, 2005). In another study, no significant gender difference was found in general foreign language anxiety and foreign language reading anxiety (Matsuda & Gobel, 2004). Studies on gender differences about the degree to which foreign language anxiety influences language performance have been rare. Existing studies have supported the notion that gender does not differentiate the effects of foreign language anxiety on language performance (Aida, 1994).

Foreign language anxiety and English test performance in Korea. As Korea is an English as a Foreign Language (EFL) context with social and educational emphasis on English proficiency, foreign language anxiety research in Korea has been centred around students' anxiety almost exclusively towards English. Korean students may possess more pronounced proneness for foreign language anxiety than do students in other countries. When students' scores on the FLCAS were compared across studies in various cultural contexts, the foreign language anxiety levels of Korean students (e.g., Kim, 2000; Koh & Kim, 2009; Park, 1996, 1998; Yum, 1998) were generally greater than those of their counterparts in other cultural contexts, such as North America (Aida, 1994; Elkhafaifi, 2005; Horwitz et al., 1986; Onwuebuzie et al., 2000; Saito et al., 1999; Sellers, 2000), Iran (Salehi & Marefat, 2014), and Japan (Matsuda & Gobel, 2004). The foreign language anxiety levels of Korean students were consistently half a standard deviation above those of students in these contexts. This difference in foreign language anxiety levels was consistently present when compared to students in other countries with EFL contexts such as Japan and Iran (e.g., Matsuda & Gobel, 2004; Salehi & Marefat, 2014). Although this comparison is only descriptive in nature and does not address statistical

significance of the differences, it suggests that Korean students may be particularly susceptible to foreign language anxiety when they learn or use English.

Comparable to the existing literature, a moderately inverse relationship between general foreign language anxiety and language performance has been reported in Korea. General foreign language anxiety negatively influenced various English achievement measures of Korean students, including course grades (Park, 1996, 1998; Yum, 1998) and test performance (Park, 2002; Lim, 2008; Lee, 2001; Park & Shin, 2001). In relation to specific language skills, evidence supports the negative effects of general foreign language anxiety on performance in speaking, reading, and listening (Kim, 2000; Lee, 2001; Yum, 1998). However, compared to general foreign language anxiety, only a small number of empirical studies have investigated domain-specific foreign language anxiety, such as foreign language reading anxiety (Kim & Park, 2014; Koh & Kim, 2009) and foreign language listening anxiety (Kim, 2000; Lee, 2001). The existing studies have demonstrated that the higher students' domain-specific foreign language anxiety levels were, the lower was their performance in the corresponding foreign language skill.

Regarding the role of gender in relation to foreign language anxiety, literature in Korea has produced mixed findings. Some studies have reported significantly higher levels of foreign language anxiety in females (Lee, 2001; Park, 1996, 1998), but other studies have failed to find significant associations between gender and foreign language anxiety (Kim, 2000; Park & Shin, 2001; Yum, 1998). In addition, gender did not differentiate the effects of foreign language anxiety on English performance in these studies. For example, Lim (2008) found no significant interaction effect between gender

and foreign language anxiety on standardized English test performance in high school students.

2.5 Relationships among the Three Types of Anxiety

As both test anxiety and foreign language anxiety originate from the overall construct of anxiety, these two types of anxiety share similar conceptual characteristics and are often related to the same psychological variables in a similar manner. For example, test anxiety and foreign language anxiety have been associated with students' negative views of themselves. Test anxious students tend to experience reduced self-efficacy and engage in self-derogatory cognitions (Sarason & Sarason, 1990; Spielberger & Vagg, 1995). Test anxiety has been negatively correlated with students' self-esteem (Chukwuorji & Nwonyi, 2015; Dan, Bar Ilan, & Kurman, 2014; Dan & Raz, 2015). Similarly, students with high foreign language anxiety tend to show low self-esteem (Horwitz et al., 1986; Sharifi & Ahour, 2014). In addition, common aspects exist in the way these two types of anxiety adversely influence students' test performance and achievement. Students with high foreign language anxiety have been shown to experience significantly greater levels of cognitive interference than do their counterparts with low foreign language anxiety (Sellers, 2000; Oh, 1990). Cognitive interference is one of the major underlying mechanisms for how test anxiety reduces test performance (Zeidner, 1998).

Empirical studies have examined the conceptual overlap between test anxiety and general foreign language anxiety. Horwitz et al. (1986) found a moderately positive correlation between test anxiety and foreign language anxiety ($r = .53$). This moderate to high positive correlation between test anxiety and foreign language anxiety has been

replicated in more recent studies (e.g., Salehi & Marefat, 2014; Tsai, 2013). However, there has been little research on how test anxiety is related to foreign language anxiety specifically in reading and listening domains. This lack of previous literature may be attributed to the fact that research on test anxiety, foreign language reading anxiety, and foreign language listening anxiety seldom includes all three of the anxiety constructs in its investigation. Thus no previous research has included all of these three types of anxiety and examined the relationships among these anxieties in a given sample of participants. A study conducted by Tsai and Li (2012) is one of the few studies that examined test anxiety and foreign language reading anxiety. This study found significantly positive correlations between test anxiety and foreign language reading anxiety. However, as this study used a test anxiety scale that did not differentiate the cognitive and emotional facets of test anxiety, it is still unclear how cognitive test anxiety is related to foreign language reading anxiety and foreign language listening anxiety. In addition, one empirical study from one sample of participants is not robust enough to claim relationships among test anxiety, foreign language reading anxiety, and foreign language listening anxiety. As foreign language reading anxiety and foreign language listening anxiety have been shown to have conceptual distinction as well as different sources of anxiety from general foreign language anxiety (Kim, 2000; Saito et al., 1999), test anxiety may show different patterns of relationships with foreign language anxiety related to reading and listening. As empirical studies usually focus on either foreign language reading anxiety or foreign language listening anxiety and not on both, it is unclear how these two different domain-specific foreign language anxieties are related to each other.

2.6 Current Study

As the review of literature suggests, cognitive test anxiety, foreign language reading anxiety, and foreign language listening anxiety seem to be closely related to each other as members of the broad anxiety family. However, because none of the previous empirical studies included all of these three types of anxiety in their investigation at the same time, it is unclear the extent to which these three types of anxiety are related to each other. In addition, although these three types of anxiety have been empirically supported to adversely influence test takers' language test performance, this relationship has not been properly examined for Korean test takers and their performance specifically in the TOEIC LR, the most widely used English proficiency test in Korea. Thus the current study aimed to fill these literature gaps through examination of how cognitive test anxiety, foreign language reading anxiety, and foreign language listening anxiety are related to each other in Korean TOEIC LR test takers and the extent to which these three anxieties influence Korean test takers' TOEIC LR performance.

CHAPTER 3 – METHODS

3.1 Research Design

This study adopted a survey design using a questionnaire to explore the relationship between two types of anxiety (i.e., test anxiety and foreign language reading/listening anxiety) and Korean students' TOEIC LR scores. Although an experimental research design might have served better to reveal the effects of anxiety on test performance, this research design was not feasible for the present study. First, manipulation of degrees of anxiety in participants, which would be required for an experimental design, would have increased potential psychological risks for participants. Second, as TOEIC LR scores were to be used for real high-stakes decisions for participants of this study, it would have been unethical to induce anxiety in participants, which might have negatively influenced their test performance. Thus a non-experimental research design was used to address the research questions. Of the different types of non-experimental research designs, a survey research design was used. As a frequently used research design in educational research to describe attitudes, beliefs, and opinions, a survey research design seems to be the most fitting research design to collect participants' responses on test anxiety and foreign language reading/listening scales.

The study described here received clearance from the General Research Ethics Board (GREB) at Queen's University to help ensure that the researcher attended to the ethical dimensions of the research, which should pose minimal risk to both the participants and the researcher (see Appendix A).

3.2 Participants

The majority of Korean test takers write TOEIC LR tests to fulfill graduation and employment requirements. Their ages tend to fall between 21 and 30 (ETS, 2011a, 2011b, 2014a, 2014b, 2016). The target population for this study matched these characteristics of typical TOEIC LR test takers in Korea. In total, 258 Korean test takers who were university students or graduates in need of TOEIC LR scores for various high-stakes decisions, including admission, graduation, and/or employment, were recruited. Only participants scheduled to write the TOEIC LR on October 30th, November 12th & 27th, and December 18th of 2016 were recruited. The recruitment process was carried out in university classes, TOEIC LR preparation academies, TOEIC LR preparation online communities, and TOEIC LR test sites where there was high availability of potential participants for this study.

3.3 Instrument

A questionnaire consisting of four sections was used for this study: (a) demographics, (b) cognitive test anxiety scale, (c) foreign language reading anxiety scale, and (d) foreign language listening anxiety scale (see Appendix B). All the sections of the questionnaire except for the foreign language listening anxiety scale were initially designed in English. However, as target participants of this study had Korean as their native language, all the instruments originally written in English were translated to Korean so that participants would be able to comprehend the items, and meanings of the texts would not be lost (see Appendix C). To ensure the adequacy of the translation, six native Korean speakers were asked to complete the questionnaire and to provide feedback on the appropriateness of the translation.

Section One: Demographics is a scale created specifically for this study to collect participants' demographic information: age, gender, and number of previous attempts on the TOEIC LR one year prior to their scheduled test.

Section Two: Cognitive Test Anxiety Scale (CTAS, Cassady & Finch, 2014) is a 17-item scale that measures the cognitive facet of test anxiety. Participants responded to items, such as, "I lose sleep over worrying about examinations" and "While taking an important examination, I find myself wondering whether the other students are doing better than I am," on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). Although this scale originally used a 4-point Likert scale, the original scale was replaced with a 5-point Likert scale in this study to match the scales used in the other two anxiety measures. Cassady and Finch (2014) reported that the CTAS was a unidimensional scale with a one-factor solution. An excellent level of internal consistency has been reported for this scale (Cronbach's α = .93; Cassady & Finch, 2014). The final score was calculated by summing scores of all the items, with higher scores meaning higher levels of the cognitive facet of test anxiety. Only the cognitive facet of test anxiety was measured in the current study, as previous findings suggest that the cognitive aspect of test anxiety more steadily forms a strong negative relationship with test performance (e.g., Hembree, 1988). As this scale was only available in English, it was translated to Korean and then back-translated to help ensure the accuracy of translation.

Section Three: Foreign Language Reading Anxiety Scale (FLRAS, Saito, Horwitz, & Garza, 1999) is a 20-item scale that measures levels of foreign language anxiety specifically in reading. Although the original scale was used to measure reading anxiety in French, Russian, and Japanese, in the current study, the target language was

replaced by English to assess reading anxiety in English. Participants responded to items, such as, "I get upset when I'm not sure whether I understand what I am reading in English" and "I feel intimidated whenever I see a whole page of English in front of me," on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). In its initial development, the scale was found to have a good level of internal consistency (Cronbach's α = .86; Saito, Horwitz, & Garza, 1999). An excellent level of internal consistency has been reported in a more recent study with Korean university students (Cronbach's α = .93; Koh & Kim, 2009). The negatively worded items (items 12, 13, 14, and 18) were reverse-coded so that higher scores on all the items would indicate higher degrees of foreign language reading anxiety. The final score was calculated by summing scores across all the items, with higher scores meaning higher levels of foreign language reading anxiety in English. Although the original scale was written in English, it was translated to Korean and then back-translated to English to help ensure the accuracy of translation.

Section Four: Foreign Language Listening Anxiety Scale (FLLAS, Kim, 2000) is a 33-item scale that measures levels of foreign language listening anxiety specifically in English. Participants responded to items, such as, "When a person speaks English very fast, I worry that I might not understand all of it" and "If I let my mind drift even a little bit while listening to English, I worry that I will miss important ideas," on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree). The scale has been found to have an excellent level of internal consistency when used with Korean university students (Cronbach's α = .90; Kim, 2000). A similar level of internal consistency was reported in a more recent study also with Korean university students (Cronbach's α = .93; Kim,

2005). The negatively worded items (items 6, 14, and 31) were reverse-coded so that higher scores on all the items would indicate higher degrees of foreign language listening anxiety. The final score was calculated by summing scores of all items, with higher scores meaning higher levels of foreign language listening anxiety. The original scale was developed in both English and Korean; the Korean version of the scale was used in the current study.

3.4 Data Collection

Data collection took place for two and a half months from October 30th of 2016 to January 10th of 2017. I went to South Korea on September 25th and began data collection after I received ethics clearance on October 18th. Data collection was carried out on Survey Monkey, an online survey website. Upon being recruited, participants were asked to complete the questionnaire on Survey Monkey within three days after their TOEIC LR tests. Participants' responses on the anxiety scales were collected after the test instead of beforehand based on the previous finding that test takers tended to experience a greater level of test anxiety after they experienced the actual test (Zeidner, 1991). Before being instructed to complete the questionnaire, participants were presented with the Letter of Information/Consent Form stating necessary information about the study, such as voluntary participation, confidentiality policy, withdrawal without penalty, and compensation (see Appendix D). As participants of this study had Korean as their first language, the Letter of Information/Consent Form was translated into Korean so that the meanings of the text were not lost, and participants could make an informed decision (see Appendix E). Only when participants reported their consent by clicking the "agree" button could they proceed to the questionnaire.

Participants first completed the basic demographic section of the questionnaire and then responded to a series of self-report items that measured test anxiety and foreign language reading/listening anxiety. For each participant, the scales and the items within the scales were counter-balanced by randomization. Participants received the equivalent of five Canadian dollars for doing the questionnaires, regardless of whether or not the questionnaires were completed. When the official test scores were released approximately three weeks after the test dates, participants who had completed the questionnaires were contacted again via their preferred method of contact (i.e., email or text message) and asked to report their TOEIC Listening and Reading scores. Upon the submission of their TOEIC LR scores, participants received another amount equivalent to five Canadian dollars. Participants' questionnaire responses were linked to their test scores using the contact information they used to communicate with the investigator.

3.5 Data Analysis

Among the 229 participants in this study, 3 participants were excluded from data analysis as they did not submit their TOEIC LR scores. Of the remaining 226 participants, 15 participants had missing data. However, as these missing data were small in number (1 missing response for 13 participants and 2 missing responses for 2 participants), these missing data were replaced with the mean among other participants on the item with missing data. Therefore, 226 participants were included in data analysis.

Descriptive Statistics. Descriptive statistics (e.g., central tendency, dispersion, skewness, and kurtosis) were conducted for gender, age, number of previous attempts on the TOEIC LR, TOEIC LR scores, and responses on the three anxiety scales (see Appendix F).

Factor Analyses. Three separate exploratory factor analyses (EFA) were conducted for each scale of anxiety. As a preliminary analysis, the Kaiser-Meyer-Olkin measure (KMO) of sampling adequacy value was calculated and compared to the recommended value of .60 to examine the suitability of the sample for EFA (Kaiser 1970, 1974). The Bartlett's Test of Sphericity was also conducted to confirm patterned relationships in the data. Principal axis factoring (PAF) was chosen as the extraction method with direct oblimin as the rotation method. PAF was chosen over principal component analysis (PCA), as previous literature suggests PAF is more advantageous than PCA in producing more sensible results of factor analysis (Fabrigar, Wegener, MacCallum, & Strahan, 1999; Gorsuch, 1990). An oblique rather than orthogonal rotation method was used as oblique rotation methods allow the factors to be correlated, which is considered to produce more realistic factor structures when examining psychological phenomena (Schmitt, 2011). Kaiser's criterion of Eigenvalue of 1 and scree plot were used to decide how many factors should be retained. The factor loading of .40 was chosen as a cut-off value, following recommendations from previous literature (e.g., Hair, Black, Babin, Anderson, & Tatham, 1998; Stevens, 1992). Reliability analysis was conducted alongside factor analysis not only to calculate internal consistency of the scales but also to assist in the decision of how many factors should be selected.

Correlation Analyses. For correlation analyses, Pearson product-moment correlation coefficients (r) were calculated among the variables involved in the study. These analyses assessed the relationships not only between the dependent variables (TOEIC listening scores and TOEIC reading scores) and the independent variables (age, gender, the number of previous attempts on the TOEIC LR, and the scores from the three

anxiety scales) but also among the independent variables as a preliminary analysis for multicollinearity for subsequent regression analyses. Cohen's (1992) guidelines were used to interpret the magnitudes of correlation coefficients: small (.10), medium (.30), and large (.50)

Multivariate Analysis of Variance (MANOVA). Two-way MANOVA was carried out to investigate whether or not significant differences existed in the three types of anxiety and TOEIC Listening and Reading scores across gender (male and female), the number of previous attempts on the TOEIC LR (no previous attempts, one previous attempt, and two or more previous attempts), and the interaction between gender and previous attempts.

Regression Analyses. Two sets of hierarchical multiple regression analyses with four different regression models were carried out to examine the extent to which the demographic variables and three types of anxiety (i.e., test anxiety and foreign language reading/listening anxiety) predicted participants' TOEIC LR scores. In Model 1, TOEIC scores were regressed onto only the demographic variables. In Model 2, cognitive test anxiety was added into the model with the demographic variables. In Model 3, instead of cognitive test anxiety, the specific foreign language anxiety corresponding to TOEIC scores was added into the model. In Model 4, both cognitive test anxiety and corresponding foreign language anxiety were included in the model along with demographic variables.

CHAPTER 4 – RESULTS

4.1 Descriptive Statistics

Among 226 participants, there were 100 (44.2%) male and 126 (55.8%) female test takers. Age of participants ranged from 18 to 43 with a mean of 23.98 and a standard deviation of 3.30. The number of previous attempts on the TOEIC LR varied from 0 to 13 with a mean of 1.99 and a mode of 1. Participants' TOEIC Listening Comprehension scores ranged from 215 to 495 with a mean of 434.93 and a standard deviation of 56.36. TOEIC Reading Comprehension scores varied from 145 to 495 with a mean of 397.81 and a standard deviation of 69.94. The descriptive statistics for the three anxiety scales are presented in Appendix F.

4.2 Exploratory Factor Analyses

Cognitive Test Anxiety Scale. The Kaiser-Meyer-Olkin measure (KMO) of sampling adequacy value for the Cognitive Test Anxiety Scale's exploratory factor analysis was .93, and the Bartlett's Test of Sphericity was statistically significant ($p < .001$). The Kaiser's criterion suggested a 4-factor structure where the first factor explained 40.42% of the total variance, and the remaining three factors collectively accounted for 11.06% of the total variance. The scree plot showed a clear break after the first factor, supporting a 1-factor structure. Due to the discrepancy in the number of factors suggested by the Kaiser's criterion and the scree plot, an additional factor analysis was carried out with a fixed number of factors set to 1. The produced 1-factor structure retained 16 items (all except item 9) and explained 39.77% of the total variance. Reliability analysis of the 1-factor structure of the scale indicated an excellent level of

internal consistency (Cronbach's alpha = .913). Item 9 was the only item that increased

internal consistency when removed (Cronbach's alpha = .915). As both factor analysis

and reliability analysis supported a 1-factor structure with item 9 removed, this 1-factor

structure with 16 items was chosen as the final factor structure of the Cognitive Test

Anxiety Scale. The factor loadings of this 1-factor structure are presented in Appendix G.

      Foreign Language Reading Anxiety Scale. The Kaiser-Meyer-Olkin (KMO)

value was .90 for the Foreign Language Reading Anxiety Scale's exploratory factor

analysis, with the Bartlett's Test of Sphericity statistically significant (p < .001). The

Kaiser's criterion suggested a 4-factor structure where the first factor explained 31.71%

of the total variance, and the remaining three factors collectively accounted for 10.58% of

the total variance. The scree plot supported a 1-factor structure with a clear break after

the first factor. To address the difference in the number of factors suggested by these two

factor selection methods, an additional factor analysis with a fixed number of factors set

to 1 was carried out. The produced 1-factor structure retained 18 items, all except for

items 16 and 20, and accounted for 31.20% of the total variance. Reliability analysis of

this 1-factor structure indicated a very good level of internal consistency (Cronbach's

alpha = .887). Items 16 and 20 were the only items that increased internal consistency

when removed (Cronbach's alpha = .901). Based on the consensus between factor

analysis and reliability analysis for a 1-factor structure with items 16 and 20 removed, the

1-factor structure with 18 items was chosen as the final factor structure of the Foreign

Language Reading Anxiety Scale. The factor loadings of this 1-factor structure are

presented in Appendix G.

Foreign Language Listening Anxiety Scale. The Kaiser-Meyer-Olkin (KMO)

value was .94 for the Foreign Language Listening Anxiety Scale's exploratory factor

analysis, and the Bartlett's Test of Sphericity was statistically significant (p < .001). The

Kaiser's criterion suggested a 6-factor structure where the first factor explained 36.16%

of the total variance and the remaining five factors collectively accounted for 13.20% of

the total variance. The scree plot supported either a 1- or a 2-factor structure. Due to the

discrepancy in the number of factors suggested by the Kaiser's criterion and the scree

plot, additional factor analyses were carried out with fixed numbers of factors set to 1 and

2. The produced 2-factor structure retained 26 items and had 35.90% and 4.48% of the

total variance explained by the first and second factor, respectively. However, the second

factor only consisted of negative factor loadings, which posed a problem for meaningful

interpretations of the factor. Therefore, the 2-factor structure was rejected. The produced

1-factor structure retained 32 items (all except for item 25) and accounted for 35.76% of

the total variance. Reliability analysis of the 1-factor structure indicated an excellent level

of internal consistency (Cronbach's alpha = .943). Item 25 was the only item that

increased internal consistency when removed (Cronbach's alpha = .947). Based on the

agreement between factor analysis and reliability analysis for a 1-factor structure with

item 25 removed, the 1-factor structure with 32 items was chosen as the final factor

structure of Foreign Language Listening Anxiety Scale. The factor loadings of this 1-

factor structure are presented in Appendix G.

4.3 Correlation Analyses

Pearson product-moment coefficients among all the variables are presented in

Table 2. Regarding the relationships between the dependent variables and the

independent variables, TOEIC Listening Comprehension scores were significantly correlated with gender, cognitive test anxiety, foreign language listening anxiety, and foreign language reading anxiety. The small positive correlation with gender ($r = .13$) indicated that females generally had higher TOEIC Listening Comprehension scores than did males. The negative correlations with all three types of anxiety showed that people with higher anxiety, regardless of measure, tended to have lower TOEIC Listening Comprehension scores. Correlations were small with cognitive test anxiety ($r = -.20$) and medium with foreign language listening anxiety ($r = -.44$) and foreign language reading anxiety ($r = -.37$).

TOEIC Reading Comprehension scores were significantly correlated only with the three types of anxiety, indicating test takers higher on these anxieties had generally lower TOEIC Reading Comprehension scores. Correlations were small with cognitive test anxiety ($r = -.25$) and medium with foreign language reading anxiety ($r = -.41$) and foreign language listening anxiety ($r = -.34$).

In terms of the relationships among the independent variables, significant correlations were found among the three anxiety scores and the number of previous attempts. Cognitive test anxiety formed large negative correlations with foreign language listening anxiety ($r = .54$) and foreign language reading anxiety ($r = .56$). Foreign language reading anxiety formed a small positive correlation with the number of previous attempts, indicating test takers with more attempts on the TOEIC LR tended to have a higher level of foreign language reading anxiety ($r = .13$). The two foreign language anxieties formed a large positive correlation with each other ($r = .71$).

Table 2

Pearson Product-Moment Correlation Coefficients among Variables

	1	2	3	4	5	6	7	8
Independent Variables								
1. Age	--							
2. Gender	-.13	--						
3. Previous Attempts	.05	.03	--					
4. Cognitive Test Anxiety	.00	.13	.07	--				
5. Foreign Language Listening Anxiety	.03	.09	.06	.56**	--			
6. Foreign Language Reading Anxiety	-.02	.05	.13*	.54**	.71**	--		
Dependent Variables								
7. TOEIC Listening Scores	.03	.13*	-.04	-.20**	-.44**	-.37**	--	
8. TOEIC Reading Scores	.01	.04	-.07	-.25**	-.34**	-.41**	.78**	--

Note: $* p < .05$, $** p < .01$

4.4 MANOVA

A two-way MANOVA revealed a significant multivariate effect of gender, Wilks' $\lambda = .93$, $F(5, 221) = 3.19$, $p = .008$, with a small effect size, $\eta^2 = .07$, and also a significant multivariate effect of the number of previous attempts, Wilks' $\lambda = .90$, $F(10, 216) = 2.37$, $p = .01$, with a small effect size, $\eta^2 = .05$. The interaction between gender and the number of previous attempts was not significant. The multivariate test statistics are presented in Table 3.

Table 3

Multivariate Test

	Wilks' λ	df	F	p	η^2
Gender	.93	5	3.19	.008**	.07
Previous Attempts	.90	10	2.37	.01*	.05
Gender * Previous Attempts	.94	10	1.32	.22	.03

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

In terms of gender, follow-up univariate analyses of variance (ANOVA) found the main effect only in TOEIC Listening scores, $F(1, 220) = 5.54$, $p = .02$, with a small effect size, $\eta^2 = .03$. Follow-up pairwise comparisons showed female test takers scored significantly higher on average in TOEIC Listening Comprehension than did their male counterparts. The statistics from tests of between-subject effects of gender and mean comparisons in dependent variables across gender are presented in Table 4 and Table 5, respectively.

Table 4

Tests of Between-Subjects Effects of Gender

Dependent Variables	*df*	*F*	*p*	η^2
Listening Scores	1	5.54	.02*	.03
Reading Scores	1	.93	.34	.004
Cognitive Test Anxiety	1	3.44	.07	.02
Foreign Language Reading Anxiety	1	.31	.58	.001
Foreign Language Listening Anxiety	1	1.67	.20	.01

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

Table 5

Mean Comparisons in Dependent Variables across Gender

	Male		Female	
	M	*SD*	*M*	*SD*
Listening Scores	426.55	61.72	441.67	50.96
Reading Scores	395.00	73.22	400.04	67.43
Cognitive Test Anxiety	2.80	.76	3.06	.76
Foreign Language Reading Anxiety	2.84	.69	2.90	.62
Foreign Language Listening Anxiety	3.02	.70	3.20	.60

In terms of the number of previous attempts, follow-up ANOVA found a main effect in TOEIC Listening scores, $F(2, 220) = 3.21$, $p = .04$, with a small effect size, $\eta^2 = .03$, and foreign language reading anxiety, $F(2, 220) = 5.34$, $p = .005$, with a small

effect size, $\eta^2 = .05$. Post-hoc comparisons with Tukey's test were conducted to evaluate differences among the means. Test takers with no previous attempts scored significantly higher in TOEIC Listening Comprehension than test takers with two or more previous attempts. Test takers with one previous attempt did not differ significantly from the other two groups. Test takers with no previous attempts reported significantly lower on foreign language reading anxiety than did test takers with at least one previous attempt. However, there was no significant difference between test takers with one previous attempt and those with more than two previous attempts. The statistics from tests of between-subject effects of previous attempts and mean comparisons in dependent variables across three groups of previous attempts are presented in Table 6 and Table 7, respectively.

Table 6

Tests of Between-Subjects Effects of Previous Attempts

Dependent Variables	df	F	p	η^2
Listening Scores	2	3.21	.04*	.03
Reading Scores	2	2.08	.13	.02
Cognitive Test Anxiety	2	1.20	.30	.01
Foreign Language Reading Anxiety	2	5.34	.005**	.05
Foreign Language Listening Anxiety	2	2.01	.14	.02

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

Table 7

Mean Comparisons in Dependent Variables across Previous Attempts

	No Attempt		One Attempt		Two+ Attempts		No vs. One	No vs. Two+	One vs. Two+
	M	SD	M	SD	M	SD	p	p	p
LC	448.31	54.95	435.15	61.62	426.41	52.41	.37	.04*	.58
RC	411.94	72.28	399.77	71.26	387.68	66.56	.58	.08	.52
CTA	2.81	.76	2.85	.71	3.00	.75	.94	.25	.44
FLLA	3.02	.68	3.00	.60	3.19	.62	.98	.25	.16
FLRA	2.65	.61	2.93	.66	2.88	.65	.03*	.004**	.88

Note. * $p < .05$, ** $p < .01$, *** $p < .001$, LC is Listening Comprehension scores, RC is Reading Comprehension scores, CTA is Cognitive Test Anxiety, FLLA is Foreign Language Listening Anxiety, FLRA is Foreign Language Reading Anxiety.

4.5 Regression Analyses

TOEIC Listening scores. TOEIC Listening scores were regressed onto age, gender, and the number of previous attempts. The demographic variables accounted for a significant amount of variance in TOEIC Listening scores, *adjusted R^2* = .03, $F(4, 221)$ = 2.86, p = .024. Among the entered predictors, gender and two or more previous attempts were the only significant predictors. Gender positively predicted TOEIC Listening scores, β = .15, p = .02. Two or more attempts compared to no or one attempt negatively predicted TOEIC Listening scores, β = -.21, p = .01.

When cognitive test anxiety was entered into the model in addition to demographic variables, the regression model stayed significant, explaining a significant amount of variance in TOEIC Listening scores, *adjusted R^2* = .07, $F(5, 220)$ = 4.35, p = .001. Among the entered predictors, gender, two or more attempts, and cognitive test anxiety were the only significant predictors. Gender positively predicted TOEIC Listening scores, β = .18, p = .007. Two or more attempts and cognitive test anxiety negatively predicted TOEIC Listening scores (β = -.18, p = .02; β = -.21, p = .002, respectively).

When foreign language listening anxiety was entered into the model instead of cognitive test anxiety, the regression model stayed significant, accounting for a significant amount of variance in TOEIC Listening scores, *adjusted R^2* = .23, $F(5, 220)$ = 14.07, $p < .001$. Among the entered predictors, gender, two or more attempts, and foreign language listening anxiety were the only significant predictors. Gender positively predicted TOEIC Listening scores, β = .19, p = .002. Two or more attempts and foreign

language listening anxiety negatively predicted TOEIC Listening scores (β = -.15, p = .04; β = -.45, p < .001, respectively).

In the last model, both cognitive test anxiety and foreign language listening anxiety were entered into the model along with demographic variables. The regression model explained a significant amount of variance in TOEIC Listening scores, *adjusted R^2* = .22, $F(6, 219)$ = 11.80, p < .001. Gender, two or more attempts, and foreign language listening anxiety stayed significant predictors, whereas cognitive test anxiety became a non-significant predictor. Gender positively predicted TOEIC Listening scores, β = .19, p = .002. Two or more attempts and foreign language listening anxiety negatively predicted TOEIC Listening scores (β = -.15, p = .03; β = -.48, p < .001, respectively). The statistics for the regression analyses of TOEIC Listening scores are presented in Table 8.

Table 8

Regression Analysis of TOEIC Listening Scores

	Model 1	Model 2	Model 3	Model 4
	β	β	β	β
Age	.40	.04	.97	.06
Gender	.15*	.18*	.19**	.19**
One attempt	-.10	-.10	-.11	-.11
Two[+] attempts	-.21*	-.18*	-.15*	-.15*
CTAS		-.21**		.06
FLLAS			-.45***	-.48***
Adj. R^2	.03*	.07**	.23***	.22***

Note: * p < .05, ** p < .01, *** p < .001

TOEIC Reading scores. TOEIC Reading scores were regressed onto age, gender, and previous attempts. The demographic variables failed to account for a significant amount of variance in TOEIC Reading scores; that is, the regression model was not significant.

When cognitive test anxiety was entered into the model in addition to demographic variables, the regression model was significant, explaining a significant amount of variance in TOEIC Reading scores, *adjusted R^2* = .06, $F(5, 220)$ = 3.84, *p* = .002. Among the entered predictors, cognitive test anxiety was the only significant predictor. It negatively predicted TOEIC Reading scores (β = -.24, *p* < .001).

When foreign language reading anxiety was entered into the model instead of cognitive test anxiety, the regression model stayed significant, accounting for a significant amount of variance in TOEIC Reading scores, *adjusted R^2* = .16, $F(5, 220)$ = 9.40, *p* < .001. Among the entered predictors, foreign language reading anxiety was the only significant predictor. It negatively predicted TOEIC Reading scores (β = -.40, *p* < .001).

In the last model, both cognitive test anxiety and foreign language reading anxiety were entered into the model along with demographic variables. The regression model explained a significant amount of variance in TOEIC Reading scores, *adjusted R^2* = .16, $F(6, 219)$ = 7.86, *p* < .001. Foreign language reading anxiety stayed a significant negative predictor, β = -.38, *p* < .001, whereas cognitive test anxiety became a non-significant predictor. The statistics for the regression analyses of TOEIC Reading scores are presented in Table 9.

Table 9

Regression Analysis of TOEIC Reading Scores

	Model 1	Model 2	Model 3	Model 4
	β	β	β	β
Age	.01	.02	.01	.01
Gender	.05	.08	.07	.07
One attempt	-.08	-.07	.002	-.001
Two$^+$ attempts	-.18*	-.15	-.08	-.08
CTAS		-.24**		-.04
FLRAS			-.40***	-.38***
Adj. R^2	.03	.06**	.16***	.16***

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

CHAPTER 5 - DISCUSSION AND CONCLUSION

The present study addressed three research questions regarding the effects of

gender and previous attempts on TOEIC LR scores and the three types of anxiety, the

relationships among the three types of anxiety, and the predictive effects of anxiety and

demographic variables on TOEIC LR scores. This chapter addresses these three research

questions in sequence: "What significant differences exist in the levels of cognitive test

anxiety, foreign language reading anxiety, and foreign language listening anxiety and

TOEIC LR scores of Korean test takers across gender and the number of previous

attempts on the TOEIC LR?"; "How are cognitive test anxiety, foreign language reading

anxiety, and foreign language listening anxiety related to each other?"; and "To what

extent do age, gender, the number of previous attempts, cognitive test anxiety, foreign

language reading anxiety, and foreign language listening anxiety predict Korean test

takers' TOEIC LR scores?" The limitations of the present study and directions for future

research are then discussed, followed by implications and conclusions.

Answering the Three Research Questions

5.1 Differences in Anxiety and TOEIC LR Scores across Gender/Previous Attempts

The first research question was: "What significant differences exist in the levels

of cognitive test anxiety, foreign language reading anxiety, and foreign language listening

anxiety and TOEIC LR scores of Korean test takers across gender and the number of

previous attempts on the TOEIC LR?" Regarding gender differences in TOEIC LR scores,

a significant difference was found in TOEIC Listening scores but not in TOEIC Reading

scores. Specifically, female test takers achieved significantly higher TOEIC Listening

scores on average than did their male counterparts. This pattern of gender differences in TOEIC Listening scores is consistent with the official TOEIC LR score reports of Korean test takers (ETS, 2017). These TOEIC LR score reports for the past 12 test dates from September, 2016 to March, 2017 show that female test takers had consistently higher TOEIC Listening scores than did their male counterparts. The gender difference in TOEIC Reading scores in this study is also consistent with this report. In this study, TOEIC Reading scores were not significantly different across gender. In the reports from the ETS, TOEIC Reading scores across gender over the same period were less consistent and smaller in magnitude. Similarly, Hyde and Linn (1988) concluded from their meta-analysis of 165 verbal ability studies that cross-gender differences in verbal ability, including reading, were minimal. The meta-analysis did not examine listening.

Wolfgram, Suter, and Goksel (2016) found that concentration was a key component in listening comprehension but not in reading comprehension. Males in South Korea are conscripted in their early twenties and serve in the military for about two years. According to the demographic report of conscripts in 2013 (Military Manpower Administration, 2014), the age of 94% of the conscripts in 2013 ranged from 20 to 22. As the average age of the male participants in this study was 24.45, on average, the male test takers in the sample of this study consisted of those men who had completed their mandatory military service. These male test takers had to put their English education on hold for two years, whereas female test takers could continue their English education at university or private English academies. During this time, it is possible that the female students maintained their concentration in an academic setting, whereas the males

changed their type of concentration with consequent difficulties in listening comprehension.

In terms of gender differences in anxiety, no significant differences in mean were found between genders in any of the three types of anxiety. Thus in this particular sample of Korean test takers, male and female test takers on average experienced the same degrees of cognitive test anxiety, foreign language reading anxiety, and foreign language listening anxiety. For cognitive test anxiety, this finding contradicts previous literature where females reported significantly higher degrees of cognitive test anxiety (e.g., Cassady, 2004; Cassady & Johnson, 2002; Hembree, 1988; Putwain, 2008; Zeidner, 1990). One possible reason for the non-significant difference between genders in cognitive test anxiety may lie in the high-achieving characteristic of the sample. According to the official TOEIC LR score reports of Korean test takers (ETS, 2017), the average Listening and Reading scores in the population of Korean test takers across October 30th, November 12th and 27th, and December 18th in 2016 were 372.73 and 310.30, respectively. These national average scores are more than one standard deviation below the Listening and Reading scores of the sample of this study. As this comparison in TOEIC LR scores between the entire population of the Korean test takers and the sample of this study suggests, the sample of this study consists of high-achieving test takers. Reflected in their relatively high TOEIC LR scores, the participants of this study might have already had sufficient English proficiency, which might have resulted in relatively high confidence in their performance on the TOEIC LR. As high-achieving test takers, it is likely that the sample of this study had lower levels of cognitive test anxiety to begin with compared to the general population of Korean TOEIC LR test takers. Thus

it is possible that the gender difference in cognitive test anxiety was not statistically significant in this study because this particular sample was characterized with relatively low levels of anxiety.

This pattern has been reported in previous literature. Khalid and Hasan (2009) investigated the differences in test anxiety between low and high achievers and also between genders within low and high achievers among Pakistani university students. High achievers reported significantly lower levels of the cognitive facet of test anxiety than did low achievers. In addition, in contrast to low achievers, there was no significant gender difference in the cognitive facet of test anxiety among high achievers. This finding suggests that high achievers have reduced cross-gender differences in cognitive test anxiety, which may explain the non-significant differences in cognitive test anxiety between genders in the sample of this study.

In terms of foreign language reading and listening anxiety, the findings of the current study support the view that gender does not influence individuals' experience of foreign language anxiety in reading (e.g., Matsuda & Gobel, 2004; Yum, 1998) and listening (e.g., Elkhafaifi, 2005; Yum, 1998). Thus in this particular sample of Korean test takers, male and female test takers on average experienced the same degrees of cognitive test anxiety, foreign language reading anxiety, and foreign language listening anxiety.

In terms of differences across previous attempts in TOEIC LR scores, significant differences were found in Listening scores but not in Reading scores. Specifically, test takers with no previous attempts achieved significantly higher TOEIC Listening scores on average than did test takers with two or more previous attempts. This pattern is

consistent with previous findings where re-takers had lower scores compared to first-time

test takers on standardized English proficiency tests (e.g., Cheng et al., 2014). The reason

for this pattern may lie in the characteristics of test takers with multiple attempts on tests.

The group of first-time test takers consists of test takers who may or may not have

characteristics to help them achieve their desired scores, such as sufficient English

proficiency and/or low anxiety levels. However, as those who possess these helpful

characteristics would be more likely to achieve their desired scores on their first attempt

and would not pursue further attempts on the test, these test takers would be subsequently

filtered out from the group of test takers with previous attempts. Thus only those test

takers without the characteristics helpful to achieve desired scores (i.e., test takers with

inadequate English proficiency and/or high anxiety levels) would remain in the groups

with previous attempts. This pattern would manifest more prominently for those students

with more previous attempts, which may explain that the significant difference in TOEIC

Listening scores was found only between test takers with no previous attempts and those

with two or more previous attempts.

Regarding differences in anxiety across the three previous attempt groups,

significant differences were found only in foreign language reading anxiety. Specifically,

test takers with multiple previous attempts reported significantly greater levels of foreign

language reading anxiety compared to test takers with no previous attempts. The same

interpretation used for the case of TOEIC Listening scores and test takers with multiple

attempts may explain this pattern. Test takers with lower levels of foreign language

reading anxiety were likely to achieve their desired scores on their first attempt and were

subsequently filtered out from the groups of test takers with one or more previous

attempts; thus only those students with higher levels in foreign language reading anxiety interfering with their test performance remained in the groups with one or more previous attempts.

5.2 Relationships among the Three Types of Anxiety

The second research question was: "How are cognitive test anxiety, foreign language reading anxiety, and foreign language listening anxiety related to each other?" The results show that these three measures of anxiety are related. Cognitive test anxiety formed medium positive correlations with foreign language listening anxiety ($r = .54$) and foreign language reading anxiety ($r = .56$). As such, test takers with higher cognitive test anxiety tended to have higher degrees of both foreign language reading and foreign language listening anxieties. This positive correlation was expected as the constructs of both test anxiety and foreign language anxiety have their origins in general anxiety (MacIntyre & Gardner, 1991). There was no previous study so far that specifically examined the extent to which cognitive test anxiety was related to either foreign language reading anxiety or foreign language listening anxiety – thus making this contribution of my study important to future research in language testing. This finding is, however, consistent with previous studies that have examined the relationship between test anxiety and general foreign language anxiety, which found medium to large positive correlations between the two types of anxiety (e.g., Salehi & Marefat, 2014; Tsai, 2013).

The two foreign language anxieties also formed a large positive correlation with each other ($r = .71$). This finding indicates that test takers with higher anxiety in one language domain tended to have higher anxiety in the other domain as well. Further, this correlation between foreign language reading and foreign language listening anxiety was

greater than the correlation these two types of foreign language anxiety formed with cognitive test anxiety. This pattern of correlations among the three types of anxiety may be attributed to the domain specificity in the three anxiety constructs. Cognitive test anxiety is a construct associated with anxiety in general test situations that are not specific to particular test constructs. On the other hand, foreign language reading anxiety and foreign language listening anxiety are concerned with anxiety specifically in test constructs of reading and listening in a foreign language. As members/constructs of the greater anxiety family, these three anxieties are positively correlated with each other. However, because foreign language reading anxiety and foreign language listening anxiety are concerned with specific and also conceptually more closely related domains, these two foreign language anxiety constructs form greater correlations with each other than they do with cognitive test anxiety. These findings help us to understand the finer differences among various anxiety constructs.

5.3 Predictors of TOEIC LR Performance

The third research question was: "To what extent do age, gender, the number of previous attempts, cognitive test anxiety, foreign language reading anxiety, and foreign language listening anxiety predict Korean test takers' TOEIC LR scores?" In terms of TOEIC Listening scores, the significant predictors were gender, previous attempts, cognitive test anxiety, and foreign language listening anxiety. Female test takers were more likely to achieve higher TOEIC Listening scores than were their male counterparts. As shown in the discussion on the first research question, this pattern may be attributed to the mandatory military service of the male test takers in this study, resulting in a longer

time away from their English study, with lower English language listening proficiency based on changes in concentration patterns.

Test takers with two or more previous attempts were more likely to score lower on TOEIC Listening Comprehension than were test takers with less than two previous attempts. This finding is consistent with previous studies on other language tests (see Cheng, at al., 2014) where test repeaters had lower test score. As discussed in the first research question, this finding may be due to the fact that test takers with multiple attempts consist of test takers who could not achieve their desired scores on the first attempt, due to other factors associated with lower test scores, such as insufficient English proficiency and/or high levels of anxiety.

Cognitive test anxiety negatively predicted TOEIC Listening Scores when it was the only anxiety variable in the regression model, indicating test takers with higher levels of cognitive test anxiety were likely to achieve lower TOEIC Listening scores. Although some of the few studies that examined the relationship between test anxiety and listening test performance found that test anxiety was not a significant predictor of listening test performance (e.g., Amiryousefi & Tavakoli, 2011; In'nami, 2006), these studies were conducted using various anxiety constructs and in different testing contexts than this study, and had potential limitations. The first limitation lies in the scale used in these studies to measure test anxiety. Amiryousefi and Tavakoli (2011) used the Test Anxiety Scale (Sarason, 1975) to measure test anxiety of participants. However, as this scale does not differentiate the cognitive and emotional facets of test anxiety, the authors investigated the relationship between test anxiety and listening test performance using the construct of general test anxiety. As the cognitive facet of test anxiety has been

documented to negatively affect test performance in a more consistent and stronger manner than the emotional facet of test anxiety (Hembree, 1988), it is possible that the non-significant predictive effects of test anxiety on listening test performance in the Amiryousefi and Tavakoli study may be attributed to the lack of differentiation between the cognitive and emotional facets of test anxiety.

In'nami (2006) conducted an exploratory factor analysis on items from two test anxiety scales, the Test Anxiety Scale (Sarason, 1975) and the Test Influence Inventory (Fujii, 1993). Two of the extracted factors were general test worry and task-irrelevant thinking, which could be argued to represent the cognitive facet of test anxiety. Neither of these factors was a significant predictor of listening test performance. However, each factor only consisted of four items, which may be susceptible to criticism for the lack of sufficient number of items to adequately represent the construct of cognitive test anxiety. On the other hand, the present study employed a scale that specifically measures cognitive test anxiety with a relatively sufficient number of items (n = 17) and excellent reliability. Thus the findings of the current study may better grasp the predictive effects of cognitive test anxiety on listening test performance than did previous studies.

Another limitation of these previous studies lies in research context in which the relationship between test anxiety and listening test performance was investigated. Amiryousefi and Tavakoli (2011) administered the listening component of the Test of English as a Foreign Language (TOEFL) as a practice test to measure participants' listening proficiency. In'nami (2006) also used an adapted version of the listening component of the TOEFL to assess participants' listening performance. The results of these tests did not have any high-stakes impact on participants' lives, making these tests

low-stakes in nature, whereas the TOEIC LR was high-stakes in nature for participants of my study, as they were writing the test to use the scores for important decisions, such as graduation and/or employment. A low-stakes context may lack authenticity in situations where students' cognitive test anxiety actually interferes with their test performance. Thus, in contrast to these previous studies, the findings of the current study, conducted in a high-stakes context, may better illustrate the relationship between cognitive test anxiety and foreign language listening performance. The findings by Cheng et al. (2014) support this explanation. Cheng et al. examined the predictive effects of cognitive test anxiety on performance across three different English proficiency tests among Chinese test takers. As the results of these tests were actually used for important decisions in the test takers' lives, these tests were considered high-stakes. In the Cheng et al. study, a factor of cognitive test anxiety was a significantly negative predictor of test takers' listening performance across the three high-stakes English proficiency tests.

This negative predictive effect of cognitive test anxiety on TOEIC Listening scores, however, disappeared when foreign language listening anxiety was entered into the regression model in addition to cognitive test anxiety. In contrast to cognitive test anxiety, foreign language listening anxiety was a significant negative predictor of TOEIC Listening scores in this regression model, indicating the higher levels of foreign language listening anxiety test takers had, the lower their TOEIC Listening scores were. These negative predictive effects of foreign language listening anxiety on foreign language listening test performance are consistent with previous studies. Kim (2000) investigated the relationship between foreign language listening anxiety and performance on the TOEFL practice test in Korean university students. A factor of foreign language listening

anxiety named lack of confidence in English listening accounted for a significant amount of variance in English listening performance and also was a significantly negative predictor of listening performance.

A possible explanation for the disappearance of cognitive test anxiety as a significant predictor upon the addition of foreign language listening anxiety to the regression model may be related to overlap between the domains governed by these two anxiety constructs. That is, the construct of foreign language listening anxiety may contain not only test takers' anxiety over their own listening ability but also anxiety over actually having to successfully perform listening in a foreign language. As cognitive test anxiety can be considered performance anxiety specifically on tests, the component of foreign language listening anxiety that represents anxiety over listening performance may conceptually overlap with cognitive test anxiety. Thus the part of TOEIC Listening scores that was predicted by cognitive test anxiety may have been replaced by foreign language listening anxiety when both anxieties were entered into the regression model, reducing the beta weight of cognitive test anxiety to a non-significant level.

In terms of TOEIC Reading scores, the only predictors were cognitive test anxiety and foreign language reading anxiety. Similar to the case of TOEIC Listening scores, cognitive test anxiety negatively predicted TOEIC Reading scores only when it was the sole anxiety variable in the regression model. This finding is, however, not consistent with previous studies that found no significant relationship between test anxiety and foreign language reading test performance. Amiryousefi and Tavakoli (2011) showed that test anxiety was a non-significant predictor of the reading component of a practice TOEFL test in Iranian university students. In addition, test anxiety formed non-

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significant correlations with performance on a practice TOEFL reading test in another group of Iranian university students (Birjandi & Alemi, 2010) and also with scores on a general English test that measures language skills related to reading, such as vocabulary, reading comprehension, and grammar in another group of Iranian university students (Javanbakht & Hadian, 2014). However, similar to the case of previous studies examining the relationship between test anxiety and TOEIC Listening scores, these studies employed a test anxiety scale that did not differentiate the cognitive and emotional facets of test anxiety. In addition, these studies only focused on the relationship between general test anxiety and reading performance in a low-stakes context using practice tests for reading comprehension in English. In contrast to these studies, Cheng et al. (2014) examined the relationships between cognitive test anxiety and reading performance across three different high-stakes English proficiency tests in Chinese test takers. In this study, a factor of cognitive test anxiety was a significant negative predictor of test performance in a foreign language consistently across the three different English proficiency tests. Perhaps, similar to the case of foreign language listening performance, test takers' test anxiety may affect their reading performance more robustly in a high-stakes context.

Foreign language reading anxiety also significantly negatively predicted TOEIC Reading scores. This negative predictive relationship between foreign language reading anxiety and reading test performance in a foreign language is consistent with previous research (e.g., Koh & Kim, 2009; Kim & Park, 2014; Saito et al., 1999; Sellers, 2000; Tsai & Li, 2012; Yum, 1998). For example, Koh and Kim (2009) investigated the relationship between foreign language reading anxiety and performance on a practice

TOEIC Reading test in Korean university students. When participants were divided into three proficiency groups based on their performance on the practice TOEIC Reading test, significant differences in foreign language anxiety were found across the three groups. Specifically, the higher participants' scores on the test were, the greater levels of foreign language anxiety they reported.

Similar to the case of TOEIC Listening scores, cognitive test anxiety became a non-significant predictor of TOEIC Reading scores when foreign language reading anxiety was added into the regression model with cognitive test anxiety. The same interpretation used for the disappearance of predictive effects of cognitive test anxiety on TOEIC Listening scores may explain this phenomenon. Foreign language reading anxiety may include not only anxiety over one's own reading ability in a foreign language but also anxiety over actually performing foreign language reading. Conceptualized as the cognitive facet of anxiety over performance in general test situations, cognitive test anxiety may share its domain with this specific part of foreign language anxiety concerned with having to perform foreign language reading. As a result, when both of these anxieties were entered into the regression model, the portion of TOEIC Reading scores predicted by cognitive test anxiety was replaced by foreign language reading anxiety.

5.4 Limitations and Implications for Future Research

Three major limitations are present in the current study. One of the limitations of this study lies in the representativeness of the sample. The sample of this study consisted only of high-achieving test takers. This characteristic of the sample is shown in the score comparison between the population of Korean test takers and the sample of this study.

This limitation in the representativeness of the sample hurts the degree to which the findings of this study can be generalized to the entire population of Korean TOEIC LR test takers. This high-achieving characteristic of the sample may be due to the fact that the recruitment procedure took place at test sites, universities, and TOEIC LR preparation academies located in Seoul, which, according to the official TOEIC LR scores report, is a region where the average TOEIC Listening and Reading scores are greater than any other regions in Korea (ETS, 2017). It is also possible that this high-achieving characteristic of the sample may be attributed to the fact that only university students or graduates were recruited for this study. As university students tend to have more exposure to English education and relatively greater English proficiency than do students with college or professional degrees in Korea (ETS, 2017), this selective sampling may have reduced representativeness of the sample population by including only high-achieving test takers. Alternatively, it is also possible that test takers with relatively high TOEIC LR scores were more likely to participate in the study compared to low-achieving test takers. Although potential participants were assured upon recruitment that their scores would be kept confidential and that only the principal investigator would have access to their scores, it is possible that low-achieving participants felt reluctant to participate in the study due to their worry over experiencing embarrassment. To overcome this limitation, future research should pay more attention to how to include low-achieving test takers as well as their high-achieving counterparts into the study to maximize representativeness of the sample. This goal could be achieved by recruiting participants with other than university education such as test takers with college or professional degrees and without post-secondary education. In addition, it is also possible to recruit test takers residing in

regions other than Seoul, which is a region with the highest TOEIC LR scores. The increased representativeness would strengthen generalizability of the findings, which, in turn, would provide more comprehensive findings on the relationships between anxiety and test performance among Korean test takers.

The second and third limitations lie in the three anxiety scales used in this study. The anxiety scales used in this study conceptualize anxiety as traits; that is, these scales assess the extent to which individuals perceive certain situations as anxiety-provoking. In the case of the Cognitive Test Anxiety Scale, the scale measures the extent to which individuals perceive test situations in general as anxiety-provoking. Similarly, the Foreign Language Reading Anxiety Scale and the Foreign Language Listening Anxiety scale assess the degree to which individuals overall perceive reading and listening in a foreign language as anxiety-provoking, respectively. However, as the TOEIC LR can be considered a high-stakes test, it is possible that the participants might have experienced high levels of state anxiety regardless of their individual traits in the three types of anxiety. Future research could clarify this part by employing two kinds of anxiety scales: a scale that measures anxiety as a trait and a scale that measures anxiety as a state.

In addition, the fact that the three anxiety scales used in this study relied on self-report might have contributed to the limitation in this study. Although self-reports have been a popular data collection method in social and behavioural science research (Elliott, 2004), this data collection method possesses recognized weaknesses that could hurt the accuracy and validity of data. One concern lies in the extent to which people understand themselves adequately enough to accurately report their own psychological information. Although self-reports assume that people have sufficient understanding of their own

feelings and behaviours, it is possible that people are not equipped with such optimal self-awareness or sometimes equipped with distorted self-awareness, which could in turn reduce accuracy of their responses on psychological constructs, such as anxiety (John & Robinson, 1994). Thus when participants in this study were asked to reflect on their own levels of cognitive test anxiety, foreign language reading anxiety, and foreign language listening anxiety, they might have misjudged the degrees to which they usually experience anxiety in general test situations or when they have to engage in reading and listening in English. In addition, people may vary in their understanding or interpretations of questions on a survey, which serves as a prerequisite for accurate responses on a survey. Participants in this study might have misunderstood some of the questions on the three anxiety scales and provided inaccurate information concerning their experiences on the three types of anxiety under investigation. Furthermore, as the questionnaire was completed on an on-line survey platform, participants were not readily accessible to the principal investigator for any questions they might have had on the questionnaire. This lack of opportunity to ask the principal investigator questions might have dismissed the chance to increase the accuracy of participants' responses.

The findings of this study provide three implications for future research. First, as this study showed that test takers' anxiety could influence their test performance, these findings could serve as a stepping stone for investigation on the role of anxiety in the context of validity of test score interpretation. Messick (1989) suggested construct-irrelevant variance as one of the two major threats to hurt construct validity by damaging adequacy and appropriateness of test scores interpretations. As anxiety was not part of the intended test constructs of the TOEIC LR, the findings of this study could provide partial

evidence that cognitive test anxiety, foreign language reading anxiety, and foreign language listening anxiety act as sources of construct-irrelevant variance. As the TOEIC LR does not take these anxieties into account in the process of test validation, the findings of this study may contribute to the discussion on whether or not language tests should include test takers' anxiety in test validation and address it as a possible source of construct-irrelevant variance.

Second, the findings of this study suggest the importance in examining anxiety of test takers in other EFL contexts with high-stakes English proficiency tests. Even if this study found negative relationships between anxiety and test performance on a foreign language proficiency test, the findings of this study may not be generalizable to other EFL contexts. As this study showed anxiety negatively affected test takers' test performance on high-stakes English proficiency tests, it would be worthwhile to investigate to what extent this relationship between test takers' anxiety and their language test performance manifests in other EFL contexts.

Lastly, this study may provide implications for future research on possible interventions for Korean test takers on how to manage their own anxiety levels. As the findings show, test takers in Korea can experience test anxiety and foreign language anxiety over an English proficiency test. Future research should investigate how to help these test takers manage their test anxiety and foreign language anxiety during these English proficiency tests. There have been studies on how to help students with test anxiety (Zeidner, 1998) and language learners with foreign language anxiety. However, most of these studies focus on interventions in classroom settings where teachers can have partial or full control over assessment measures and evaluation procedures.

However, as English proficiency tests such as the TOEIC LR are administered by testing companies that aim to practice strict protocols to achieve optimal standardization, it would not be feasible to expect anxiety interventions for individuals from them. Therefore, future research should focus more on interventions where test takers could learn and practice anxiety interventions on their own so that they could minimize the negative impact of anxiety on their performance on important tests.

5.5 Conclusion

This study investigated the degree to which cognitive test anxiety, foreign language reading anxiety, and foreign language listening anxiety influenced Korean test takers' performance on a high-stakes English proficiency test, the TOEIC LR. As no previous studies have so far investigated the relationships among these three types of anxiety in a single group of participants, this study served to fill the literature gap by including all three of the anxieties into a single investigation and providing finer understanding on how these three anxieties are related to each other. In addition, by examining how these anxieties influence test takers' performance on the TOEIC LR specifically in the context of Korea, the present study helped shed light on the role of anxiety on this most widely used English proficiency test in Korea.

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APPENDIX A: ETHICS CLEARANCE LETTER

October 18, 2016

Mr. Yoon-Goo Nam
Master's Student
Faculty of Education
Queen's University
Duncan McArthur Hall
511 Union Street West
Kingston, ON, K7M 5R7

GREB Ref #: GEDUC-828-16; TRAQ # 6019276
Title: "GEDUC-828-16 Exploring Relationships Between Korean Test Takers' Anxiety and Performance on the Test of English for International Communication in Reading and Listening Comprehension (TOEIC LR)"

Dear Mr. Nam:

The General Research Ethics Board (GREB), by means of a delegated board review, has cleared your proposal entitled **"GEDUC-828-16 Exploring Relationships Between Korean Test Takers' Anxiety and Performance on the Test of English for International Communication in Reading and Listening Comprehension (TOEIC LR)"** for ethical compliance with the Tri-Council Guidelines (TCPS 2 (2014)) and Queen's ethics policies. In accordance with the Tri-Council Guidelines (Article 6.14) and Standard Operating Procedures (405.001), your project has been cleared for one year. You are reminded of your obligation to submit an annual renewal form prior to the annual renewal due date (access this form at http://www.queensu.ca/traq/signon.html/; click on "Events"; under "Create New Event" click on "General Research Ethics Board Annual Renewal/Closure Form for Cleared Studies"). Please note that when your research project is completed, you need to submit an Annual Renewal/Closure Form in Romeo/traq indicating that the project is 'completed' so that the file can be closed. This should be submitted at the time of completion; there is no need to wait until the annual renewal due date.

You are reminded of your obligation to advise the GREB of any adverse event(s) that occur during this one year period (access this form at http://www.queensu.ca/traq/signon.html/; click on "Events"; under "Create New Event" click on "General Research Ethics Board Adverse Event Form"). An adverse event includes, but is not limited to, a complaint, a change or unexpected event that alters the level of risk for the researcher or participants or situation that requires a substantial change in approach to a participant(s). You are also advised that all adverse events must be reported to the GREB within 48 hours.

You are also reminded that all changes that might affect human participants must be cleared by the GREB. For example, you must report changes to the level of risk, applicant characteristics, and implementation of new procedures. To submit an amendment form, access the application by at http://www.queensu.ca/traq/signon.html; click on "Events"; under "Create New Event" click on "General Research Ethics Board Request for the Amendment of Approved Studies". Once submitted, these changes will automatically be sent to the Ethics Coordinator, Ms. Gail Irving, at the Office of Research Services for further review and clearance by the GREB or GREB Chair.

On behalf of the General Research Ethics Board, I wish you continued success in your research.

Sincerely,

John D. Freeman

John Freeman, Ph.D.
Chair
General Research Ethics Board

c: Dr. Liying Cheng, Supervisor
        Dr. Richard Reeve, Chair, Unit REB
        Ms. Erin Wicklam, Dept. Admin.

APPENDIX B: QUESTIONNAIRE (ENGLISH)

Demographic Information

Please fill in the following blanks or check in the boxes to provide your demographic information.

1. Date of Birth: _____

2. Gender

    a. Male: _____

    b. Female: _____

3. Reasons to take the TOEIC LR (Check all that apply):

    a. Graduation _____

    b. Employment _____

    c. Other: _____

4. Number of previous attempts on the TOEIC LR in the past year: _____

Cognitive Test Anxiety Scale (CTAS)

The following statements describe how various people feel about writing tests in general or during and after tests. Indicate if these statements apply to how you feel by writing the number of the item that best indicates your choices.

      1 = Strongly Agree
      2 = Agree
      3 = Neither Agree nor Disagree
      4 = Disagree
      5 = Strongly Disagree

1. I lose sleep over worrying about examinations.
2. While taking an important examination, I find myself wondering whether the other students are doing better than I am.
3. I tend to freeze up on things like intelligence tests and final exams.
4. During tests, I find myself thinking of the consequences of failing.
5. At the beginning of a test, I am so nervous that I often can't think straight.
6. My mind goes blank when I am pressured for an answer on a test.
7. During tests, the thought frequently occurs to me that I may not be too bright.
8. During a course examination, I get so nervous that I forget facts I really know.
9. After taking a test, I feel I could have done better than I actually did.
10. I worry more about doing well on tests than I should.
11. During tests, I have the feeling that I am not doing well.
12. When I take a test that is difficult, I feel defeated before I even start.
13. I am a poor test taker in the sense that my performance on a test does not show how much I really know about a topic.
14. I am not good at taking tests.
15. When I first get my copy of a test, it takes me a while to calm down to the point where I can begin to think straight.
16. I do not perform well on tests.
17. When I take a test, my nervousness causes me to make careless errors.

Note: from Cassady and Finch (2014)

Foreign Language Reading Anxiety Scale (FLRAS)

Directions: Statements 1 through 20 refer to how you feel about reading English. For each statement, please indicate whether you (1) strongly agree, (2) agree, (3) neither agree nor disagree, (4) disagree, or (5) strongly disagree by marking the appropriate number on the line following each statement. Please give your first reaction to each statement and mark an answer for every statement.

1. I get upset when I'm not sure whether I understand what I am reading in English.
2. When reading English, I often understand the words but still can't quite understand what the author is saying.
3. When I'm reading English, I get so confused I can't remember what I'm reading.
4. I feel intimidated whenever I see a whole page of English in front of me.
5. I am nervous when I am reading a passage in English when I am not familiar with the topic.
6. I get upset whenever I encounter unknown grammar when reading English.
7. When reading English, I get nervous and confused when I don't understand every word.
8. It bothers me to encounter words I can't pronounce while reading English.
9. I usually end up translating word by word when I'm reading English.
10. By the time you get past the funny letters and symbols in English, it's hard to remember what you're reading about.
11. I am worried about all the new symbols you have to learn in order to read English.
12. I enjoy reading English.
13. I feel confident when I am reading in English.
14. Once you get used to it, reading English is not so difficult.
15. The hardest part of learning English is learning to read.
16. I would be happy just to learn to speak English rather than having to learn to read as well.
17. I don't mind reading to myself, but I feel very uncomfortable when I have to read English aloud.
18. I am satisfied with the level of reading ability in English that I have achieved so far.
19. English culture and ideas seem very foreign to me.
20. You have to know so much about English history and culture in order to read English.

Note: from Saito, Horwitz, and Garza (1999)

Foreign Language Listening Anxiety Scale (FLLAS)

The following statements apply to how various people feel about listening to native speakers of English speak English. Indicate if these statements apply to how you feel by writing the number of the item that best indicates your choices.

1. Strongly Disagree
2. Disagree
3. Undecided
4. Agree
5. Strongly Agree

1. When listening to English I tend to get stuck on one or two unknown words.
2. I get nervous if a listening passage is read only once during English listening tests.
3. When someone pronounces words differently from the way I pronounce them, I find it difficult to understand.
4. When a person speaks English very fast, I worry that I might not understand all of it.
5. I am nervous when I am listening to English if I am not familiar with the topic.
6. It's easy to guess about the parts that I miss while listening to English.
7. If I let my mind drift even a little bit while listening to English, I worry that I will miss important ideas.
8. When I'm listening to English, I am worried when I can't watch the lips or facial expression of a person who is speaking.
9. During English listening tests, I get nervous and confused when I don't understand every word.
10. When listening to English, it is difficult to differentiate the words from one another.
11. I feel uncomfortable in class when listening to English without the written text.
12. I have difficulty understanding oral instructions given to me in English.
13. It is hard to concentrate on what English speakers are saying unless I know them well.
14. I feel confident when I am listening in English.
15. When I'm listening to English, I often get so confused I can't remember what I have heard.
16. I fear I have inadequate background knowledge of some topics when listening in English.
17. My thoughts become jumbled and confused when listening to important information in English.
18. I get worried when I have little time to think about what I hear in English.
19. When I'm listening to English, I usually end up translating word by word without understanding the contents.
20. I would rather not have to listen to people speak English at all.
21. I get worried when I can't listen to English at my own pace.
22. I keep thinking that everyone else except me understands very well what an English speaker is saying.
23. I get upset when I'm not sure whether I understand what I am listening to English.
24. If a person speaks English very quietly, I am worried about understanding.
25. I have no fear of listening in English as a member of an audience.
26. I am nervous when listening to an English speaker on the phone or when imagining a situation where I listen to an English speaker on the phone or when imagining a situation where I listen to an English speaker on the phone.
27. I feel tense when listening to English as a member of a social gathering or when imagining a situation where I listen to English as a member of a social gathering.

28. It's difficult for me to listen to English when there is even a little bit of background noise.
29. Listening to new information in English makes me uneasy.
30. I get annoyed when I come across words that I don't understand while listening to English.
31. English stress and intonation seem familiar to me.
32. When listening to English, I often understand the words but still can't quite understand what the speaker means.
33. It frightens me when I cannot catch a key word of an English listening passage.

Note: from Kim (2000)

APPENDIX C: QUESTIONNAIRE (KOREAN)

인구학적 정보

1. 생년월일: _____

2. 성별

    a. 남성 _____

    b. 여성 _____

3. 토익 성적이 필요한 이유 (해당 사항 모두 선택)

    a. 졸업 _____

    b. 취업 _____

    c. 기타 _____

4. 지난 1 년 동안 토익 시험을 본 횟수: _____

시험 불안 설문지

본 설문은 토익(TOEIC LR) 응시자들을 대상으로 시험 불안에 관한 연구를 진행하기 위하여
작성된 설문지 입니다. 아래 문항들은 여러분이 시험을 준비 하거나 볼 때 느끼는 다양한
감정들을 묘사 하고 있습니다. 각 문항들을 읽으시고 여러분에게 제일 잘 맞는 번호를 보기에서
골라 클릭하여 선택 해주시기 바랍니다. 여러분이 답하신 내용과 설문 결과는 본 연구의 목적
이외에 다른 용도로 절대 사용되지 않을 것임을 약속 드립니다.

보기: (1) 전혀 그렇지 않다, (2) 어느정도 그렇다, (3) 그저 그렇다, (4) 꽤 그렇다, (5) 매우 그렇다.

1. 시험 걱정에 잠을 설친다
2. 중요한 시험을 볼 때, 다른 사람들이 나보다 더 잘 하고 있는지 신경쓰인다.
3. 지능검사나 기말고사 같은 시험 상황에서 긴장감 때문에 몸이 경직 되곤 한다.
4. 시험을 볼 때, 시험 결과가 안 좋을 경우를 미리 생각하게 된다.
5. 시험을 시작할 때, 너무 긴장해서 머리가 복잡 해지고 생각이 정리가 안된다.
6. 답을 적어야 된다는 압박감에 머리가 새하얘진다.
7. 시험을 볼 때, 내가 그렇게 똑똑하지 않은 것 같다는 생각이 든다.
8. 시험을 볼 때, 긴장이 돼서 잘 아는 내용을 까먹는다.
9. 시험이 끝나면 "더 잘 볼 수 있었는데" 라고 생각하게 된다.
10. 시험 걱정을 지나치게 한다.
11. 시험을 볼 때, 시험이 잘 안 풀리는 느낌이 든다.
12. 시험이 어려우면 시작하기 전부터 벌써 망친 느낌이 든다.
13. 시험 내용을 공부 한 만큼 점수가 나오지 않는 것 같다.
14. 시험이라는 평가 방식에 약하다.
15. 시험지를 받고 나서 시간이 좀 지나야 마음이 진정되고 생각을 제대로 할 수 있게 된다.
16. 시험을 잘 못 본다.
17. 시험을 볼 때, 긴장감 때문에 부주의한 실수를 한다.

영어 읽기(독해) 불안 조사지

본 설문은 토익(TOEIC LR) 응시자들을 대상으로 영어 읽기(독해) 불안에 관한 연구를 진행하기 위하여 작성된 설문지 입니다. 아래 문항들은 여러분이 영어로 쓰인 글을 읽을 때 느끼는 다양한 감정에 대해 묻고 있습니다. 각 문항들을 읽고 여러분의 느낌에 제일 알맞는 번호를 보기에서 골라 클릭하여 선택 해주시기 바랍니다. 여러분이 답하신 내용과 설문 결과는 본 연구의 목적 이외에 다른 용도로 절대 사용되지 않을 것임을 약속 드립니다.

보기: (1) 전혀 그렇지 않다, (2) 그렇지 않다, (3) 그저 그렇다, (4) 그렇다, (5) 매우 그렇다

1. 영어로 쓰인 글을 읽을 때, 내용을 잘 이해하지 못하면 마음이 놓이지 않고 불안하다.
2. 영어로 쓰인 글을 읽을 때, 글 속의 단어들의 뜻은 알고 있지만, 필자가 말하고자 하는 바를 이해하지 못할 때가 있다.
3. 영어로 쓰인 글을 읽을 때, 긴장되고 혼란스러워 읽고 있는 내용을 잘 기억하지 못 한다.
4. 영어로만 쓰인 글을 보면 두려워 진다.
5. 영어로 쓰인 글을 읽을 때, 글의 주제가 낯설면 불안하다.
6. 영어로 쓰인 글을 읽을 때, 모르는 문법이 나오면 마음이 놓이지 않고 불안하다.
7. 영어로 쓰인 글을 읽을 때, 모든 단어를 이해하지 못하면 마음이 불안하다.
8. 영어로 쓰인 글을 읽을 때, 내가 발음하지 못 하는 단어가 나오면 신경이 쓰이고 성가시다.
9. 보통, 영어로 쓰인 글을 읽을 때 단어 하나하나를 번역하게 된다.
10. 영어로 쓰인 글을 읽을 때, 생소한 단어에 집중하게 되어, 읽고 있는 내용을 기억하기가 어렵다.
11. 영어로 쓰인 글을 읽기 위해 새로운 단어를 익혀야 하는 게 부담스럽다.
12. 나는 영어 읽기가 재미 있다.
13. 나는 영어 읽기에 자신이 있다.
14. 일단 익숙해지면 영어 읽기(독해)는 그렇게 어렵지 않다.
15. 영어를 배우는 데 가장 어려운 것은 읽기(독해)이다.
16. 영어 읽기(독해) 보다 영어 말하기를 배우면 좋을 것 같다.
17. 여러 사람 앞에서 영어 지문을 소리 내어 읽을 때 거북함을 느낀다.
18. 나는 현재 나의 영어 읽기(독해) 능력에 만족한다.
19. 나는 영어권의 문화와 사고방식에 익숙하지 않다.
20. 영어 독해력을 향상하는 데 영어권 역사와 문화에 익숙해야 한다고 생각한다.

영어 듣기(청해) 불안 설문지

본 설문은 토익(TOEIC LR) 응시자들을 대상으로 영어 듣기(청해) 불안에 관한 연구를 진행하기 위하여 작성된 설문지 입니다. 아래 문항들은 여러분이 영어를 모국어로 하는 사람들의 (미국인, 영국인 등) 말을 들을 때 느끼는 다양한 감정들을 묘사하고 있습니다. 각 문항들을 읽으시고 여러분과 제일 잘 맞는 번호를 보기에서 골라 클릭하여 선택 해주시기 바랍니다. 여러분이 답하신 내용과 설문 결과는 본 연구의 목적 이외에 다른 용도로 절대 사용되지 않을 것임을 약속 드립니다.

보기: (1) 전혀 그렇지 않다, (2) 그렇지 않다, (3) 그저 그렇다, (4) 그렇다, (5) 매우 그렇다.

1. 영어를 들을 때, 모르는 한 두 단어에 집착하는 경향이 있다.
2. 영어 듣기 시험을 볼 때, 지문을 단 한 번씩만 들려주는 것 때문에 긴장된다.
3. 영어를 들을 때, 상대방의 발음이 내가 발음하는 방식과 다르면 이해하기가 어렵다.
4. 상대방이 영어로 매우 빨리 말할 때 다 알아 듣지 못 할 까봐 걱정된다.
5. 익숙하지 않은 화제에 대해 영어로 들을 때 긴장된다.
6. 영어를 들을 때, 어느 부분을 놓치더라도 쉽게 추측할 수 있다.
7. 영어를 들을 때, 조금이라도 딴 생각을 하면 중요한 내용을 놓칠 것 같아 걱정된다.
8. 영어를 들을 때, 상대방의 입술 움직임이나 얼굴 표정을 볼 수 없으면 걱정된다.
9. 영어 듣기 시험을 볼 때, 단어를 모두 이해하지 못하면 긴장되고 초조해진다.
10. 영어를 들을 때, 단어 하나하나를 구분하기가 힘들다.
11. 수업시간에 교재 없이 영어를 들을 때면 마음이 편하지가 않다.
12. 영어로 된 지시문을 들을 때 이해하기가 힘들다.
13. 잘 알지 못하는 사람이 영어로 말하는 것을 들으면 집중하기가 힘들다.
14. 영어 듣기(청해)에 대해 자신감이 있다.
15. 영어를 들을 때, 너무 당황스러워 들은 것을 기억하지 못 하곤 한다.
16. 영어를 들을 때, 그 화제에 대해 충분한 배경 지식이 없을 까봐 걱정된다.
17. 중요한 정보를 영어로 들을 때, 생각이 뒤죽박죽되고 혼란스러워진다.
18. 영어로 들은 것을 생각해 볼 시간이 거의 없을 때 걱정된다.
19. 영어를 들을 때 대개 단어 하나하나를 번역하다가 내용을 이해하지 못하고 끝나곤 한다.
20. 영어로 말하는 것을 아예 듣지 않을 수 있으면 좋겠다.
21. 영어를 나에게 맞는 속도로 들을 수 없을 때 걱정된다.
22. 영어를 들을 때, 나만 빼고 모든 사람들이 다 이해할 것이라고 줄곧 생각한다.
23. 영어를 들을 때, 내용을 잘 이해하지 못한 것 같으면 마음이 놓이지 않고 불안하다.
24. 상대방이 영어로 아주 작게 이야기 하면 이해할 수 있을지 걱정된다.

25. 청중의 한 명으로써 영어를 들을 때는 두렵지 않다.

26. 전화로 상대방이 영어로 말하는 것을 듣거나 그러한 상황을 상상할 때 긴장된다.

27. 사교적 모임에서 영어로 말하는 것을 듣거나 그러한 상황을 상상할 때 긴장된다.

28. 소음이 약간이라도 있으면 영어를 듣기가 어렵다.

29. 새로운 정보를 영어로 들을 때 불안해진다.

30. 영어를 들을 때 이해할 수 없는 단어들이 나오면 신경이 쓰이고 성가시다.

31. 영어의 강세와 억양에 익숙한 편이다.

32. 영어를 들을 때, 단어들은 다 알아듣지만 상대방이 말하는 의미를 잘 이해하지 못할 때가 있다.

33. 영어를 들을 때, 핵심 단어를 알아듣지 못할 때 겁이 난다.

APPENDIX D: LETTER OF INFORMATION & CONSENT FORM (ENGLISH)

Exploring Relationships Between Korean Test Takers' Anxiety and Performance on the Test of English for International Communication in Reading and Listening Comprehension (TOEIC LR)

This research is being conducted by Yoon-Goo Jason Nam (Master of Education, Candidate) under the supervision of Dr. Liying Cheng, in the Faculty of Education at Queen's University in Kingston, Ontario. This study has been granted clearance by the General Research Ethics Board according to Canadian research ethics principles (http://www.ethics.gc.ca/default.aspx) and Queen's University policies (http://www.queensu.ca/urs/reserch-ethics).

What is this study about? The purpose of this research is to develop a deeper understanding of how anxiety influences high-stakes language test performance. In particular, I am interested in how test anxiety and foreign language reading/listening anxiety influence Korean test takers' performance on Test of English for International Communication in Listening and Reading comprehension (TOEIC LR).

What is involved to participate in this study? This study will be conducted in two phases. The first phase will take place soon after your pre-scheduled TOEIC LR exam. You will be required to complete a questionnaire that collects: (a) basic demographic information, (b) responses on a test anxiety scale, (c) responses on a foreign language reading anxiety scale, and (d) responses on a foreign language listening anxiety. The second phase will take place on the release day of your TOEIC LR scores report. You will be contacted by Yoon-Goo Jason Nam and asked to report your TOEIC LR scores. The entire data collection procedure will be carried out on an online survey website and via e-mail. In total, participating in this study will require 30 minutes maximum. There are no known significant physical, psychological, economic, or social risks associated with this study. However, minimal psychological risk might exist in this study. It is possible that you might feel upset while reporting your own anxiety tendencies or TOEIC LR scores. In that case, a list of your local counselling resources would be provided so that you could receive help if applicable. Although you may not directly benefit from taking part in this research study, information from this study will contribute to our understanding of the effects of test anxiety and foreign language reading/listening anxiety on Korean test takers' TOEIC LR performance and may guide future test development and revision.

Is participation voluntary? Yes. You should not feel obliged to answer any questions that you find objectionable or that make you feel uncomfortable. You may choose to withdraw from the study by closing the browser at any time with no penalties. If you wish to withdraw, contact Yoon-Goo Jason Nam (9yn@queensu.ca). If you withdraw, you may request removal of all or part of your data from the study.

What will happen to your responses? Your responses will be kept confidential. Only Yoon-Goo Jason Nam will have access to this information. Your confidentiality will be maintained to the extent possible. None of the data, including TOEIC LR scores, will contain your name. To protect your identity, an arbitrary identity code will replace your name on all data files. Results from this study will be published in Yoon-Goo Jason Nam's master's thesis, and may be published in professional journals or presented at scientific conferences, but any such presentations will maintain individual confidentiality. In accordance with the General Research Ethics Board Standard Operating Procedures, all electronic data will be securely/password protected for a minimum of five years or beyond. If data are used for secondary analysis, they will contain no identifying information. You are entitled to a copy of the findings, if you are interested. If you would like a copy of the findings, please contact 9yn@queensu.ca.

Will you be compensated for your participation? Yes, you will receive $5.00 (five Canadian dollars) for the questionnaire and another $5.00 (five Canadian dollars) when you report your TOEIC LR scores. If you do not complete the questionnaire, you are not eligible to participate in the second phase of the study, submission of your TOEIC LR scores.

What if you have concerns? Any questions about study participation may be directed to Yoon-Goo Nam at 9yn@queensu.ca or his supervisor, Dr. Liying Cheng at liying.cheng@queensu.ca. Any ethical concerns about the study may be directed to the Chair of the General Research Ethics Board at chair.GREB@queensu.ca or 613-533-6081.

Thank you for your interest in participating in this research study.

Clicking on the button below constitutes consent to participate in the first phase of this study (questionnaire). Responding to the email request for TOEIC LR scores constitutes consent to participate in the second phase of this study (score submission). PLEASE RETAIN A COPY OF THIS CONSENT FORM FOR YOUR RECORDS.

APPENDIX E: LETTER OF INFORMATION & CONSENT FORM (KOREAN)

연구 참여 설명서 및 동의서
한국 토익 응시자들의 불안감과 시험 점수의 관계

본 연구의 책임자는 캐나다 온타리오 주 킹스턴에 위치한 퀸즈 대학교 (Queen's University) 교육학과에 소속된 남윤구 (석사과정)와 그의 지도교수인 Dr. Liying Cheng 입니다. 이 연구는 캐나다 연구 윤리 규정과 퀸즈 대학교 연구 윤리를 준수하고, 연구 윤리 위원회로부터 승인을 받았습니다.

캐나다 연구윤리 규정 (http://www.ethics.gc.ca/default.aspx)
퀸즈 대학교 연구 윤리 방침 (http://www.queensu.ca/urs/research-ethics)

무엇에 관한 연구인가요? 본 연구의 목적은 응시자의 불안감이 토익 LR 성적에 어떤 영향을 미치는지 조사하는 것입니다. 구체적으로 두 가지 종류의 불안감 (시험에서 느끼는 불안감 및 영어 읽기와 듣기로부터 오는 불안감)이 한국인 토익 LR 응시자들의 시험 성적에 어떤 영향을 미치는지 알아보는 것입니다.

연구가 어떻게 진행되나요? 본 연구의 참여 과정은 두 단계로 이루어져 있습니다. 첫 단계는 참가자의 토익 LR 시험 응시 직후에 진행됩니다. 시험 응시 후 3 일 이내에 (1) 간단한 신상에 관한 질문, (2) 시험 불안 정도, (3) 영어 독해 및 청해 불안 정도를 측정하는 온라인 설문지에 응답합니다. 두 번째 단계는 연구 담당자(남윤구)로부터 토익 LR 성적 발표일에 연락을 받으신 후 토익 LR 성적을 답장으로 전달해주시면 됩니다. 참가자의 토익 성적이 이 연구의 필수 요소이므로 토익 LR 점수 제공에 동의해야 이 연구에 참여하실 수 있습니다. 연구에 참여하는 데 총 30 분 정도가 소요될 것으로 예상되고, 신체적, 정신적, 및 사회적 위험성은 없을 것으로 예상됩니다. 하지만 설문지에 응답 시 불편한 감정이 들 수도 있습니다. 불편한 감정이 심할 경우에는 전문적인 도움을 받으실 수 있도록 참가자의 거주 지역 내 심리상담소에 관한 정보를 제공해 드리겠습니다. 본 연구에서 수집된 정보는 시험 불안과 영어 독해 및 청해 불안이 토익 LR 응시자의 시험 점수에 어떤 영향을 미치는지를 보여주며 토익 LR 시험의 타당도 향상과 평가에 쓰일 수 있습니다.

연구 참여는 자발적으로 이루어지나요? 네, 그렇습니다. 답하기 불쾌하거나 거북하다고 느껴지는 질문에는 응답하지 않으셔도 됩니다. 또한, 설문지 작성 중 언제든지 불이익 없이 참여를 취소할 수 있습니다. 제공해주신 자료를 부분적으로 또는 전부 삭제하길 원하신다면 연구 담당자(남윤구, 9yn@queensu.ca) 에게로 연락 바랍니다.

제 설문 응답은 어떻게 되는 건가요? 토익 LR 점수를 포함하여 모든 설문 응답은 익명으로 처리되어 비밀이 보장되며 연구 담당자 (남윤구) 및 지도교수인 Dr. Liying Cheng 만이 열람할 수 있습니다. 또한 퀸즈 대학교 연구윤리 위원회의 규정에 따라 모든 자료는 5 년 이상 암호화되어 보관됩니다. 본 연구의 결과는 학술연구 목적 (연구 담당자의 석사논문, 학술지, 및 학술대회발표 등)외에는

사용되지 않습니다. 본 연구의 최종 결과를 확인하고 싶은 분은 연구 담당자 (남윤구, 9yn@queensu.ca)에게 연락바랍니다.

연구 참여에 대한 보상이 있나요? 네, 있습니다. 온라인 설문지 작성 시 5 천 원이 기재된 계좌로 지급되며 토익 성적 전달 시 5 천 원이 추가로 지급됩니다. 온라인 설문지를 작성하지 않으면 토익 성적 전달 단계에는 참여할 수 없습니다.

질문이 있으면 어떡하죠? 연구 참여 과정에 대한 질문은 연구 담당자 (남윤구, 9yn@queensu.ca) 또는 지도 교수인 Dr. Liying Cheng (liying.cheng@queensu.ca)에게 연락 바랍니다. 본 연구의 윤리 사항에 관해 질문이 있다면,연구 윤리 위원회 의장 (chair.GREB@queensu.ca; +1-613-533-6081)에게로 연락 바랍니다.

밑에 위치한 "동의합니다." 보기를 선택하시면 본 연구의 첫 단계인 온라인 설문조사에 참여하기로 동의 하신 걸로 간주되고, 성적 발표일에 연구 담당자에게 성적을 전달하시면 두 번째 단계인 토익 성적 전달 과정에 참여하기로 동의 하신 걸로 간주됩니다. 필요하시다면 이 연구 참여 동의서를 보관하시기 바랍니다.

본 연구에 참여해 주셔서 감사합니다.

APPENDIX F: DESCRIPTIVE STATISTICS

Descriptive Statistics for the Cognitive Test Anxiety Scale (n = 226)

	Mean	SD	Skewness	Kurtosis
1. I lose sleep over worrying about examinations.	2.43	1.20	.49	-.82
2. While taking an important examination, I find myself wondering whether the other students are doing better than I am.	2.92	1.23	.03	-1.10
3. I tend to freeze up on things like intelligence tests and final exams.	3.08	1.20	-.23	-.98
4. During tests, I find myself thinking of the consequences of failing.	3.15	1.18	-.28	-.97
5. At the beginning of a test, I am so nervous that I often can't think straight.	2.58	1.09	.32	-.80
6. My mind goes blank when I am pressured for an answer on a test.	2.48	1.14	.44	-.73
7. During tests, the thought frequently occurs to me that I may not be too bright.	3.03	1.12	.03	-.95
8. During a course examination, I get so nervous that I forget facts I really know.	2.85	1.09	.07	-.96
9. After taking a test, I feel I could have done better than I actually did.	3.81	0.97	-.69	-.04
10. I worry more about doing well on tests than I should.	2.79	1.15	.42	-.67
11. During tests, I have the feeling that I am not doing well.	3.08	1.02	-.14	-.78
12. When I take a test that is difficult, I feel defeated before I even start.	3.01	1.14	.08	-1.14
13. I am a poor test taker in the sense that my performance on a test does not show how much I really know about a topic.	3.00	1.07	.04	-.73
14. I am not good at taking tests.	3.07	1.15	-.14	-.99
15. When I first get my copy of a test, it takes me a while to calm down to the point where I can begin to think straight.	2.86	1.13	.07	-.88
16. I do not perform well on tests.	2.94	0.98	.03	-.58
17. When I take a test, my nervousness causes me to make careless errors.	3.19	1.01	-.20	-.76

Descriptive Statistics for the Foreign Language Reading Anxiety Scale (n = 226)

	Mean	SD	Skewness	Kurtosis
1. I get upset when I'm not sure whether I understand what I am reading in English.	3.42	.95	-.42	-.66
2. When reading English, I often understand the words but still can't quite understand what the author is saying.	3.28	1.01	-.30	-.71
3. When I'm reading English, I get so confused I can't remember what I'm reading.	2.80	1.07	.21	-.83
4. I feel intimidated whenever I see a whole page of English in front of me.	2.34	1.03	.56	-.40
5. I am nervous when I am reading a passage in English when I am not familiar with the topic.	3.42	1.06	-.38	-.65
6. I get upset whenever I encounter unknown grammar when reading English.	2.91	1.09	.03	-.93
7. When reading English, I get nervous and confused when I don't understand every word.	2.79	1.09	.19	-.86
8. It bothers me to encounter words I can't pronounce while reading English.	2.85	1.19	.00	-1.08
9. I usually end up translating word by word when I'm reading English.	2.66	1.10	.34	-.81
10. By the time you get past the funny letters and symbols in English, it's hard to remember what you're reading about.	2.82	1.11	.25	-.91
11. I am worried about all the new symbols you have to learn in order to read English.	2.96	1.08	.03	-1.01
12. I enjoy reading English.	3.10	1.03	-.34	-.64
13. I feel confident when I am reading in English.	3.07	1.01	-.08	-.64
14. Once you get used to it, reading English is not so difficult.	3.70	.76	-.87	1.16
15. The hardest part of learning English is learning to read.	2.19	1.03	.85	.23
16. I would be happy just to learn to speak English rather than having to learn to read as well.	4.12	.92	-1.11	1.07
17. I don't mind reading to myself, but I feel very uncomfortable when I have to read English aloud.	2.77	1.29	.27	-1.08
18. I am satisfied with the level of reading ability in English that I have achieved so far.	2.54	1.09	-.23	-.95
19. English culture and ideas seem very foreign to me.	3.00	1.03	.03	-.55
20. You have to know so much about English history and culture in order to read English.	3.58	1.09	-.71	-.15

Descriptive Statistics for the Foreign Language Listening Anxiety Scale (n = 226)

	Mean	SD	Skewness	Kurtosis
1. When listening to English I tend to get stuck on one or two unknown words.	2.81	1.16	.23	-.97
2. I get nervous if a listening passage is read only once during English listening tests.	3.43	1.07	-.61	-.44
3. When someone pronounces words differently from the way I pronounce them, I find it difficult to understand.	3.51	.98	-.51	-.18
4. When a person speaks English very fast, I worry that I might not understand all of it.	3.68	.98	-.57	-.32
5. I am nervous when I am listening to English if I am not familiar with the topic.	3.69	.93	-.77	.26
6. It's easy to guess about the parts that I miss while listening to English.	3.40	.84	-.60	.23
7. If I let my mind drift even a little bit while listening to English, I worry that I will miss important ideas.	4.00	.83	-.93	1.18
8. When I'm listening to English, I am worried when I can't watch the lips or facial expression of a person who is speaking.	2.30	1.05	.54	-.64
9. During English tests, I get nervous and confused when I don't understand every word.	2.96	1.08	.01	-.99
10. When listening to English, it is difficult to differentiate the words from one another.	2.81	1.00	.20	-.70
11. I feel uncomfortable in class when listening to English without the written text.	2.91	1.11	.10	-.85
12. I have difficulty understanding oral instructions given to me in English.	2.65	.97	.32	-.41
13. It is hard to concentrate on what English speakers are saying unless I know them well.	2.92	1.05	.15	-.92
14. I feel confident when I am listening in English.	3.02	1.02	-.27	-.43
15. When I'm listening to English, I often get so confused I can't remember what I have heard.	2.85	1.03	.15	-.75
16. I fear I have inadequate background knowledge of some topics when listening in English.	3.04	1.03	-.10	-.87
17. My thoughts become jumbled and confused when listening to important information in English.	3.08	1.04	.10	-.77
18. I get worried when I have little time to think about what I hear in English.	3.42	1.03	-.42	-.49
19. When I'm listening to English, I usually end up translating word by word without understanding the content.	2.38	1.13	.63	-.46

20. I would rather not have to listen to people speak English at all.	2.22	1.07	.70	-.28
21. I get worried when I can't listen to English at my own pace.	3.49	.98	-.49	-.54
22. I keep thinking that everyone else except me understands very well what an English speaker is saying.	2.32	1.13	.62	-.61
23. I get upset when I'm not sure whether I understand what I am listening to in English.	3.47	1.05	-.45	-.53
24. If a person speaks English very quietly, I am worried about understanding.	3.34	1.00	-.62	-.30
25. I have no fear of listening in English as a member of an audience.	3.24	.96	-.38	-.60
26. I am nervous when listening to an English speaker on the phone or when imagining a situation where I listen to an English speaker on the phone.	3.33	1.11	.39	-.86
27. I feel tense when listening to English as a member of a social gathering or when imagining a situation where I listen to English as a member of a social gathering.	3.20	1.17	-.24	-1.00
28. It's difficult for me to listen to English when there is even a little bit of background noise.	2.95	1.04	.13	-.93
29. Listening to new information in English makes me uneasy.	3.23	1.04	-.27	-.76
30. I get annoyed when I come across words that I don't understand while listening to English.	3.56	.93	-.61	-.12
31. English stress and intonation seem familiar to me.	2.90	1.10	.02	-.90
32. When listening to English, I often understand the words but still can't quite understand what the speaker means.	3.04	.98	-.13	-.88
33. It frightens me when I cannot catch a key word of an English listening passage.	3.50	.99	-.44	-.68

APPENDIX G: FACTOR LOADINGS

Factor Loadings of the Cognitive Test Anxiety Scale (n = 226)

Item	Cognitive Test Anxiety	Communalities
5	**.76**	.58
8	**.74**	.55
10	**.74**	.55
11	**.73**	.54
6	**.71**	.51
17	**.70**	.49
14	**.69**	.48
3	**.65**	.40
16	**.64**	.41
7	**.63**	.40
15	**.60**	.36
1	**.56**	.32
12	**.56**	.31
13	**.53**	.29
4	**.50**	.25
2	**.45**	.20
9	.34	.15

Factor Loadings of the Foreign Language Reading Anxiety Scale (n = 226)

Item	Foreign Language Reading Anxiety	Communalities
3	.74	.54
10	.70	.49
18	.69	.47
13	.68	.46
9	.67	.45
4	.66	.44
7	.63	.40
6	.58	.34
5	.58	.33
1	.56	.31
8	.54	.29
11	.53	.29
2	.52	.28
19	.51	.27
12	.49	.24
15	.48	.23
14	.47	.22
17	.45	.20
20	.11	.01
16	.04	.003

Factor Loadings of Foreign Language Reading Anxiety Scale (n = 226)

	Foreign Language Reading Anxiety	**Communalities**
14	**.72**	.52
15	**.71**	.50
19	**.70**	.49
17	**.69**	.48
29	**.69**	.47
21	**.69**	.46
4	**.68**	.46
18	**.66**	.44
33	**.66**	.43
5	**.66**	.43
12	**.65**	.42
30	**.62**	.39
27	**.61**	.37
9	**.61**	.37
23	**.60**	.37
10	**.60**	.36
31	**.60**	.36
6	**.59**	.35
24	**.59**	.34
28	**.58**	.34
3	**.58**	.34
7	**.57**	.32
11	**.57**	.32
26	**.57**	.32
13	.**56**	.31
22	**.56**	.31

32	**.53**	.38
1	**.53**	.28
2	**.52**	.27
16	**.52**	.27
20	**.50**	.24
8	**.43**	.18
25	-.16	.03