

The Construct Validation of ELI Listening Placement Tests

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### **Abstract**

This study presents the validation process for the listening placement tests administered by the English Language Institute (ELI) at the University of Hawaii at Manoa. The research questions are: (a) How does the ELI define the listening comprehension construct validity, (b) How well does the ELI Listening Placement Test (ELI LPT) measure the listening comprehension construct, and (c) How differently do test-takers perform on the dictation test and the multiple-choice test according to language group? Participants in the research included international students and immigrant students enrolled over three semesters in spring and fall 2010 and spring 2011. The study was conducted using a quantitative approach including test score analysis, test item analysis, and a survey, as well as a qualitative approach including curriculum analysis and interviews with administrators and instructors. The findings from the evaluation process addresses the three research questions, the ELI listening comprehension construct, positive and negative evidence concerning construct validity, and different test performances of language groups. Some constructive suggestions for the ELI based on these results were discussed as well as follow-up research topics.

*Key words:* listening placement test, construct validity, factors affecting test performances

## Introduction

The University of Hawaii at Manoa (UHM) has a high percentage of international and immigrant students; the English Language Institute (ELI) provides Academic English courses for these students to prepare them for their regular courses and avoid any excessive academic burden that might be caused by English language deficiencies. In order for the ELI to offer appropriate support for students, the ELI evaluates their language proficiency and places them in the appropriate level of English courses. Inaccurate evaluation of students' language abilities will cause numerous problems such as academic struggles, unnecessary expenditure for extra courses, and conflicts between stakeholders, including professors, instructors, administrators as well as students. Thus, it is important to ensure that the ELI placement test functions well as a measure of students' language proficiency in order to prevent such negative impacts. Although we should consider a number of issues such as the reliability of the test, distribution of the test scores, and test practicality when evaluating the test, construct validity of the test would be the most fundamental concern. If the test is not an appropriate measure to assess student proficiency, the test scores will not represent student's actual level and do not justify the ELI's decisions on student placements.

Up to now, the ELI administrators have not noticed any conspicuous problems due to the placement test. However, the ELI has not conducted any test validation research so far even though the current ELI placement tests have been used for a long period of time. The lack of evaluation on the validity of the ELI placement test motivates the author to carry out this study. Among the five subtests of the ELI placement test, the Academic Listening Test (ALT), Dictation Test (DCT), Reading Comprehension Test (RCT), Gap Filling (GF), and Writing test, this study will investigate the two listening placement tests, Academic Listening Test (ALT) and

Dictation Test (DCT). Thus, the following literature review will discuss the construct of listening comprehension in academic circumstances like the ELI, how we can operationalize it, and which methods can be utilized to evaluate whether such operationalization really represents students' academic listening skills.

## **Literature Review**

### **Construct and Construct Validity**

A *construct* is not easy to measure since it is related to something that occurs in the human mind. According to Ebel and Frisbie (1991, p108), "The term *construct* refers to a theoretical conceptualization about an aspect of human behavior that cannot be measured or observed directly." That is, the term *construct* describes concepts, such as love, motivation, attitude, and reading comprehension, which underlie certain human behaviors, yet are hard to define. Measurement involves collecting evidence that tells us something about the construct, but there is always the question of whether particular evidence is actually relevant to a given construct. According to Ebel and Frisbie (1991, p. 108), "Construct validation is a process of gathering evidence to support the contention that a given test indeed measures the psychological construct the makers intend it to measure". In other words, the goal of construct validation is to ascertain with solid evidence that a test score truly represents a test-taker's capability of what a test developer or evaluator intends to measure. Based on this definition, we will discuss the definition of listening comprehension, how to measure this construct, and how to evaluate the measurements below.

**Defining the construct of listening comprehension.** Buck (2001) suggests two steps to defining a listening comprehension construct: (a) the understanding of the construct on a theoretical or conceptual level, and (b) the accumulation of information of the target language

use situation. That is, he argues that the theoretical understandings of the construct should be reinterpreted in light of the specific language use situation. These two steps are discussed below.

**Theoretical understandings of the listening comprehension construct.** Current literature on listening comprehension has not reached a single definition of listening comprehension. According to Carroll (1971) as cited in Dunkel, Henning, and Chaudron (1993), most of the research on listening comprehension until the mid 1990s was approached from the perspectives of classroom objectives, without attention to the genuine nature of listening and its relationships with general language behavior. As well as the deficiency of research on listening and insufficient understandings of listening comprehension, Witkin (1990) points out that another challenge to listening-related research is confusion and disagreements of the definition of *listening*. By discussing the thirty-four definitions of listening comprehension extracted from the existing communication research, Glen (1989) claims that the failure to reach one universal definition of listening comprehension leads to a limit on the research of the nature of listening comprehension and listening-related teaching methods.

However, in spite of the differing points of view on the listening comprehension construct, scholars agree on some of the basic characteristics of listening when defining the construct. Listening comprehension involves processing information from auditory and visual inputs and relating it to previous schemata (Clark & Clark, 1977). Vandergrift (1999, p. 168) included a social context in listening comprehension. He described listening as:

A complex, active process in which the listener must discriminate between sounds, understand vocabulary and grammatical structure, interpret stress and intonation, retain what was gathered in all of the above and interpret it within the immediate as well as the larger sociocultural context of the utterance.

Some researchers attempt to classify the cognitive process in a hierarchy from lower to

higher order (Buck 1991; Rost 1990). They categorize these cognitive skills into two classes: a “lower” order of understanding, that is, the literal meanings; and a “higher” order understanding like inference and evaluation. Along with such efforts to align listening skills in a hierarchy, listening skill–related taxonomies have been introduced and used as a guideline for listening test development as well (Munby 1978; Powers 1986; Richards 1983; Rost 1990).

Van Dijk and Kintsch (1983) approach the information process of listening comprehension from the perspective of listeners’ strategies by introducing two main listening strategies: local and global. These are divided based on the different locations of the clues for listening comprehension. Local strategies search for the clues by connecting the facts provided by texts. That is, meaning construction is limited to the clause- or sentence- level. On the other hand, global strategies, also known as macro strategies, go beyond the local clues by relating the facts from texts to previous knowledge, such as synthesizing information, drawing conclusion, and making inferences.

These two strategies are reported to require listeners to approach information in different ways according to listening abilities (Hildyard & Olson, 1982). When transitioning from the global to the local, listeners can verify the hypotheses they have already made from facts. The other way that listening comprehension proceeds, from local strategies to global strategies, is by building up data to construct a conclusion. The former is called knowledge-based analysis, while the latter is termed data-based analysis. The use of the different strategy processes can be determined by a listener’s proficiency. It is argued that more skillful listeners are more likely to follow the knowledge-based analysis, while less skillful listeners adhere to the details for general understandings. This claim is buttressed by the study done by Shohamy and Inbar (1991) showing that lower level test-takers found it more difficult to answer questions that referred to

global rather than local cues.

The complexity of the nature of listening comprehension itself and the various interpretations and approaches by a myriad of researchers do not allow for one ultimate answer for developing or evaluating listening tests. Hence, decisions concerning the scope of the listening comprehension construct are left to test developers or evaluators based on the purposes of the test and their own specific circumstances. Dunkel, Henning and Chaudron (1993) mentioned the importance of delimiting the listening construct when developing a test in their tentative model for test specification and development. According to them, listening comprehension follows the prerequisite steps of orientation, attention, perception, and recognition, while it precedes the subsequent steps application, analysis, synthesis, and evaluation. They pointed out that listening comprehension is separate from prerequisite and subsequent stages. Listening comprehension is not able to occur without the former steps, and the subsequent steps play a significant role in facilitating the listeners to fully understand the contents.

**Understanding target-language use situations.** As mentioned above, it is necessary to apply these theoretical understandings of the listening comprehension construct to the target-language use situation (Buck, 2001). With academic listening tests, it is essential to carefully consider which listening skills and/or tasks for successful performances in academic situations are needed.

Some researchers have suggested a list of listening skills which are necessary for successful achievement in academic circumstances. For example, Powers' (1986) survey presented important listening skills needed for students' academic success in class from the perspectives of university lecturers. The findings from the survey included: identifying main

ideas or topic of a lecture; the relationships among main ideas in a lecture; retaining and retrieving what they listened to by taking notes; and inferring relationships amongst information provided in a lecture. Richards (1983) also provided a taxonomy of micro-skills needed in academic listening, including identifying the purpose of a lecture, identifying the key lexical items on a topic, and being aware of various lecturing styles. Among various listening skills regarded crucial by the researchers, Rost (1994) emphasized the importance of inference by claiming that lecture input can be changed into memorable intake mostly based on inference.

As an important tool to assist listeners with listening comprehension in academic situations like a lecture, note taking has gained much attention by researchers. A survey done by Ferris and Tagg (1996) indicates the importance of note-taking skills in students' subject-matter courses. The survey was distributed to faculty members across majors in four tertiary education institutions in USA. The survey addressed the importance of each main task in the participants' classes. Surprisingly, note-taking skills ranked highest, above tasks such as oral presentations and small group discussion. Out of a four point Lickert scale [from Always (1) to Never (4)], the average of importance for note-taking skill ranged from 1.00 to 2.02, while oral presentations and small group work rated between 2.33 and 3.51 and between 2.13 and 3.38, respectively. However, the diversity of class size and course level should be considered when applying the findings from his survey into other contexts since the different environments and contexts of each program might affect the importance of tasks in class.

As a follow-up study, Ferris (1998) later approached note-taking skills from students' perspectives by asking students in the same four tertiary institutions about the relative importance of each main task in their class. Interestingly, even though students still pointed out the importance of note-taking in the survey, the degree of importance for note-taking was lower

than the instructors' responses had been. The students put formal speaking as the most important skill with the mean score of 3.35 out of 7 on a Lickert scale [from 1 (most important) to 7 (least important)]. This was followed by general listening comprehension (3.41), pronunciation (3.44), and communications with peers (3.60). However, note-taking showed an average score of 3.93. The answers shown in the student survey present a different rank from those which the instructors posed for each task's importance. The rank of relative importance of oral/aural tasks in class answered by the students in this survey paralleled the result of Kim (2006)'s study, reporting on participants who were graduate students in non-science and non-engineering fields, who chose presentation skills and general listening comprehension as the most important skills to possess, while pronunciation and note-taking were considered the least important.

**Operationalizing the construct.** How a listening comprehension construct, defined based on theoretical and situational understandings, can be measured by making decisions on texts and tasks (test formats) of listening tests, is a process known as *operationalization* (Buck, 2001). In this study, the construct validity of tests will be approached with a focus on format. A discussion on test formats, especially multiple-choice questions and dictation will follow.

Currently, a number of listening formats have been developed and used such as listening cloze, sentence repetition, dictation, note-taking, and interpretive formats (Brown, 2006). However, among the myriad of listening tasks, it is crucial to carefully consider which task best operationalizes the listening comprehension construct. Such decisions for an appropriate task or test format must be based on clear understanding of what each task is designed to measure.

Among these various types of listening formats, a dictation and a multiple choice listening test, which are used as the ELI LPTs (Listening Placement Test), include the following

characteristics.

First, since dictation is widely used as an integrative test, a number of studies on what dictation actually measures have discussed how dictation contributes to assessing the various language skills, rather than providing a narrow investigation on the listening skills themselves used in dictation.

In favor of dictation tests, Oller and Streiff (1975) claimed that dictation played an important role as an excellent language test to assess language learner's internalized grammar, which can be called *expectancy grammar*. According to their claims, the dictation test provided comprehensive information on the learner's language development across phonological, syntactic, semantic and sociolinguistic knowledge. These arguments were supported by other researchers. According to Hio (1983), the errors found in dictation revealed what listeners comprehended from auditory inputs as well as their knowledge of phonology, morphology, syntax, and semantics. In addition, other studies have demonstrated high correlations of dictation scores with those of other language proficiency tests. (Valette, 1967; Oller, 1971; Oller et al., 1974; Fouly & Cziko, 1985).

Unlike a number of reports that showed dictation as a great measure for an overall language skill, only a few studies have narrowed down the scope of their research into listening skills and strategies alone, examined by dictation. Moreover, the findings from these studies have presented conflicting results. According to Buck (2001), dictation can measure listening comprehension, although the listening comprehension measured by dictation remains in a lower-level of cognitive skills, with only a literal understanding. Cartledge (1968) also argued that general listening comprehension can be measured by dictation since listeners need to contextualize their aural inputs. On the other hand, the results of the studies done by Valette

(1964) and Sugawara (1999) do not support Buck (2001) and Cartledge (1968)'s claims. Valette (1964) reported that learners who practiced dictation in class failed to improve their listening comprehension skills. She argued that sound discriminations trained through dictation are different from general listening comprehension. Sugawara (1999) also raised some possibilities that dictation might interfere with the listening comprehension process. According to him, dictation is not able to promote listening comprehension, because listeners might feel burdened from excessive mental processes involved in dictation. Therefore, it remains unclear whether dictation can play the role of a legitimate listening comprehension test and which listening skills are actually involved in dictation,.

On the other hand, considering multiple-choice (MC) tests, what an MC measures depends on the questions and answer options used (Yi'an, 1998). That is, the kinds of questions we ask test-takers will determine which listening strategies they will use in a test. In his study, by using introspection methods, Yi'an points out the role of questions and options in MC. He argues that questions and options provide the purpose of listening for listeners and have an influence on their listening process. Another noticeable feature of MC is that it involves various test-taking strategies, especially guessing. Cheng (2004) found a high rate of testing strategies used in MC as indicated by the results of the posttest survey in his study. According to his survey, 97% of the test-takers responded that they prefer multiple-choice questions (MC) to open-ended questions (OE) because their test-taking strategies helped them to get better scores. Their preferences towards MC were also revealed in the results of the two tests, MC and OE. The mean score of MC, 33.84, was significantly higher than that of OE, 25.23. Thus, he concluded that correct answers did not represent true listening comprehension, since 97 %, again, answered that guessing worked as a very important strategy in a test.

As well as making the right decisions on test methods for operationalizing the construct, a test developer or evaluator should consider the intervening variables involved with test performances when interpreting the test scores (Buck, 2001). The intervening variables refer to construct-irrelevant factors which might cause variability between test-takers. The variances caused by the factors which are not directly related to the test construct might mislead the inference of the test scores and threaten the construct validity of the test. Thus, a number of researchers have paid attention to which factors affect test performances and discussed how to avoid them in a test (Briere, 1968, 1973; Briere & Brown, 1971; Farhady, 1979; Chen & Henning, 1985; Hansen-Strain, 1987; Zeidner, 1986, 1987; Kunnan, 1990; Rubin, 1994; Buck, 2001). A variety of construct-irrelevant variables have been revealed including test method, text, and test-takers' characteristics. Among these factors, the interesting findings on different characteristics of test-takers such as native language, ethnicity, and educational background have been reported and raise some concerns on the issue of test bias. For example, Kunnan's (1990) study has presented how items function differently according to test-takers' native languages and their educational backgrounds. In his study, Chinese and Japanese groups showed strong preferences towards grammar multiple-choice questions, while Spanish groups preferred vocabulary to the other four test items of grammar, listening comprehension, reading comprehension, and writing error detection. Based on these results, he suggested that the different characteristics of ethnic groups, like instructional backgrounds and native language, might provide some advantages or disadvantages for examinees. Another study conducted by Hansen-Strain (1987) has strengthened these arguments of test-bias by comparing the cognitive style and the cloze-test scores between two groups, Asian students and students from South Pacific Islands. According to the results of a field dependence/independence measure, and the

cloze-test, Asian students turned out to be more field independent than Island students, and outperformed Island students in the cloze test. Based on these findings, she claimed that Asian students might have a great advantage taking the cloze-test due to their cognitive style of field independence, compared to Island Students.

### **Evaluating Construct Validity**

A number of approaches to construct validation have been used. They include differential-group studies, intervention studies, structural equation modeling and statistical methods using internal correlations, MTMM (Multi-Trait Multi-Method) and factor analysis (Bachman & Palmer, 1979, 1982; Alderson, Clapham, & Wall, 1995; Kunnan 1995; Sasaki 1996). In addition, other empirical studies have suggested different ways of evaluating construct validity by analyzing reliability and item difficulties, by correlating a test with other official test focusing on criterion-related validity (Fouly & Cziko, 1985; Chapell, Jamieson, & Hegelheimer, 2003). Among the approaches, internal correlations, MTMM, and analysis of reliability and item difficulties used in this study will be discussed in detail.

Alderson et al. (1995) introduced ways of using internal correlations to evaluate the construct validity. One of them is to check the relationship between subtests and the whole test. They mentioned Classic Test Theory in their book, claiming that the correlations between subtests and the whole test should be more than + 0.7 in order to show good construct validity. (Also, the correlation between the subtest and the overall score minus the score of test in question, should be used in order to prevent inflation of the correlation.) However, since the internal correlation merely provides us with a general picture of how subtests are correlated to each other, we need to use more refined methods in order to determine what really leads to such correlations.

In this case, more advanced statistical analysis such as MTMM can be used. MTMM is based on the theory that tests measuring similar traits will demonstrate “higher intercorrelations (convergent validity) than those measuring different traits (divergent validity)” (Alderson et al., 1995, p. 186). In one example case using MTMM, Bachman and Palmer (1979) used MTMM to discover that scores from an interview were less influenced by test methods than scores from other tasks (translation and self-rating), and the interview satisfied both convergent validity and discriminant validity. However, Brown (2001) has pointed out that MTMM is rarely used as a construct validity measure for language tests since the mutual relatedness of language skills is in conflict with the precondition that the traits measured should be different from each other. Similarly, although some empirical research has attempted to use MTMM in language-related studies, the result had not been very successful. For example, Buck (1992) failed to prove with MTMM that listening and reading skills are distinct traits.

The study of Chapell, Jamieson, and Hegelheimer (2003) on construct validation of a web-based ESL test showed how reliability and item difficulties were used as part of the validation process. The web-based test was designed to place students into a proper ability level after taking the 10-15 minute Interest and Ability Finder. This test was the initial check for test-takers’ interest and language proficiency. With the design of a computer adaptive test, the test-takers were supposed to spend most of their test-taking time at their level. Thus, the researchers need to discuss whether test-takers can be distinguished reliably and items demonstrate proper level of difficulties. By examining reliability and item difficulties of each level, they found that test scores of advanced level examinees showed unsatisfactory level of reliabilities like .70 for the reading test, .69 for the listening test, and .63 for the writing test. Thus, in order to work on reliability, they suggested improving their items and carrying out further qualitative research on

test authenticity and strategies of test-takers.

### **Statement of Purpose**

This paper will evaluate the construct validity of the two subtests of the ELI Listening Placement Tests (LPT), the multiple-choice ALT, (Academic Listening Test) and the Dictation Test (DCT). This study is motivated by a variety of issues. As mentioned in the introduction, placement tests have important consequences. Moreover, there is a lack of construct validity evaluation of the ELI listening placement test, and ELI administrators have noticed apparent differences in test performance among ethnic groups [ Harsch, personal communication, October, 5, 2010 ]. Thus, this study will first examine what listening comprehension means for the ELI, and how the dictation and multiple-choice tests function as measures of this ELI listening comprehension construct. Finally, how three different language groups, classified and based on their official languages, performed in the ALT and DCT will be investigated as well.

### **Research Questions**

Do ELI placement tests have construct validity?

1. How does the ELI define the construct validity of listening comprehension?
2. How well does the ELI LPT measure what the ELI defines as academic listening?
3. How differently do test-takers perform in the dictation test and the multiple-choice test according to language group?

### **Method**

#### **Participants**

The participants of this study were international students and immigrant students who required further assistance to develop their English academic skills. They participated in ELI

placement tests at one of three semesters between spring 2010 and spring 2011. The international and immigrant students typically submit an official language proficiency test score like TOEFL (*Test of English as a Foreign Language*) for admission. If they achieve a score of 600 or higher, they are exempted from ELI courses. If they score below 600, or if they do not have any official language proficiency test score, they are required to take ELI placement tests. The scores of a majority of the students usually range from 500 to 600 based on the Paper-Based TOEFL. With the results of ELI placement test, the test-takers can be divided into three levels: Exempted, 80 level and 70 level. Those who get above a t-score of 60 on either of the ALT or the DCT can be exempted from ELI listening & speaking courses like students with TOEFL score of 600 or higher. Next, those who get T-scores between 50 and 60 on either the ALT or DCT are placed into ELI speaking & listening course 80, while the rest of students who gain t-scores below 50 are assigned to ELI speaking and listening course 70.

Although the total number of the test-takers during the three semesters was 374, the scores of 70 ELI test-takers were deleted due to missing or incomplete test scores. 304 test-takers' scores who completed the four subtests of the ELI placement tests, Academic Listening Test, Dictation Test, Gap-fillings, and Reading Comprehension, were included. The total population of test-takers consisted of 111 students exempted from the ELI, 94 students in ELI 80 courses, and 99 students in ELI 70 courses.

According to their official language, this population can be classified into three broad categories as well: first, those from countries that use English as an Official Language (EOL), second, those from countries whose official languages belong to the Indo-European language family (IE) and lastly, those of non- Indo European languages (NIE). This grouping is based on how close the origin of their official languages is to English which is a part of the Indo-European

language family. Out of 304 test-takers, only 277 students' backgrounds were accessible due to missing or incomplete demographic data. The first group, EOL, includes the following countries: Zimbabwe, Botswana, Hong Kong, Philippine, India, Palau, American Samoa, Micronesia, Malaysia and Papua New Guinea. The second group consists of: Switzerland, Norway, Germany, Poland, Denmark, Sweden, Russia, Angola, Macau, Bangladesh, Nepal, Chile, Brazil, Latvia, Iran, and Timor-Leste. Finally, the third group includes: Burma, Morocco, China, Taiwan, Korea, Thailand, Japan, Mongolia, Vietnam, Cambodia, and Indonesia. Table 1 presents percentages of each language proficiency in these three groups. EOL has 34 students in exempted level (69%), 12 in 80 course (24%), four in 70 course (8%) out of 50. Next, 43 students in IE group consists of 23 exempted students (53.49%), 13 from 80 Course (30.28%), and seven from 70 Course (16.28%). Finally, in NIE of 184 students, exempted level has 32 (17.39%) with 66 (35.87%) in 80 course and 86 (46.74%) in 70 course.

Table 1

*Percentages of Each Language Group in 70, 80, and Exempted Levels*

	EOL	IE	NIE
Exempted	34(69%)	23(53.49%)	32(17.39%)
80	12(24%)	13(30.23%)	66(35.87%)
70	4(8%)	7(16.28%)	86(46.74%)
Total	50	43	184

**Materials**

Several materials were used for this study: a survey questionnaire (Appendix 1); ELI placement test forms; listening test audio CDs; the students' demographic information such as language backgrounds and TOEFL scores; a survey of Teachers' Confidence Level (2009); and test scores of the four placement subtests: (a) Dictation Test (DCT), (b) Academic Listening Test (ALT), (c) Gap fillings (GF), and (d) Reading Comprehension Test (RCT). The author also

examined the ELI speaking and listening course curriculum. More details regarding the survey questionnaire, Teachers' Confidence Level, and ELI listening tests are provided below.

The survey questionnaire consists of two parts. Part 1 collects demographic information, and Part 2 includes 14 items addressing the factors affecting test performances. The purpose of the survey is to analyze which factors influenced the students' performances in the listening tests and investigate whether these factors are related to the construct or not. The factors were classified based on the two categories, construct-relevant variables and construct-irrelevant variables. As discussed in the literature review above, test-takers' performances are influenced by various factors including construct-relevant and construct irrelevant variables. The construct-relevant factors will be the examinee's listening skills in the case of listening tests. On the other hand, construct-irrelevant variables include test method effects, test environment, different characteristics of test-takers, etc. The survey items include text familiarity (lecture listening), reading effect, test-strategy, writing effect, topic effect, understandings of the contents, word recognitions, test formats, memory effect, vocabulary, anxiety, speech delivery rate, and test instructions. These factors were classified based on the construct of listening comprehension defined by the ELI curriculum. The ELI curriculum puts an emphasis on note-taking skills and vocabulary for comprehensive understanding of academic sources such as lecture; thus, the construct-relevant factors include recognizing words, understanding the content, lecture listening in class, note-taking, and new vocabulary. Construct-irrelevant factors are reading effect, test strategies, anxiety, lecture listening in a test, memory effects, speech delivery rate, writing effect, topic, and test instruction.

Teacher Confidence Level is a survey for ELI instructors asking how confidently they feel that each student in 70 or 80 ELI courses was placed in the right class. This survey was

conducted by ELI at the end of the Fall semester in 2009. Teachers' judgments on student placements were quantified into percentages.

The ELI listening placement test includes dictation and multiple-choice sections. For the dictation, students listen to a 50-word speech at normal speed at first and listen to the same text divided into seven chunks, with pauses and at a slow speaking rate, and finally, they listen to the text at normal speed. The multiple-choice test (ALT) includes five listening testlets (three short lectures and two long lectures) and 35 items. Test takers listen only once and are allowed to take notes while they listen to the lectures. The lectures cover various academic topics and include features of a natural lecture in class like false starts, pauses, and fillers.

### **Procedures**

This study has five main concerns:

1. The academic listening comprehension construct of interest to the ELI was examined by conducting document analysis. After that, two ELI listening and speaking course instructors and the author analyzed ALT test items and compared them with ELI listening strategies and skills described in the ELI curriculum in order to see how well test questions reflect what students learn in an ELI course.
2. The reliability of ALT and DCT and item discriminations of ALT were examined.
3. The internal consistency of ALT and DCT were investigated and the test scores of each of three groups (EOL, IE, NIE) were compared.
4. The Teacher Confidence Level survey and interviews with administrators and listening and speaking course instructors were utilized for evaluating the external validity of the ALT and DCT.
5. A survey was distributed to test-takers who took ELI placement tests in spring 2011 right

after the ELI placement test was completed on each test day. The author visited the test room each time (The placement test was administered on three different days), distributed the paper survey, and collected it. It took about ten minutes to finish the survey. Moreover, I observed the whole test procedure from the beginning to the end.

### **Analysis**

First, in terms of ELI curriculum analysis, I examined the ELI speaking and listening course curriculum including course goals, expected student outcomes, objectives, listening strategies and tasks. After analyzing the ELI curriculum, the results were compared with the ALT test item analysis. The test item analysis was carried out based on the two categories of global and local questions. An ELI instructor and the author categorized each 35-item test into global and local questions, as is suggested by a study of Hansen and Jensen (1994), and the items that the two evaluators disagreed on were evaluated by another ELI instructor. The number of test items in each category was counted and converted into percentages.

The reliability of the ALT was examined with Cronbach Alpha, while Kuder-Richardson formula 21 (KR-21) was used for DCT reliability. Regarding the DCT test, each student's total score was only the accessible data unlike the ALT. Cronbach Alpha reliability was not an option for calculating the DCT reliability (Cronbach Alpha needs to split items in half, odd-numbered items and even-numbered items). However, DCT did have information on test-takers' answers on each item. Thus, KR-21 was used for obtaining DCT reliability. Item discriminations of the 35 ALT test items were analyzed between language ability levels of a high group and a low group. The grouping for item discriminations was based on ALT total score. The ALT total score refers to the number of right answers to each item. After calculating the total scores of 315 test-takers, these scores were aligned from the highest to the lowest and classified into three groups, high

level (105), intermediate (105), and low (105). Then, item facilities of three levels on each item were calculated. To obtain item discriminations for each item, the item facility of the low group was subtracted from that of the high group.

The internal correlations among all four ELIPT subtests, listening multiple-choice (ALT), dictation (DCT), reading multiple-choice (RCT), and gap fillings (GF), were investigated. Correlation coefficients between each subtest and the whole test minus the subtest in question were calculated. After that, the DCT and ALT were correlated with each other, as well as the different subtests of reading and writing. In particular, if the correlation coefficient for the dictation and the listening multiple-choice tests, respectively, and the total score minus the subtest in question, shows more than  $+0.70$ , it indicates that DCT and ALT may be interpreted as demonstrating good construct validity according to classical theory (Alderson et al., 1995).

In order to compare how each language group, EOL, IE, and NIE, performs in ALT and DCT, a two-way ANOVA with the two variables of language group and language proficiency was conducted. For this analysis, the language proficiency classification of test-takers did not follow the ELI student placements of Exempt, ELI 80, and ELI 70 since the author found that a certain portion of students were reassigned from their original placement based on their TOEFL scores. As for the NIE group, 19 students out of 184, 10.33%, were reassigned into a new level. On the other hand, 2% of the EOL group and 2.33% of the IE group were moved up or exempted from the ELI. Thus, the grouping of the test-takers according to language proficiency levels was readjusted based on the sum of ALT and DCT. The test-takers were aligned from the highest to the lowest and were divided into three groups of high level (93), intermediate (92) and low (92).

The survey of ELI teachers' confidence level was used as one of the methods to judge external validity. All the percentages of confidence levels provided by ELI teachers towards each

student's placement in 70 and 80 listening and speaking courses were added up and divided by the number of students to calculate the average of teacher confidence levels. As well as the average of the confidence levels, the comments of administrators and instructors in interviews regarding ELI LPTs and students placements were considered.

Finally, the responses to the survey of factors affecting test performances were analyzed based on the two classifications of construct-relevant, and construct-irrelevant variables. The mean scores and standard deviations were compared according to language groups, EOL, IE and NIE. The 59 respondents out of 68 examinees who took the ELI listening placement tests in spring 2011 returned the survey sheets right after they finished their placement test. Moreover, the scores of question items 4, 6, 12, 13, and 14 that imply negative meanings were reversed in order to compare the averages of each group's answers. For example, score of 1 was converted into 5, while a score 4 was changed into 2.

## **Results**

### **ELI Listening and Speaking Course Curriculum Analysis**

The analysis of goals, student outcomes and teaching philosophy described in the ELI speaking and listening course curriculum and interviews with administrators and instructors helped define ELI listening comprehension. The construct of ELI listening comprehension can be designated as *the ability to use proper listening strategies for facilitating their understandings and appropriately responding to their listening as an autonomous listener in academic situation* (ELI Curriculum Philosophy & Mission Statement).

In order to define the listening comprehension construct, one of the approaches introduced by Buck (2001) was applied. He introduced three different approaches to defining the construct: competence-based listening construct, task-based listening construct, and a construct

based on interaction between competence and task. Among them, the third approach was adopted to define ELI listening comprehension. This approach emphasizes the interaction between task and competence used in a target situation. The interaction refers to how competence is involved in task completion. For example, in an academic situation like college, the major tasks will be lecture listening, discussion, and presentation. According to the third approach, listening strategies or skills which are needed to complete these main tasks should be analyzed. Thus, the approach investigates both task and competence which are used in a target situation, and does not merely focus on either competence or task.

Based on the third approach, the listening parts of the ELI listening & speaking course curriculum were analyzed to find the major listening tasks, and listening skills and strategies. The findings from this analysis demonstrate that ELI curriculum includes three major tasks, *lecture, presentation, discussion*, and three main listening skills, *listening comprehension, critical listening, and interactive listening*. Their selections on strategies and tasks are based on findings of Ferris (1996, 1998)' studies on oral/aural communication skills in academic situations.

The ELI curriculum also describes in detail which listening skills and strategies are needed to complete each main task. How the listening tasks and listening skills are involved with each other will be illustrated below.

First, regarding the *lecture-listening* task, listening comprehension and critical listening skills are considered important for understanding academic listening materials successfully. In detail, the more specific listening strategies for this task completion were provided with the three steps of pre-, during- and post-listening. Each step includes activations of background information, note-taking skills, and reviewing the notes, respectively. In addition, the ELI

curriculum emphasizes the importance of critical listening as well, by isolating the critical listening skill from the general listening comprehension and putting it under a separate category. Critical listening is defined as “evaluating the contents that they comprehended, using what they just heard in order to construct their own opinions, incorporating their opinions from various resources, and responding to the listening materials in a critical manner (Goals and Objectives in ELI speaking and listening curriculum, p. 5)”. Thus, it can be inferred that the critical listening skill exceeds the level of general listening comprehension.

Following lecture listening, the second task, *presentation*, appears to involve the three listening skills, listening comprehension, critical listening, and interactive listening. Listeners are required to develop critical listening skills as an audience, particularly when participating in presentations. This means that they need to listen critically to the presentations, not just simply comprehending them, to respond effectively to presenters by asking questions, and, eventually, evaluate the presentations. Although it holds true that these skills, actively responding to others and asking questions, belong to speaking skills, they are still associated with listening activities as well. In addition, they are distinguished from the previous two listening skills, listening comprehension and critical listening skill, in that the other two skills process aural inputs information in one-way from speakers to listeners. However, when it comes to the interactive listening skill such as communication in a real life, a listener is expected to immediately respond to a speaker, which means that listening is two-way interaction, not a one-way transaction. Thus, the author classified responding to listening materials, which can be termed *Interactive Listening* (Field, 2008), as a third category of ELI listening comprehension construct.

Similarly, the task of *discussion* turned out that it also involves the three listening skills, listening comprehension, critical listening, and interactive listening. The ELI indicates that

students will comprehend and critically respond to other participants' opinions in discussion by effectively asking questions in small groups as well as in a whole class. Based on the analysis of these listening tasks and listening skills defined in the ELI curriculum, we can assert that the ELI listening comprehension construct goes beyond general listening comprehension and put an emphasis on the subsequent stages such as application, analysis, synthesis, and evaluation described by Dunkel, Henning and Chaudron (1993).

### **ELI LPT Test Item Analysis**

As for the ALT test item analysis, each question was classified into one of two categories: global and local questions. Global questions include synthesizing information and drawing conclusions, while Local questions refer to locating details or understanding individual words. One of the ELI listening and speaking course instructors and the author classified each of the 35 ALT items as either a global or local question. The item classification process was conducted separately by each rater not to influence each other's judgments. After each rater finished categorizing the items, the results of the classification were compared. Out of 35 items, the judgments of six items were not matched between the two raters. Due to the disagreements of the the raters, another ELI listening & speaking course instructor participated in item classification and her judgments on the six items were adopted. According to a test item analysis based on these categorizations, the ALT test items turned out to include seven global questions (20%) and 28 local questions (80%) out of 35.

### **Descriptive Statistics, Reliability and Item discriminations**

According to Table 2, the ALT and DCT displayed a near-normal distributions, which means that examinees are well-placed along the continuum. First, in terms of central tendency, the mean, median and mode of ALT were reported to be very similar to one another with the

scores of 20.70, 21, and 20, respectively. It indicates that ALT presented almost perfect normal distribution. Likewise, the mean, and median of DCT also showed almost the same scores, 30.14 and 30. However, the mode of DCT is 24, which was lower than the two estimates of central tendency, the mean and mode. This means that DCT scores were somewhat positively-skewed. The skewnesses of ALT (.03) and DCT (.07) also showed that DCT distribution was slightly more skewed than ALT distribution. Next, dispersions of ALT and DCT scores could be explained with standard deviations and ranges. According to Table 2, DCT standard deviation (11.30) and range (45) were much larger than ALT standard deviation (5.28) and range (27), which means that DCT scores were more spread out than ALT scores.

Table 2

*Descriptive Statistics of ALT and DCT*

	ALT	DCT
No. of items	35	50
<i>M</i>	20.7 (59.14%)	30.14 (60.28)
Median	21 (60%)	30 (60%)
Mode	20 (57.14%)	24 (48%)
<i>SD</i>	5.28	11.3
Range	27	45
Skewness	.03	.07

In regards to the reliability coefficients of the ALT and DCT, the two tests showed very different results from each other. As for ALT, Cronbach Alpha displayed a reliability coefficient of .74, while K-21 presented much higher reliability, .92, compared to the ALT reliability. In addition, item discriminations (ID) on the ALT also presented interesting results; 10 items out of 35 (28.57%) turned out to have low item discriminations between high- and low-level groups. These ten items' IDs ranged between .10 and .30, and among them, four items indicated

extremely low IDs below .20. According to Table 3, the questions with IDs ranging from .20 to .29 are: 10 (.26), 11 (.29), 12 (.24), 13 (.23), 31 (.25), and 34 (.29), while the questions with item discriminations below .20 are: 6 (.11), 14 (.15), 33 (.17), and 35 (.16).

Table 3

*ALT Item Facilities and Item Discriminations*

Item	IF (Total)	IF (High)	IF (Intermediate)	IF (Low)	ID
1	.42	.60	.35	.30	.30
2	.75	.90	.77	.59	.30
3	.41	.65	.34	.23	.42
4	.35	.65	.31	.10	.55
5	.54	.70	.52	.40	.30
6	.73	.76	.78	.65	.11
7	.73	.94	.76	.49	.46
8	.46	.72	.48	.19	.53
9	.77	.92	.76	.62	.30
10	.71	.82	.74	.56	.26
11	.81	.95	.80	.67	.29
12	.43	.55	.42	.31	.24
13	.81	.91	.82	.69	.23
14	.60	.72	.51	.57	.15
15	.37	.58	.31	.22	.36
16	.65	.83	.67	.47	.36
17	.60	.75	.64	.41	.34
18	.80	.95	.80	.66	.30
19	.34	.59	.30	.12	.47
20	.57	.71	.57	.41	.30
21	.79	.94	.90	.53	.41
22	.41	.60	.40	.22	.38
23	.34	.53	.32	.15	.38
24	.59	.74	.64	.39	.35
25	.63	.76	.66	.47	.30
26	.62	.81	.64	.41	.40
27	.37	.62	.31	.19	.43
28	.58	.86	.59	.30	.56
29	.77	.93	.85	.54	.39
30	.65	.81	.68	.47	.34
31	.54	.67	.53	.42	.25
32	.52	.72	.48	.36	.36
33	.50	.61	.47	.44	.17
34	.81	.95	.82	.67	.29
35	.75	.85	.70	.69	.16

### Internal Consistency

The ELI ALT and DCT listening placement tests show moderately good correlations with the whole test score minus each test, respectively. According to Table 4, the correlation coefficients between ALT and the whole test minus ALT is .74, while the correlation coefficients between the DCT and the whole test minus DCT is .60. In addition to correlations between each listening subtest and the whole test, Table 5 presents the correlation coefficients of ALT and DCT, .68, surpass those of ALT and RCT, .58. This means that the test-takers' performances in ALT and DCT were less influenced by test methods than their listening skills.

Table 4

#### *Correlations Between ALT and Whole test minus ALT*

	Whole test minus ALT	Whole test minus DCT
ALT	.744**	
DCT		.601**

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

Table 5

#### *Correlations of ELI PT Subtests*

	ALT	DCT	RCT	GF
ALT	1	.681**	.584**	.514**
DCT		1	.508**	.345**
RCT			1	.600**
GF				1

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

### **External Validity**

The investigations of external validity towards the ALT and DCT rely on the Teacher Confidence Level (2009) ratings and the comments of administrators and listening & speaking course instructors in interviews. The average Teacher Confidence Level is high at 93.47%, which indicates that teachers in listening and speaking courses feel highly confident about the placement of students into their class. Due to the limit of using the 2009 data of teacher confidence level, which does not include the particular group of participants in this study, additional interviews with one of the ELI administrators and the three ELI listening and speaking course instructors were conducted. The administrators and instructors were interviewed individually and notes on their answers were taken. The questions asked in interviews included whether they noticed any problems of their students' placements in class. According to the administrator, "I am pretty confident about students' placements. Only a few students were actually moved up after having an interview with me. Even though we officially conducted a Teacher Confidence Level only once in 2009, I guess that the teacher confidence level still would be above 90 percent." None of the instructors mentioned any noticeable problems of student placements in their classes, either. One of them merely pointed out the gaps in students' speaking skills rather than their listening skills, saying that students seemed to be placed evenly based on their listening skills while their speaking skills vary. The findings of the average teacher confidence level and the comments of the administrator and the instructors can lead to the following interpretations: (a) ELI placement tests have satisfied their primary role of assigning the test-takers in right level of courses; and (b) the placement tests reflect what the instructors have taught in their classes. If the students were placed by the test with different construct of listening comprehension from what the ELI intends to measure, the instructors might have

noticed the gaps between students' readiness for their class and their instruction based on ELI curriculum. These findings can be used as evidence to support the construct validity of the tests.

### **Different Performances of Three language Groups in the ALT and DCT**

Descriptive Statistics and a Two-way ANOVA were calculated in order to discern how the different language groups performed on the ALT and DCT tests. First, in terms of the ALT, descriptive statistics show apparent differences in test performances among the three groups, EOL, IE, and NIE. According to Table 6, the NIE group in each level from high to low outperformed the other language groups, with the highest mean scores of 60.28 in the high level, 50.31 in the intermediate level, and 39.57 in low level. Compared to the NIE group, however, the EOL showed the lowest mean scores in high and low levels with 56.92 and 38.37, respectively. In addition, the standard deviations of the NIE in each level were narrower than the other language groups. On the other hand, the EOL group shows the widest standard deviations among the three language groups. This means that the examinees of the NIE group show more similarity in their test performances towards the ALT in each level compared to the other groups while the test scores of the EOL group were relatively spread out. Despite the noticeable contrast of test performances between EOL and NIE, the mean scores and standard deviations of IE group did not show any particular similar or dissimilar patterns with the other groups. In terms of their high and low levels, the mean scores of IE group range between those of the NIE and EOL groups, and the mean score in intermediate level is the lowest, 46.22 among the three groups. The standard deviations of the IE group in each level, 5.99, 5.23, and 5.28, respectively, fall between those of NIE and EOL as well.

In order to ensure that these differences between language groups are significant, a two-way ANOVA was conducted. The alpha level was adjusted to .025 from .05 since the two types

of ELI listening placement tests, the ALT and DCT, were separately analyzed in Anova. Based on  $\alpha$ -value of .025, Table 7 shows that only proficiency level indicates significant differences while language group and the interaction of level and group turn out not to be significant. In regards to this lack of significance, these two factors, language group and the interaction between level and language group, show relatively low effect sizes compared with proficiency level. The partial eta-squared values in Table 7 represent the effect sizes of the three factors of proficiency level, language group, and the interaction between level and group. Their values are .514, .025, and .013, respectively. These figures mean that the significance of differences between levels show the medium effect size, (almost 50%) while other factors, language group and interaction of level and language group have very small effect size (2% and 1 %). Thus, it can be inferred that language groups and the interaction between language group and level did not significantly affect the test performances of the examinees in ALT. However, despite the lack of significance differences in test performances between language groups and their small effect size, the different test performances between EOL/IE groups and NIE group were reported by Post Hoc Tests and Descriptive Statistics (Tables 6 & 9). As for Post Hoc Test, Turkey HSD test was conducted. According to the results of Post Hoc Tests, there were still significant differences between EOL and NIE (Table 9). In addition, as mentioned before, the results of descriptive statistics demonstrated a contrast in test performances between EOL/IE groups and NIE group (Table 6).

Table 6

*Descriptive Statistics of Each Level (Language proficiency) & Language Group (ALT)*

Level	Group	N	M	SD
1	1	35	56.92	6.290
	2	26	58.21	5.993
	3	32	60.28	4.926
	Total	93	58.44	5.885
2	1	11	49.50	5.625
	2	10	46.22	5.230
	3	71	50.31	5.140
	Total	92	49.77	5.303
3	1	4	38.37	7.775
	2	7	38.58	5.283
	3	81	39.57	4.760
	Total	92	39.44	4.886
Total	1	50	53.80	8.254
	2	43	52.23	9.647
	3	184	47.32	9.139
	Total	277	49.25	9.448

*Note.* Level 1= High, Level 2=Intermediate, Level 3= Low  
Group 1=EOL, Group 2=IE, Group 3=NIE

Table 7

*Two-way ANOVA of Language Proficiency Level and Language Group (ALT)*

Source	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Level	8012.700	2	4006.350	141.867*	.000	.514
Group	191.917	2	95.958	3.398	.035	.025
Level*Group	100.692	4	25.173	.891	.470	.013
Error	7568.374	268	28.240			

*Note.* \* $p < 0.025$

Table 8

*Tukey HSD Comparison for Level (ALT)*

(I) Level	(J) Level	Mean Diff (I-J)	Std. Error	Sig.	97.5% Confidence Interval	
					Lower Bound	Upper Bound
1	2	8.67*	.781	.00	6.62	10.72
	3	18.99*	.781	.00	16.94	21.04
2	1	-8.67*	.784	.00	-10.72	-6.62
	3	10.33*	.781	.00	8.27	12.38
3	1	-18.99*	.781	.00	-21.04	-16.94
	2	-10.33*	.784	.00	-12.38	-8.27

Note. Level 1= High, Level 2=Intermediate, Level 3= Low

\*  $p < 0.025$

Table 9

*Tukey HSD Comparison for Group (ALT)*

(I) Group	(J) Group	Mean Diff (I-J)	Std. Error	Sig.	97.5% Confidence Interval	
					Lower Bound	Upper Bound
1	2	1.57	1.105	.330	-1.32	4.47
	3	6.49*	.848	.000	4.26	8.71
2	1	-1.57	1.105	.330	-4.47	1.32
	3	4.91*	.900	.000	2.55	7.27
3	1	-6.49*	.848	.000	-8.71	-4.26
	2	-4.91*	.900	.000	-7.27	-2.55

Note. Group 1=EOL, Group 2=IE, Group 3=NIE

\*  $p < 0.025$

Interestingly, the results of the DCT test score analysis provided somewhat different results from the findings of the ALT analysis. According to the descriptive statistics (Table 10), the NIE group performs worst among the three groups in high level and intermediate level with the lowest mean scores of 55.90 and 45.45 respectively, although the mean score(33.65) in low level falls between EOL(31.94) and IE(38.51). These results contrast with those of the ALT,

showing the highest mean scores in each level on the ALT. In addition, when comparing the mean scores of the NIE group between the ALT and DCT, the figures have declined in the three levels, high, intermediate, and low by 4.38, 4.86, and 5.79, respectively. This indicates that the NIE examinees show preferences towards the ALT over DCT. On the other hand, regarding the EOL group in the high level and the IE group in high and intermediate levels, the mean scores between the ALT and DCT have increased by 3.68, 4.70 and 3.56, which means that high-level examinees of EOL and IE, and intermediate-level examinees of IE group perform better at DCT than ALT. Notably, in terms of low-level test-takers in EOL group, their mean scores between ALT and DCT have decreased by 6.43, which follows the pattern of the NIE group. It can be assumed that the similarity between the different language groups, EOL and NIE, might be caused by rough grouping of examinees based on their official languages. It is highly possible that there exist a myriad of different characteristics within language group classified by the single factor.

Another intriguing feature of DCT test performances is the significance of differences within the two factors, language group and an interaction of group and level as well as language proficiency level. Contrary to the results of the ALT analysis, the two-way ANOVA results for the DCT test in Table 11 show that the  $\alpha$ -values of language group (.00) and the interaction of group and level (.014) are below .025, which shows significance differences. This indicates that language group and interaction between level and group also have influenced their test performances in the DCT, triggering variability between the test-takers. In particular, the interactions between language group and language proficiency level can be identified in Figure 1 as well. The lines of the EOL and NIE crossed at the point between intermediate level and low level, slightly towards low level. On the other hand, the line of EOL is crossed at the point

between high and intermediate levels, somewhat closer to the intermediate level with the line of the IE. As well as the crossing of the lines at the two points, the changes of the gaps between the EOL and NIE, and between the EOL and IE according to different levels are noticeable in illustrating the interaction of language group and language proficiency level.

The difference of mean scores between the NIE and EOL is the largest in the high level, and the differences get narrower as the proficiency levels drop into intermediate and low levels. In the low level, the NIE performs slightly better than the EOL group. On the other hand, the mean score difference between the EOL and IE is much bigger in low level than in the other levels. The gaps between the two groups, EOL and IE, have declined until the two lines reach a crossing point as language proficiency levels have increased from low to high. This presents the reverse result from the pattern between the EOL and NIE. Thus, the significant differences of the three factors identified in Table 11 and the different patterns of lines according to language group and levels shown in Figure 1 support the interpretation that the three factors, language group, language proficiency level and an interaction between them affected the examinees' test performances in DCT.

However, despite such significant differences within level, group and their interaction, it should be considered that the effect sizes of the three factors are different. That is, the effect sizes that explain how much each factor contributed to examinees' test performances in the DCT need to be compared. As for effect size comparison, the partial eta-squared values of level (.628), group (.098), and an interaction of level and group (.045) were utilized. These figures indicate that proficiency level has the medium effect size of 62.8 %. In contrast to the effect size of the proficiency level, other factors' effect sizes are only 9.8% and 4.5%. Compared to the ALT, it holds true that the effect sizes of language group and an interaction of language proficiency and

language group, to some extent, have increased. In terms of the gaps in effect sizes of the three factors between ALT and DCT, language proficiency showed the largest increase (11%) followed by language group (7.3%) and the interaction of the two factors, level and group (3.2%). It can be assumed that the increased interaction between group and level might facilitate the variability between test-takers in language group and language proficiency level. These rises in the effect sizes indicate that the mean differences of DCT test performances get larger within language groups and language proficiency levels, respectively. However the influences of the two factors still remain small compared to language proficiency levels. Hence, the interpretations from these results are that the test performances on the DCT test were mostly affected by language proficiency level, not language group and an interaction of level and language group as shown in ALT. However, as mentioned in the ALT discussion, the descriptive statistics and post-hoc results still present apparent differences between the language groups, EOL/IE groups and the NIE group, which can support the argument that the test-takers perform differently according to language groups in DCT (tables 10 & 13).

Table 10

*Characteristics of Each Level (Language proficiency) & Language Group (DCT)*

Level	Group	N	M	SD
1	1	35	64.60	6.027
	2	26	62.91	4.511
	3	32	55.90	5.697
	Total	93	61.14	6.699
2	1	11	49.09	6.989
	2	10	49.78	8.361
	3	71	45.45	5.266
	Total	92	46.35	6.037
3	1	4	31.94	6.503
	2	7	38.57	7.664
	3	81	33.65	5.306
	Total	92	33.95	5.650
Total	1	50	58.58	11.908
	2	43	55.89	11.173
	3	184	42.07	9.883
	Total	277	47.20	12.716

*Note.* Level 1= High, Level 2=Intermediate, Level 3= Low  
Group 1=EOL, Group 2=IE, Group 3=NIE

Table 11

*Two-way ANOVA of Language Proficiency Level and Language Group (DCT)*

Source	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Level	14438.403	2	7219.202	226.548*	.000	.628
Group	928.258	2	464.129	14.565*	.000	.098
Level*Group	403.881	4	100.970	3.169*	.014	.045
Error	8540.134	268	31.866			

*Note.* \*p < 0.025

Table 12

*Tukey HSD Comparison for Level (DCT)*

(I) Level	(J) Level	Mean Diff (I-J)	Std. Error	Sig.	97.5% Confidence Interval	
					Lower Bound	Upper Bound
1	2	14.78*	.830	.000	12.61	16.96
	3	27.19*	.830	.000	25.01	29.36
2	1	-14.78*	.830	.000	-16.96	-12.61
	3	12.40*	.832	.000	10.22	14.59
3	1	-27.19*	.830	.000	-29.36	-25.01
	2	-12.40*	.832	.000	-14.59	-10.22

Note. Level 1= High, Level 2=Intermediate, Level 3= Low

\*  $p < 0.025$

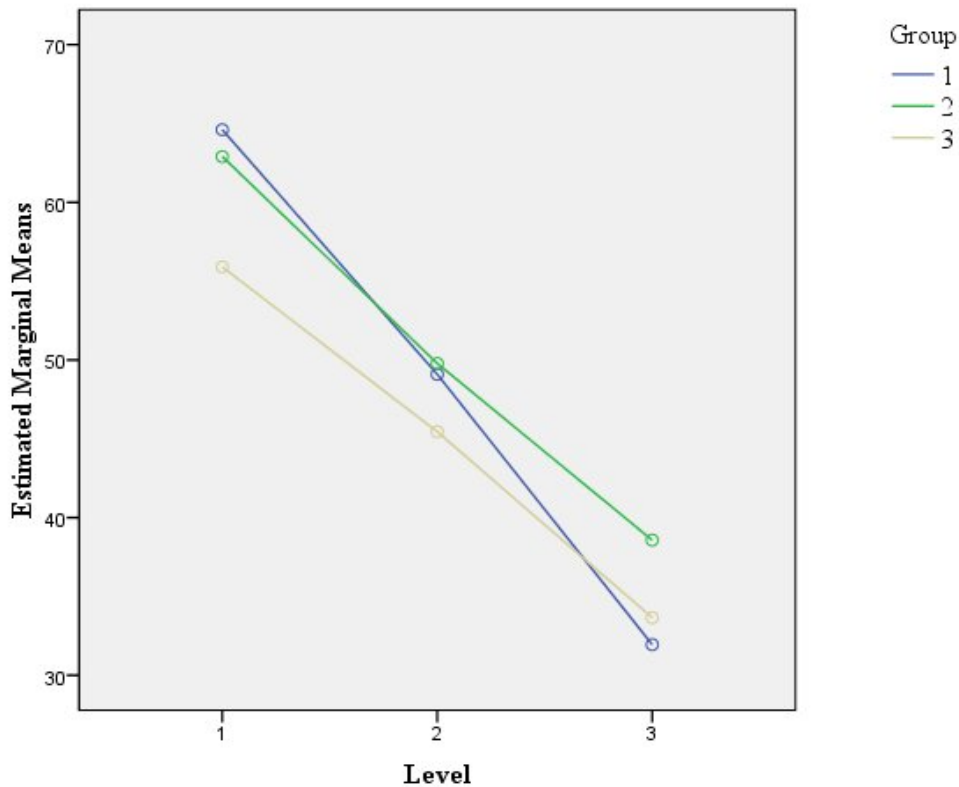
Table 13

*Tukey HSD Comparison for Group (DCT)*

(I) Group	(J) Group	Mean Diff (I-J)	Std. Error	Sig.	97.5% Confidence Interval	
					Lower Bound	Upper Bound
1	2	2.69	1.174	.059	-.39	5.76
	3	16.51*	.900	.000	14.15	18.87
2	1	-2.69	1.174	.059	-5.76	.39
	3	13.82*	.956	.000	11.31	16.33
3	1	-16.51*	.900	.000	-18.87	-14.15
	2	-13.82*	.956	.000	-16.33	-11.31

Note. Group 1=EOL, Group 2=IE, Group 3=NIE

\*  $p < 0.025$



*Figure 1.* Significant differences of Language Proficiencies and Language Groups (DCT)  
*Note.* Level 1= High, Level 2=Intermediate, Level 3= Low  
 Group 1=EOL, Group 2=IE, Group 3=NIE

In short, it can be inferred that examinees' test performances in the ALT and DCT are determined mostly by language proficiency levels rather than language group. Even though the two-way ANOVA results in DCT show significant differences in the three factors, language group, language proficiency level and an interaction of the other factors, the effect sizes of language group, and the interaction were still low relative to that of language proficiency level. In spite of the small effect size of language group and the interaction of group and level, according to comparisons of mean scores between ALT and DCT, it is noticeable that test performances of high- level examinees in EOL and IE groups showed the apparent contrast with the test-takers of NIE group in the same level. In addition, in terms of NIE group, the three levels

from high to low also show the preferences towards ALT over DCT. Thus, the different test preferences of each language group towards ALT or DCT raised the possibility that the test format might affect the test-takers' performances even though the degree of impact remains small.

### Survey of Test Performance-Affecting Factors

The survey conducted in this study investigated which factors affect the examinees' test performances in the ALT and DCT, and evaluated whether these factors are related to construct-relevancy. The results of the survey have also provided insights on the different characteristics of each language group in the two tests.

Table 14

*Comparisons of Mean Scores and Standard Deviations of the Whole Group and Each Language Group*

	<i>N</i>	<i>M</i>	<i>SD</i>
Whole Group	59	3.39	1.08
EOL	34	3.90	1.08
IE	19	3.55	.97
NIE	6	3.20	1.08

*Note.* Group 1=EOL, Group 2=IE, Group 3=NIE  
Likert Scales range from 1(Not at all) to 5(Very).

First, the general overview of answers to the survey turned out to be positive. According to Table 14, the mean score of the whole group was 3.39, above the midpoint of five scales from one to five, .30. This means that the factors described in the survey did not significantly intrude upon the examinees' test performances in the ELI LPTs. However, Table 13 presents the slight differences in responses to the survey according to language groups. The mean score of the EOL

was the highest among the three groups, 3.90, followed by the IE and NIE with mean scores of 3.55 and 3.20, respectively. These results indicate that the EOL group is the most resistant to the factors affecting test performance, while the NIE is the most vulnerable to these factors among language groups. However, despite the relatively low mean score of the NIE group compared to the EOL and IE groups, the NIE mean score is still above three, which means that they were not profoundly affected by the factors. When it comes to standard deviations, the three groups show very similar results (Table 14). The standard deviations of the EOL and NIE were almost same, 1.08. The standard deviations were 1.077 and 1.079. The IE group's standard deviation was .97 which is slightly lower than the other groups. This means that the answers of IE group show more similarity than those of the other groups, EOL and NIE.

Table 15

*Mean score comparisons between ALT and DCT on Test Performance Affecting Factors*

Factors	ALT			DCT		
	EOL	IE	NIE	EOL	IE	NIE
<i>Construct-relevant factors</i>						
1. Comfortable with a lecture listening in class* (Text familiarity)	4.00 (EOL)/ 4.23(IE)/ 3.56(NIE)					
2. Recognizing the words	x	x	x	4.33	3.53	3.50
3. Understanding the content	x	x	x	4.33	4.26	3.32
4. Note-taking	4.17	3.56	3.18	x	x	X
5. New vocabulary	3.83	3.47	2.61	3.83	3.47	2.70
<i>Construct-irrelevant factors</i>						
6. Reading overriding effect on listening test	3.17	3.28	3.35	x	x	x
7. Test strategy (Reading questions and options)	4.67	4.05	3.85	x	x	x
8. Familiar with a test format	4.83	3.41	3.86	4.00	3.11	2.79
9. Anxiety	2.60	3.26	2.77	3.00	3.21	2.75
10. Comfortable with a lecture listening in a test (Text familiarity)	3.33	3.61	3.45	3.67	3.33	2.87
11. Memory effect	4.17	3.79	3.38	4.00	3.37	2.79
12. Fast speech delivery rate	3.33	2.63	2.66	3.00	2.42	2.48
13. Writing effect on listening test	x	x	x	3.17	3.11	2.53
14. Easiness of Topic (Background Knowledge)	4.17	4.06	3.63	4.17	3.84	2.94
15. Clear test instruction	5.00	4.26	4.28	5.00	4.42	4.24

*Note.* 1. The figures of answers to the five factors, including Reading overriding effect on listening test, Writing effect on listening test, New vocabulary, Fast speech delivery rate, and Anxiety were reversed.

2\*. The answers to the factor of *comfortable with a lecture listening in class* belong to both of ALT and DCT.

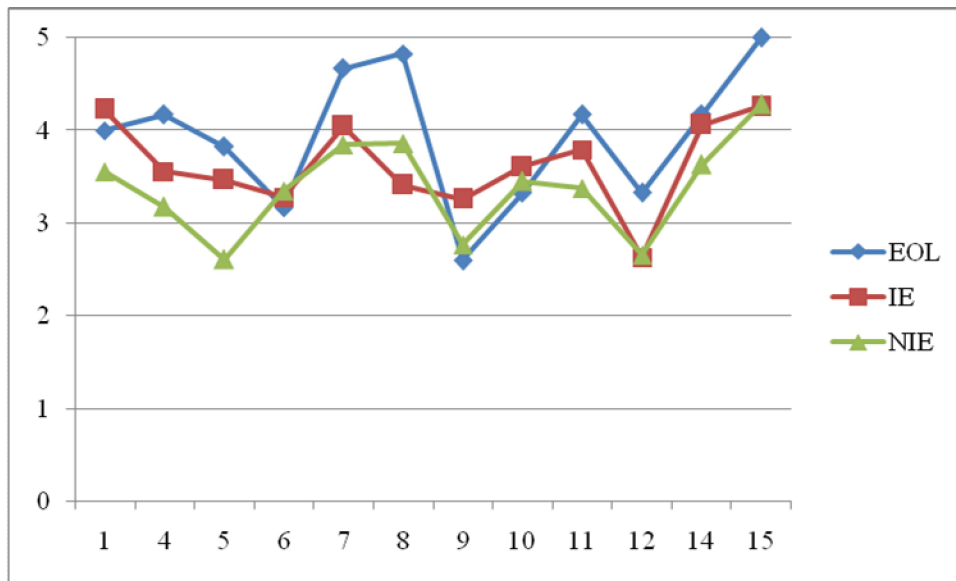


Figure 2. ALT Survey Responses of Three Language Groups, EOL, IE, and NIE

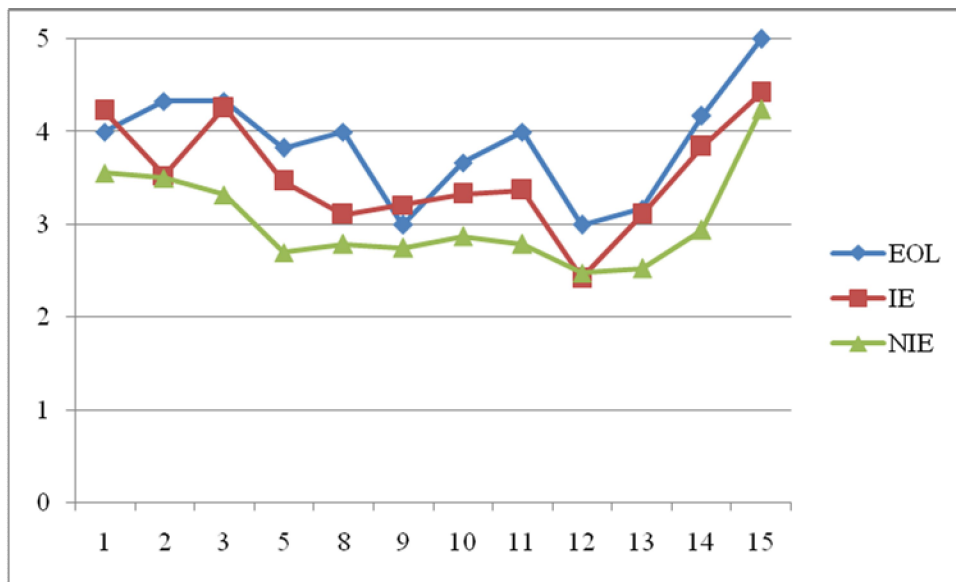


Figure 3. DCT Survey Responses of Three Language Groups, EOL, IE, and NIE

Table 15, Figure 2 and Figure 3 provide more detailed information on how differently each language group, EOL, IE, and NIE, responds to the two categories of the factors, *construct-relevant* and *construct-irrelevant variables*. First, regarding construct-relevant factors described in the survey, the three language groups did not show any particular difficulties with them, with

the exception that *new vocabulary* appears to be an obstacle for the NIE group. The mean scores of their answers to the factor, *new vocabulary*, in the ALT and DCT, were 2.61 and 2.70, below 3.00, which means that they found more new words than the other groups, EOL and IE on the two tests. It suggests that their deficiency of vocabulary might lower their listening comprehension in the listening tests. Next, in terms of *construct-irrelevant variables*, more factors from this category appear to affect the test-takers' performances. However, according to Table 15, Figure 2, and Figure 3, these factors influence the NIE group much more than EOL and IE groups. The answers of the EOL and IE groups in this category presented only two factors, *anxiety* for EOL and *fast speech delivery rate* for IE. Regarding the EOL group, their responses show the highest anxiety among the three groups in the ALT with a mean score of 2.60. (The responses to anxiety were reversed.) This figure, 2.60 is lower than the mean score of *anxiety* for the EOL group in the DCT, .30. Thus, the results reveal that the EOL group is more likely to feel anxious when taking the ALT than the other language groups. In addition, anxiety might affect the test performance of the EOL group in the ALT more than in the DCT. Next, the IE group did not demonstrate any particular difficulties caused by the factors in the survey except for *speech delivery rate*. Their answers to all the factors mentioned in the survey were 3.00 or above, while the respondents of the IE group answered that *the speech rate* of the ALT and DCT are fast with mean scores of 2.63 for ALT and 2.42 for DCT. These figures are the lowest among the three language groups despite a slight difference from those of the NIE groups.

However, contrary to the generally positive answers of the EOL and the IE groups, the answers of the NIE group presented a number of factors that might negatively affect their test performances, especially in the DCT. Table 15, Figure 2, and Figure 3 show that the three factors of *anxiety*, *speech rate*, and *vocabulary* are reported to influence the test performances of the

NIE group in both the ALT and DCT. The mean scores of *anxiety*, *speech rate* and *vocabulary* are 2.77, 2.66, and 2.61 for ALT, and those for the DCT are 2.75, 2.48, and 2.70. In addition to these common factors between the two tests, Table 15 and Figure 3 present additional difficulties when taking the DCT. They are: *test-format and text unfamiliarity*; *topic difficulty*; *writing effect*; and *memory effect*. Thus, it can be inferred that a higher number of factors in the ELI listening tests, especially, involved with the DCT, challenge the NIE group examinees more than the other language groups, EOL and IE.

These dissimilarities among the language groups can be analyzed more in depth with a focus on the relations of the factors described in the survey. First, the two factors, *recognizing the words* and *understanding the content*, that belong to the category of *construct-relevant variables*, present cognitive processes of listening. It is found that each language group goes through different cognitive processes when they are taking the DCT. According to Table 15 and Figure 3, the NIE group focuses on *word recognitions* (3.50) more than *content comprehension* (3.32), while the IE group relies much more on *understanding the content* (4.26) than *recognizing the words* (3.53). The EOL shows that they use both cognitive processes actively with the mean score of 4.33. This result is in accordance with Buck's (2001) claim that higher level listeners tend to focus on understanding the listening inputs by storing the information in chunks, while the lower level of listeners attempt to recognize the words and easily fail to retain the information they receive. Thus, one possible interpretation on these dissimilarities will be that the different language proficiencies of the three language groups might lead the examinees of each group to utilize different approaches to taking the dictation test. According to Table 9, the NIE shows the lowest mean score, 42.07, following the IE (55.89) and the EOL (58.58) in DCT.

Next, *the reading overriding effect* and *the test strategy of reading questions and options*

*as clues for finding the answers* presented contradictory results (Table 15 & Figure 2). *Reading effect* in multiple-choice questions means that excessive reading in listening tests might intrude on the test-takers' listening performances. However, as one of the test strategies, *reading questions and options in listening test*, provides additional clues for listeners to compensate for the deficiency of their listening skills as well. Unfortunately, in the survey, the answers related to these *reading effects* in ALT turned out to be conflicting. According to Table 15 and Figure 2, in terms of *reading overriding effect*, the EOL group showed a lower mean score (3.17) than the other two groups, the IE (3.28) and the NIE (3.35). This result indicates that NIE group examinees felt the least bothered by reading questions and options in the ALT among the three groups while the reading effect intruded on the EOL group the most. However, these results do not match with their answers to the next question of *using reading questions as one of their compensatory strategies*. Interestingly, the EOL showed the highest mean score, 4.67, among the three language groups that reading questions and options can help them to answer the questions. These mismatched responses between *reading overriding effect* and *test strategy* make it hard to predict their tendency towards reading factors in the ALT.

Following the reading effect, the three factors, *test format familiarity*, *text familiarity based on different situations*, and *anxiety* were analyzed together to interpret different features of each language group (Table 15, Figure 2, & Figure 3). As mentioned above, the EOL group showed the highest anxiety towards the ALT among the three groups. However, it is notable that the EOL group answered that they are highly familiar with the ALT test format with a mean score of 4.83. This figure was even higher than the mean score of *test format familiarity* towards the DCT, 4.00. Thus, one of the possible interpretations will be that a high level of anxiety has a negative influence on the EOL group's test performances on the ALT regardless of familiarity

with test format. This interpretation can be supported by their different answers to *text familiarity according to situations, in class and in tests*. The EOL group responded that they feel generally comfortable with lecture listening in class (4.00). The mean scores for *lecture-listening familiarity* declined more in the ALT (3.33) than in the DCT (3.67). It increases the credibility of the interpretation that anxiety towards ALT lowered lecture-listening familiarity in the ALT more than in DCT. On the contrary, as far as anxiety levels, the IE and NIE showed similar patterns to each other. Both of the groups presented higher anxiety towards the DCT than the ALT. The mean scores of *anxiety* for the ALT reported by the IE and NIE are 3.26 and 2.77, respectively, and these numbers dropped to 3.21 and 2.75 in the DCT. Regarding their *test format* and *text familiarities*, the IE and NIE groups answered that they are less comfortable with the DCT than the ALT and their answers to *lecture listening familiarity* decreased more in DCT than in ALT (Table 15, Figure 2, & Figure 3).

As the interpretations of the three factors, *test format familiarity*, *text familiarity* and *anxiety* were approached together, the answers to the factors of *memory effect*, *note-taking* and *fast speech rate* were compared to one another according to language group (Table 15, Figure 2 & Figure 3). When it comes to *the memory effect*, the NIE group reported that their test performances in the DCT are more vulnerable to memory effects than in the ALT by showing a higher mean score of 3.38 for ALT than that for DCT, 2.79. These results are interesting in that the lectures used in the ALT are much longer than the script of the DCT and the examinees are allowed to listen to the ALT lectures only once while the short script of DCT is played three times to the listeners. This means that the NIE examinees have more difficulties remembering what they have listened to in the DCT, despite the short script length and repeated listening, than in the ALT. These confusing results can be explained along with the answers to the two factors,

*note-taking* and *speech delivery rate*. Table 15 shows that the mean score of the NIE for *note-taking* was 3.18, above the midpoint 3.00, while that of *speech delivery rate* was 2.48, which indicates that the NIE group is more vulnerable to fast speech delivery than to note-taking skills. Hence, these results can make the predictions that fast speech rate might work as an obstacle to remembering what they have listened to, yet, their note-taking skills can help them retain information from lectures.

Remarkably, the IE group answers showed that they feel more sensitive to speech delivery rate than the NIE group. According to Table 15, the mean scores of the IE group on *speech delivery rate* are 2.63 for the ALT and 2.42 for the DCT. These figures are lower than the mean scores of the NIE group for the ALT (2.66) and the DCT (2.48). However, the answers of the IE group to *note-taking* (3.56) and *memory effect* (3.79 for ALT, 3.37 for DCT) were higher than those of the NIE group. The mean score of the NIE for *note-taking* was 3.18, while the mean scores of *memory effects* are 3.38 for the ALT, and 2.79 for the DCT. Thus, it can be inferred that even though the IE group feels the speech delivery rates in both the ALT and the DCT are fast, they could process the information quickly enough not to be influenced by memory effects. Unlike the other two groups, the EOL group did not demonstrate any particular problems with these three factors.

Finally, the rest of the factors described in the survey, *vocabulary*, *writing effect*, and *topic* were already noted above as possible difficulties for the NIE groups when taking the ALT and DCT, unlike for the EOL and IE groups. Each group reported that *test instructions* were very clear by presenting mean scores above 4.00 (Table 15, Figure 2, & Figure 3).

In brief, the findings from the survey to investigate the potential factors affecting the test performances reveal that the examinees were not negatively influenced by either of the

categories, *construct-relevant* and *construct-irrelevant variables*. The answers from the whole group appeared to be generally positive, and the mean scores of the three language groups, EOL, IE and NIE, were all above 3.00. However, apparent differences between EOL/IE groups and NIE group were identified. Among the three groups, the EOL showed the most positive answers while the NIE showed the most difficulties among the three groups. This means that the EOL was the most resistant to various factors related to the test performance followed by the IE group. The NIE was discovered to have test performances that could be more easily influenced by the factors compared to the other groups, especially by the construct-irrelevant factors. The in-depth analysis on the relations of these factors also revealed a number of intriguing features of each group such as different cognitive processes of listening, reading effect, anxiety, and memory effect.

## **Discussion**

### **1. How Does the ELI Define the Construct Validity of Listening Comprehension?**

The ELI listening comprehension construct was defined based on listening tasks and strategies described in ELI curriculum. The three major tasks and strategies include lecture listening, presentation, discussion and listening comprehension, critical listening, and interactive listening. Based on these results, the listening skills which are required to complete the three main tasks turned out to exceed the scope of understanding literal meanings to the metacognitive skills. Moreover, the ELI curriculum distinguishes critical listening from general listening comprehension, which implies that the ELI emphasizes this critical listening skill. However, the relative importance of each skill, listening comprehension, critical listening, and interactive listening was not mentioned specifically in the curriculum (Goals and Objectives in ELI speaking and listening curriculum). Thus, it can be interpreted that the ELI attempts to define the

listening comprehension construct through a hierarchy of cognitive skills from low to high order. Nevertheless, the ELI did not specify the priority and degree of the importance of each listening skill. This interpretation can also lead to the inferences that whether or not the portions of test items measuring each listening skill in ELI LPTs are appropriately distributed cannot be examined since the ELI does not specify the relative importance of each skill in their curriculum. As well as these test concerns, there is a possibility that the ELI instructors might teach their courses with different perceptions towards these skills without clear guidelines. It will affect the degree to which each course achieves their student outcomes on the three listening skills because instructors might put different levels of emphasis on each listening skill.

## **2. How Well Does ELIPTs Measure What the ELI Defines As Academic Listening?**

The ambiguity of the relative importance of each listening skill prevents immediate answers to the second research question in this study. According to the results of the test item analysis, the ELI ALT turns out to include seven global questions, which are measuring high-order cognitive skills, out of 35 items. However, among seven global questions, four questions such as question 6, 12, 14, and 35 presented low item discriminations (.11, .24, .15, and .16 respectively) (Table 1). This means that only three global questions out of 35 items, which is 8.57%, function well enough to measure the understandings beyond literal meanings. This leads to the conclusion that the ALT mostly measures literal meanings. In addition, according to current literature, the DCT, the other ELI LPT (Listening Placement Test), is claimed to examine literal meanings as well, although which specific listening skills are measured by the DCT still have not reached a strong agreement between researchers. Thus, it can be argued that test performances in the ALT and the DCT highly depend on test-takers' abilities to understanding literal meanings. This finding leaves the ELI with a decision as to the degree to which high-order

cognitive skills of listening comprehension and critical listening should be examined through the ELI LPTs. The literature also shows the controversy on which skills are needed to measure test-takers' actual listening skills, the understandings of literal meaning or beyond literal meaning. Some researchers (De Jong & Glas, 1987) claim that literal meaning represents test-takers' actual listening skills, and understandings beyond literal meanings involve their cognitive skills. On the other hand, others (Suen, 1994; Burger & Doherty, 1992; Thompson 1995) suggest that the excessive narrowing of listening comprehension to only literal meanings has a possibility of threatening construct validity of listening tests. Therefore, as mentioned in the literature review, the ELI should make a decision on specifying the scope of listening comprehension in order to evaluate the validity of ELI LPTs.

One of the pieces of evidence supporting the construct validity of the ELI LPTs, the Teacher Confidence Level survey conducted in 2009, was used. The teacher confidence level regarding students placement was above 90%, which means that instructors felt that what they taught in class was paired well with students' levels. The lack of teacher confidence level data towards students of 2010 and 2011, on which this research focuses, might lessen the credibility of findings from the 2009 data analysis. However, additional interviews with administrators and instructors indicate no mismatch between the data of the teacher confidence level in 2009 and the target group in this research (spring and fall 2010 & spring 2011). Administrators and instructors in ELI listening and speaking courses showed high confidence towards their current students by agreeing that students seemed to be well placed. These findings lead to an argument that ELI LPTs have moderately high construct validity.

In addition, the results of internal correlations of the ELI LPTs added additional evidence to strengthen the validity argument of the ELI LPTs. As already mentioned in the result

section, the ELI listening placement tests, the ALT and DCT, show moderately high correlations with the whole test score minus each test, respectively. In addition to good correlations between ALT/ DCT and the total score, the finding that the correlation coefficients between ALT and DCT are higher than those of ALT and RCT can be interpreted that test-takers' performances in ALT and DCT were more influenced by listening skills than test methods.

Despite evidence in favor of construct validity of the ELI LPTs, some concerns about the ELI LPTs were raised as well. First, the ALT reliability (.75), considered as a precondition to validity, was reported to be not satisfactory. There are some possibilities involved with such a mediocre reliability. According to Ebel and Frisbie (1986), low reliability coefficients might be led by: (a) a short length of test, (b) a test comprised of heterogeneous items, (c) a test with less discriminating items or with too easy or too difficult items, (d) test-takers of homogeneous group in their language proficiency, and (e) a speeded test. Among these possibilities, item discriminations and facilities were highly suspected as one of the factors to affect the current reliability. As expected, the results of item discriminations and item facilities strengthened the possibility that a certain number of items contributed to lowering reliability. Almost 29% of the entire ALT items fell into the categories of marginal (6 items) or poor items (4 items) (Brown, 2005). This means that the ELI needs to evaluate these items and consider revising them in order to make the listening tests more reliable; However, it still holds true that other factors such as similarity in language proficiencies between test-takers and diverse language backgrounds of test-takers might be considered as other factors of lowering the reliability as well.

### **3. How Differently Do Test-Takers Perform In the Dictation Test and the Multiple-Choice Test According To Language Group?**

The results of the descriptive statistics and two-way ANOVA addressed the third

research question in this study. As mentioned in the Result section, it turns out that language groups do not affect test performances significantly in the ALT and DCT. The test scores are more likely to be determined by different language proficiency levels. Even though significant differences between language groups in the DCT were found, the effect size was not large enough to have a profound influence on test performances. Although the overall effect sizes of language group in the ALT and DCT were much lower than those of language proficiency levels, it was discovered that the NIE group shows the preferences towards the ALT in the three levels, while only the high-level proficiency group in the EOL and high and intermediate levels of the IE group favored the ALT over the DCT. This leads to the conclusion that a test format affects the examinees' test performances in the ELI LPTs even though its impact on test performances might be relatively small. Thus, this study did not prove that test-takers' official languages play a significant role as one of the factors affecting the examinees' test performances in the ALT and DCT. However, the findings of different test performances according to language group, can be related to the issue of test bias which was discussed in literature review. This leads to the argument that that the test-takers from different language groups might get some advantages or disadvantages according to test formats.

The ELI should be aware that the ELI LPTs have some possibilities of giving advantages or disadvantages to the examinees according to language group, particularly for high level learners. For example, it can be predicted that high level of Japanese students might get advantages by taking the ALT. On the other hand, American Samoan students with high-level language proficiencies will have some disadvantages with the ALT test format. The ELI also should take into consideration that they need to supplement such potential limits coming from a test format with proper administrative decisions on students' placement. This result can

legitimize the current ELI placement policy of taking the highest score from either of the ALT or DCT for test-takers' placement.

The survey that was administered for investigating the factors affecting the test performances according to language group and whether these factors threaten the construct validity of the two tests, the ALT and DCT, indicated that the test-takers were not influenced, to a great extent, by those factors mentioned in the survey. These results might strengthen the arguments that the construct validity of the ELI listening placements is not threatened by the factors of construct-relevant and construct-irrelevant variables. Moreover, the findings from the survey provide the ELI with more in-depth understandings of different characteristics of language groups. In particular, some difficulties that each language group potentially might have in terms of listening comprehension and test-taking can provide the ELI with the guidance that can be applied to their instructions in courses. For example, the EOL group showed higher anxiety towards ALT than IE and NIE groups. In addition, NIE students were reported as having a myriad of difficulties including vocabulary, topics, memory effect and speech delivery rate. Among these results, it is noticeable that NIE students answered they had some trouble remembering what they listened to even though they reported that they understood the content. This result complies with the findings revealed from research done by Goh (2000). In her study, she attempted to reveal difficulties shared in common among test-takers, especially in low-level language proficiency. Interestingly, one of those difficulties reported by her test-takers turned out to be the same as what the NIE students indicated in a survey. Both of them answered that although they understood the content, they easily forget what they listened to. Goh (2000) suggested that their problems might be related with their working memory in the stage of parsing which usually constructs meanings. Their limited working memory, which can be called a short-

term memory, allows only for shallow processing of information. This can also raise the possibility that the difficulties reported by the NIE group might be caused by their relatively low language proficiency compared to the other groups, the EOL and IE, as shown in mean scores comparisons of the ALT and DCT tests. (Table 6 & 10). Hence, the ELI needs to conduct further research on how such differences between language groups in listening comprehension and each language groups' own difficulties should be applied in teaching ELI classes, test development and administrative decisions on interpretations of the test scores.

### **Conclusion**

In this paper, the construct validity of the ELI LPTs, ALT and DCT, were investigated with three foci: (a) what the ELI defines listening comprehension, (b) how well the ELI LPTs measures their construct, and (c) whether their construct operationalization might be limited by test-bias due to factors such as different language background. These research questions were answered to some extent in a process of evaluation and the findings are able to provide the ELI with some constructive suggestions on the ELI LPT itself, its implementations and course instruction. However, it holds true that the complexity of listening comprehension itself and multiple factors affecting test performances might limit the interpretations of results and applications of the findings from this study. Therefore, discussions of the findings among ELI administrators and instructors, and further research on some issues faced in a process of the construct validation, should follow up this study. The topics for discussion and further research will be:

1. The ELI needs to prioritize each different listening skill described in their curriculum and decide on the relative importance of each skill. This agreement should lead to another decision on the proper percentages of global and local questions in their test. It should also

function as a guideline for instructors in their course on how much they need to focus on each listening skill as well.

2. Follow-up research on some interesting findings from the survey such as EOL group's high anxiety towards ALT and memory effects on test performances in the DCT for the NIE group will help ELI to interpret the results of the survey better and apply them to their teaching and test development.

Follow-up studies on the topics above will provide additional information to help solidify arguments on construct validity of ELI LPTs.

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Appendix: Survey of Test Performance-Affecting Factors

**Part 1. Demographic Information**

Male/ Female

Graduate/ Undergraduate students

Major: \_\_\_\_\_

Age: \_\_\_\_\_

Native language: \_\_\_\_\_

**Part 2. Please read the questions and circle the number. (1: Not at all, 5: Very)**

	<b>Part A</b> Dictation	<b>Part B</b> Multiple- choice
1. Generally, I am comfortable with listening to a lecture in class.	1 2 3 4 5	
2. I am comfortable with lecture-type listening on tests.	1 2 3 4 5	1 2 3 4 5
3. I could easily take notes while listening.		1 2 3 4 5
4. I did not have enough time to read the questions and options and answer the questions.		1 2 3 4 5
5. Reading questions and options helped me to answer the questions.		1 2 3 4 5
6. I did not have enough time to write down what I heard	1 2 3 4 5	
7. I could understand the content.	1 2 3 4 5	
8. I focused on recognizing the words.	1 2 3 4 5	
9. I was familiar with this test format.	1 2 3 4 5	1 2 3 4 5
10. Generally, topics were easy to understand.	1 2 3 4 5	1 2 3 4 5
11. I could remember what I listened to when I was answering the questions or writing down words.	1 2 3 4 5	1 2 3 4 5
12. I found many unknown vocabulary words.	1 2 3 4 5	1 2 3 4 5
13. I was anxious when taking a test.	1 2 3 4 5	1 2 3 4 5
14. The rate of speech was fast.	1 2 3 4 5	1 2 3 4 5
15. Test instructions were clear enough.	1 2 3 4 5	1 2 3 4 5

**Thank you!**