International Journal of English Linguistics; Vol. 2, No. 6; 2012
ISSN 1923-869X E-ISSN 1923-8703
Published by Canadian Center of Science and Education

Effects of Multi-Faceted Lexical Instruction on the TOEIC Listening Performance of Taiwanese EFL College Students

Yi-chun Pan

Correspondence: Yi-chun Pan, National Pingtung Institute of Commerce, Taiwan. E-mail: pan_yichun@yahoo.com

Received: September 14, 2012 Accepted: November 7, 2012 Online Published: November 29, 2012

doi:10.5539/ijel.v2n6p71 URL: http://dx.doi.org/10.5539/ijel.v2n6p71

Abstract

The current study conducted an investigation into the effects of multi-faceted lexical instruction on the TOEIC aural performance of Taiwanese EFL students at tertiary institutes of technology. A total of 47 Taiwanese first-year technological college students participated in this study. Throughout the course of a three-week preparatory English class, the students were provided with lexical instruction in which vocabulary was instructed in a multi-faceted way. Not only did students receive exposure to both single lexical items and multiword units, but they also engaged in a variety of oral activities. The findings of this research clearly indicate that the TOEIC aural performance of Taiwanese technological college students generally improved as a result of such instruction. This study also discussed unexplored issues to offer suggestions for future researchers.

Keywords: listening, multi-word units, lexical instruction, TOEIC

1. Introducation

The importance of aural input for second/foreign language acquisition (SLA) has been underlined in such SLA theories as the monitor model (Krashen, 1977), the information processing model (McLaughlin et al., 1983), the interaction model (Hatch, 1983), and the intake model (Chaudron, 1985). However, in general, L2 learners experience great difficulty comprehending aural input (Graham, 2002, 2006). For one thing, listening is a complex process in which the listener must apply a variety of both linguistic and non-linguistic knowledge sources to interpret rapidly incoming data (Buck, 2001; Rost, 2002; Vandergrift, 2007). In addition, as listeners, there are a variety of factors over which L2 learners have no control, such as the speech rate, the speaker's accent, and the cultural content of the talk (Graham, 2002, 2006).

In Taiwan, like everywhere else, EFL learners experience difficulty comprehending spoken English (Chang, 2010; Shang; 2008). This is due in part to the fact that their first language dominates most of their communication. Another reason Taiwanese EFL learners have trouble listening is because they learn how to listen largely through formal instruction in the classroom, exposed very little to English beyond the context of formal study, so they often face many challenges including limited vocabulary, fast speech, unfamiliar accents, unfamiliar topical knowledge, and an inability to match spoken and written forms (Chen, 2007). EFL learners should therefore not be expected to immediately engage in listening tasks (Chang & Read, 2006) but should instead be "tuned in" so that "they know what to expect, both in general and for specific tasks" (Underwood, 1989, p.30).

The procedure for tuning students in draws from a variety of "pre-listening" activities, which are based on two different levels of processing: bottom-up and top-down (Richards, 2003). While different types of support play valuable roles in the instruction of listening skills, this study is particularly interested in investigating the effects of bottom-up-based support on the aural performance of Taiwanese college students. Within this context, bottom-up-based listening support refers specifically to multi-faceted lexical instruction, wherein students will be provided with instruction of both single lexical items and multi-word units, will receive multiple exposures to those vocabulary items, and will be given a sufficient amount of time for numerous exposures to lexical items.

The efficacy of multi-faceted lexical instruction should be assessed due to the fact that the linguistic threshold hypothesis posits that to listen in a L2 one must first achieve a level of L2 linguistic ability, particularly vocabulary knowledge (Mecartty, 2000). In the same vein, Stahr (2009) contends that one major contributor to successful listening comprehension might be vocabulary size. Bonk (2000) determined that participants who recognized fewer than 80% of the different lexical words (nouns, verbs, adjectives, and adverbs) in the input

texts had little likelihood of attaining high comprehension scores. Furthermore, Bonk's data revealed the fact that 60% of the participants who knew more than 90% of the lexical word types achieved good comprehension. Likewise, Schmitt (2008) claimed that most learners had to know 95% of the running words (i.e. word tokens) in the texts to obtain good comprehension scores. Based on this brief review of the literature, it is readily apparent that the basis of spoken language comprehension (Goh, 2000; Rost, 2002) is derived from knowledge of vocabulary (including the meaning, segmentation, and recognition of words), and it is therefore crucial to examine the degree to which lexical intervention contributes to aural comprehension ability.

An investigation into the effectiveness of multi-faceted lexical instruction is also important because an insufficient knowledge of vocabulary appears to be a leading cause of stress among EFL listeners. Boyle (1984) determined, based upon the opinions of 60 students in Hong Kong, that they considered vocabulary the most important aid to the effectiveness of listening comprehension. Kelly's (1991) later investigation scrutinized errors made by EFL learners in transcription and translation after listening to extracts recorded from the BBC. Between lexical, perceptional, and syntactical errors, lexical ignorance was again regarded to be the primary obstacle for these students. Taiwanese EFL learners experience the same difficulties as other EFL learners. Chao and Cheng (2004) investigated the listening difficulties of students from four senior high schools, and students in that study felt that their lack of a sufficient vocabulary led to listening difficulties. Along the same lines, Chien and Kao (2002) found that students believed an increased L2 vocabulary would improve listening comprehension. Since the limited vocabulary possessed by students presents obstacles to their successful comprehension of spoken English, we should assess the effectiveness of lexical intervention on their listening performance.

Furthermore, an examination of the effectiveness of multi-faceted lexical instruction should be undertaken due to the fact that existing literature on the subject presents inconsistent findings. Some offered much acclaim to its value (Chung & Huang, 1998; Kang, 2009), whereas others cast doubt upon its effectiveness (Chang & Read, 2006; Chang, 2007). For example, Kang's (2009) study demonstrated the facilitative effects of vocabulary pre-teaching on junior-high school students' listening comprehension. On the other hand, research has revealed some negative results—for instance, Chang and Read (2006) determined that vocabulary instruction prior to a listening comprehension test had no significant effect on the performance of college students. More intriguingly, those students were both psychologically and affectively reliant on such pre-listening support at the same time that they felt it had little effectiveness in terms of improving their comprehension (Chung, 2002; Chang & Read, 2006). This ambivalence deserves further exploration. Not only must we scrutinize possible problems previous research designs may have had in terms of the methods of teaching vocabulary they utilized, but we should also overcome the limitations of previous studies and modify them with theory-based alternatives.

There is also a necessity to assess the effects of multi-faceted lexical instruction on the TOEIC (Test of English for International Communication) listening scores of college students. In terms of the TOEIC, Chujo and Oghigian (2009) suggested that listeners require a minimum vocabulary size of 4000 words in order to reach a 95% coverage level. Starhr (2009) believes that an explicit focus on vocabulary learning is necessary to expand the vocabulary size that learners possess. To date, the bulk of extant research has focused on the relationship between lexical support and self-made tests (e.g., Chang & Read, 2006; Kang, 2009; Li, 2009), but very few studies have addressed the effects of lexical intervention on the TOEIC listening performance of Taiwanese EFL college students. Such a study will be indispensable because in Taiwan, the TOEIC is a high-stakes test due to its adoption by many companies and organizations as one of the criteria for recruitment and promotion and its use by many universities and colleges as a graduation benchmark (Chu, 2009; Lai, 2008; Lin, 2009). Thus, EFL teachers have a responsibility to help their students improve their TOEIC scores so that they can successfully graduate and be competitive in their future careers (Chu, 2009; Lai, 2008; Lin, 2009). It is hoped that the results of this study will shed more light upon the influence of intentional vocabulary teaching on the listening performance of students on high-stakes standardized tests.

To summarize, the objective of this study is to investigate the effect of multi-faceted lexical instruction on the aural performance of learners. Specifically, it seeks to determine the degree to which the listening success of students, if any, on the TOEIC can be attributed to such instruction. Given the fact that extant research has only provided inconsistent or limited evidence in response to this question, it is critical that this present study be undertaken.

2. Method

The purpose of this research was to determine what effects multi-faceted lexical instruction had on the TOEIC aural performance of EFL students at technological colleges. The following sections include a description of the participants, the teaching materials and instruments, and the procedures, data analysis, and results.

2.1 Participants

A total of 47 Taiwanese technological first-year college students took part in the first pilot study. They had studied English for about 9 years on average and had little exposure to spoken English outside of class. The participants were students in a preparatory business class. The purpose of this preparatory class, which began three weeks before school started, was to provide regular high school graduates who had no academic business training with introductory knowledge in economics, accounting, and statistics, to level the playing field with their peers, who had graduated from vocational high schools. In addition to those business prep courses, the students were given an English course with the objective of helping them pass the graduation benchmark, that is, TOEIC 350 or equivalents in other standardized exams such as GEPT and TOEFL. The duration of the English course was three weeks, and the students had two three-hour classes each week for a total of 18 hours of instruction.

At the first class, the participants were given a TOEIC listening pre-test, the results of which are set out in Table 1. The overall mean score of 33.55 (out of 100) shows that in general the students were at a high beginning level in English listening proficiency. According to the scores of a TOEIC test, those who scored 34 or above (33 was used as the cut-off point) were assigned to the higher language proficiency group, and those with scores of 33 or below were classified as having lower language proficiency. There were 21 students at the higher level (mean=39.52), and 26 students at the lower level (mean=28.73). The difference between the means was significant (t=7.399, p=.000).

Table 1. Descriptive Statistics for TOEIC Listening Pre-test Scores (Total Score=100)

	N	Mean	SD
Higher Proficiency	21	39.52	5.988
Lower Proficiency	26	28.73	3.976
TOTAL	47	33.55	7.321

2.2 Listening Materials

The primary listening materials I used in class were drawn from *Tactics for TOEIC® Listening and Reading Test* (Trew, 2007). The book, designed for TOEIC preparation, provides the same format of practice questions with 10 questions in Photographs, 30 questions in Question-Response, 30 questions in Short Conversations, and 30 questions in Short Talks. The rationale for choosing this book is that a thorough understanding of test directions and task requirements allows learners to focus fully on demonstrating their language proficiency (Hwang & Lee, 2009). Once learners have familiarized themselves with the format of the TOEIC test, they can proceed to concentrating entirely on their listening comprehension ability.

2.3 The Instruction Model

As its model of instruction, this pilot study adopted the three types of pre-task activities devised by Skehan (1998). In the "teaching" stage, students were provided with a list of lexical items (including both single words and multiword units) embedded in sentences and then were taught their pronunciations. Proceeding to the "consciousness-raising" stage, students were asked to read sentences aloud several times and then repeat them without looking at the list. Finally, in the "planning" stage, students were given the homework task of practicing those lexical items embedded in sentences. At their next class, the teacher briefly reviewed the lexical items that had previously been taught to the students and then the class answered listening test questions. The teacher provided the students the correct answers and the transcript, and then explained any parts that confused them.

2.4 The Procedure

During the first class, the students were given the paper-and-pencil version of the TOEIC listening pre-test. Over the three-week course, the pedagogical cycle proceeded as described in the Instruction Model. This teaching cycle repeated until the last class, in which students were given a computerized version of the TOEIC listening post-test.

3. Results

Version 12.0 of SPSS for Windows was employed for the quantitative statistical analysis. Test results are presented in Table 1. Overall, while the entire class performed significantly better in the pre-test than in the post test (t=12.67, p=.000), the lower-proficiency group achieved greater progress than the higher-proficiency group. The lower-proficiency group advanced 19.12 points (from 28.73 to 47.85 out of 100) compared to an improvement of 16.10 points for the higher-proficiency group (from 39.52 to 55.62 out of 100). The effect size calculated by Cohen's (1988) d was 2.92 for the post-test results for the lower- proficiency group, much higher than that for the higher-proficiency group (1.67). These findings demonstrated that multi-faceted lexical instruction had a facilitating effect on the listening performance of the participants and that the lower-proficiency group benefited from lexical intervention to a higher degree than their higher-proficiency counterparts did.

Table 2. Means and Standard Deviations of TOEIC Listening Pre- and Post-test Scores

	Pre-test		Post-test	
	M	SD	M	SD
Higher Proficiency	39.52	5.988	55.62	12.221
Lower Proficiency	28.73	3.976	47.85	8.370
TOTAL	33.55	7.321	51.32	10.875

4. Discussion

The following sections begin with an explanation for the apparent success of multi-faceted lexical instruction in the facilitation of listening comprehension. Subsequent to that is a discussion of the techniques utilized in lexical intervention that contributed to this success.

4.1 Why Did Multi-Faceted Lexical Instruction Work?

The most critical challenge facing language learners today is the fact that insufficient vocabulary knowledge hinders successful listening (Kelly, 1991). Kintsch's Construction-Integration Model (1998) contends that the initial developmental phase of the mental model of an individual occurs primarily based upon the words in the context, in a bottom-up manner. The individual then combines this linguistic information into propositions, which generally occurs at the conclusion of leach clause in the text. If listeners are not provided with a sufficient supply of vocabulary knowledge to rely upon when decoding text, it only stands to reason that they may resort to counterproductive problem-solving processes such as uneducated guesses or diverted textual reconstruction (Kintsch, 2005). In contrast, the provision of an adequate number of lexical items not only facilitates greater accuracy in textual decoding, it also helps free up cognitive space for more effective higher level processing such as the utilization of prior knowledge to resolve ambiguities and contradictions in the mental model of the listener (Hulstijn, 2003).

In this study, lexical intervention taught students a number of related lexical items that assisted them in processing the incoming stream of speech to a higher degree of accuracy. This intervention also resulted in a greater amount of free cognitive space from quick decoding, allowing for the activation and utilization of strategies (e.g., intelligent guessing or inferencing) to facilitate student comprehension. As Student B stated, the vocabulary (both single items and multiword units) that he learned from lexical intervention helped him to understand more of the aural text instead of his usual method of unintelligently guessing the message using only the very limited number of words he knew.

As a whole, students relied upon their increased command of vocabulary knowledge to build a more solid mental model of the text, which in turn improved their comprehension. If they possessed poor linguistic competence (vocabulary knowledge in particular), students might resort to ineffective top-down processes (e.g., uneducated guesses), which would decrease their level of comprehension of L2 spoken text.

4.2 How did Multi-Faceted Lexical Instruction Work?

Multi-faceted lexical instruction persuasively affected Taiwanese EFL technological college students' TOEIC performance. This apparent success could be attributed to the three primary techniques utilized in lexical intervention: multiple exposures to lexical items, sufficient preparation time, and multiword unit instruction.

4.2.1 Multiple Exposures to Lexical Items

In regard to lexical interventions, vocabulary instruction covered three areas: the meaning of lexical items, how they were used within specific contexts, and perhaps most importantly, how they actually sounded within those contexts. These multiple exposures to lexical items resulted in an improved depth of processing. This in turn helped students to internalize the lexical items and prepare them for immediate use (Mortazavi, 2011). As Schmidt (2001) contended, learning requires learners to be actively involved, which allows them to first notice and then intake new elements. Multiple exposures to lexical items provided students with an avenue to successfully learning the vocabulary.

Something noteworthy during the course of lexical intervention is that while students received multiple exposures to lexical items, they were strongly encouraged to utter words embedded in sentences or mini-conversations out loud. This suggestion was based upon the theoretical rationale that holding a word in a phonological short-term memory is an important influence to vocabulary learning (Gathercole & Baddeley, 1989). In a similar vein, Nation (2001) claimed that possessing a knowledge of the spoken forms of words helps students to be able to recognize those words when they are heard. Bird and Williams (2002) also discovered that vocabulary that was presented with both textual and aural forms resulted in better recognition memory for spoken-word processing. More recently, Hayati & Mohmedi (2011) have argued that reading aloud may assist students in processing the information more deeply, thus resulting in a higher possibility that they will learn the material.

Quite a few of the participants strongly believed in the concept that the enunciation of vocabulary within a context helped to increase their comprehension of test questions. Student A provided the following endorsement. He said that he was able to 'learn' unfamiliar words more easily when he was taught not only the written form of the words but also their meanings, usage, and pronunciation. Then, with repeated oral practice of those lexical items, he had an increased ability to identify them in speech and accordingly could keep up with the speakers' rate of speech. Furthermore, through the exercise of reading aloud, he alleviated the problem of having a difficult time understanding speakers who possessed non-American accents.

The participants agreed that studying vocabulary was very helpful to their aural comprehension. However, we should highlight the importance of providing students multiple exposures so that successful internalization of lexical items occurs. Such internalization will facilitate familiarity with the pronunciation of the vocabulary and ensure that students can relate the lexical items to the aural text. If this internalization does not occur, the effects of enhancing listening comprehension through lexical support may be reduced.

4.2.2 Sufficient Preparation Time

Time is another factor that may contribute to the success of lexical intervention, a result similar to that of Farrokhi and Modarres' study (2012). In that study, the lower-proficiency vocabulary group outperformed the content-related support group. They attributed their success to two factors: the effective role that vocabulary support played in bottom-up processing and the extra preparation time offered to the vocabulary group. Farrokhi and Modarres (2012) pointed out that the time factor was critical in assisting the learners to process and internalize the lexical items during the time allotted.

Analogous to the study conducted by Farrokhi and Modarres, the participants in this research not only were taught vocabulary during instruction but were offered time to review those lexical items. This sufficient amount of preparation time allowed the student participants to 'learn' the lexical items that had been taught in class. According to the skill-building theory (Dekeyser & Juff, 2005), practice is crucial for learning to become autonomous, and since practice takes time, it can therefore be inferred that sufficient preparation time is a critical factor in reinforcing what learners have learned and then being able to apply it upon demand.

4.2.3 Multiword Unit Instruction

Multiword units were taught during lexical intervention, a possible additional factor leading to the participants' success with listening quizzes. Ellis (2003) stressed that learning to understand a language involves parsing the speech stream into chunks that reliably mark meaning. Multiword items helped the students see and be able to then parse structural patterns or chunks in the aural text, which may assist them in understanding the text. According to SLA literature (Conklin & Schmitt, 2008; Hakuta, 1974), processing information in chunks allows the learner to process individual bits and then link their forms and meanings, thus reducing the burden placed upon the learner (Conklin & Schmitt, 2008).

In summary, L2 students experience difficulty with listening comprehension due to its ephemeral nature (Graham, 2006). It is therefore critical that teachers provide some form of support to EFL learners to aid them

with aural comprehension. In this study, the higher post-test scores attained justified the use of the vocabulary support provided by lexical intervention.

Additionally, multiple exposures to lexical items, sufficient preparation time, and the instruction of multiword units (three primary techniques utilized in lexical intervention) augmented the positive effects on listening comprehension elicited by lexical support. Exposing students to lexical items multiple times improved their depth of processing, making the learning of words much easier. Providing students with sufficient preparation time reinforced their vocabulary knowledge, and instructing them in multiword units inspired them to link the forms and meanings of words instead of process words as individual bits. The provision of multiword instruction through a variety of activities in conjunction with a reasonable duration of time between the lexical teaching and the listening quizzes contributed to the improved quiz performance of the experimental group.

5. Unexplored Issues

Although the findings of this study demonstrated an improvement in the listening performance of the participants after three weeks of lexical pre-teaching, there were some limitations that should be modified in any future research.

First, the study did not feature a control group with which comparisons to the treatment group could be made, thus making it impossible to determine whether lexical pre-teaching elicits a more facilitative effect than a traditional way of teaching listening. The traditional method of teaching listening includes teachers having students listen to text and then offering them an explanation of the text after the listening task is complete.

Additionally, the length of the experiment was another limitation. Due to the original syllabus prescribed for this course, it was impossible to implement the research for an entire semester, so the time span in this study had to be shortened to three weeks, which did not seem to be an adequate amount of time.

One more issue concerns the instrument used in this study. The pre-test was a paper-and-pencil version, whereas the post-test was a computerized version. Will these differing versions of the test be one of the variables that affect students' listening performance? Brown (2004) suggested that it is better to employ identical versions of the pre- and post-tests in order to ensure reliability. Furthermore, the addition of achievement tests such as quizzes, midterms, or final exams will be implemented in the second pilot study for two reasons. On the one hand, these achievement tests serve the diagnostic role of telling students the areas in which they require improvement. On the other hand, they may provide information on whether lexical intervention should be adjusted in order to help increase students' aural comprehension (Hughes, 2003).

References

Bird, S. A., & Williams, J. N. (2002). The effect of bimodal input on implicit and explicit memory: An investigation into the benefits of within-language subtitling. *Applied Psycholinguistics*, *23*(4), 509-533. http://dx.doi.org/10.1017/S0142716402004022

Bonk, W. (2000). Second language lexical knowledge and listening comprehension. *International Journal of Listening*, *14*, 14-31. http://dx.doi.org/10.1080/10904018.2000.10499033

Boyle, J. P. (1984). Factors affecting listening comprehension. *ELT Journal*, *38*, 34-38. http://dx.doi.org/10.1093/elt/38.1.34

Broersma, M., & Cutler, A. (2008). Phantom word activation in L2. *System*, *36*, 22-34. http://dx.doi.org/10.1016/j.system.2007.11.003

Brown, D. (2004). *Language assessment: Principles and classroom practices*. New York: Pearson Education. http://dx.doi.org/10.1080/0969594042000304609

Buck, G. (2001). *Assessing listening*. New York: Cambridge University Press. http://dx.doi.org/10.1017/CBO9780511732959

Chang, C-S. (2007). The impact of vocabulary preparation on L2 listening comprehension, confidence and strategy use. *System*, *35*, 534-550. http://dx.doi.org/10.1016/j.system.2007.06.003

Chang, C-S. (2010). Second-language listening anxiety before and after a 1-yr. intervention in extensive listening compared with standard foreign language instruction. *Perceptual and Motor Skill*s, *110*(2), 355-365. http://dx.doi.org/10.2466/pms.110.2.355-365

Chang, C-S., & Read, J. (2006). The effects of listening support on the listening performance of EFL learners. *TESOL Quarterly*, *40*, 375-397. http://dx.doi.org/10.2307/40264527

Chao, Y. G., & Cheng, Y. P. (2004). Listening difficulties of Taiwanese EFL students in senior high schools.

Selected Papers from the Thirteenth International Symposium on English Teaching (pp. 250-258). Taipei: Crane.

Chaudron, C. (1985). Intake: On models and methods for discovering learners' processing of input. *Studies in Second Language Acquisition*, *7*, 1-14. http://dx.doi.org/10.1017/S027226310000512X

Chen, J-C. (2007). Enhancing technology college students' English listening comprehension by listening journals. *Journal of Nanya Institute of Technology*, *27*, 143-160.

Chien, C. N., & Kao, L. H. (2002). Effects of metacognitive strategy on listening comprehension with EFL learners. *Selected Papers from the Eleventh International Symposium on English Teaching* (pp.298-307). Taipei: Crane.

Chu, H-Y. (2009). *Stakes, needs and washback: An investigation of the English benchmark policy for graduation and EFL education at two technological universities in Taiwan* (Unpublished doctoral dissertation). National Taiwan Normal University, Taipei, Taiwan.

Chujo, K., & Oghigian, K. (2009). How many words do you need to know to understand TOEIC, TOEFL & EIKEN? An examination of text coverage and high frequency vocabulary. *Journal of Asia TEFL*, *6*, 121-148.

Chung, J. M. & Huang, S. C. (1998). The effects of three aural advance organizers for video viewing in a foreign language classroom. *System*, *26*, 553-565. http://dx.doi.org/10.1016/S0346-251X(98)00037-2

Chung, J. M. (2002). The effects of using two advance organizers with video texts for the teaching of listening in English. *Foreign Language Annals*, *35,* 231-241. http://dx.doi.org/10.1111/j.1944-9720.2002.tb03157.x

Cohen, J. (1988). *Statistical power analysis for the behavioral statistics*. Hillsdale, NJ: Lawrence Erlbaum.

Conklin, K., & Schmitt, N. (2008). Formulaic sequences: Are they process more quickly than nonformulaic language by native and nonnative speakers?. *Applied Linguistics*, *29*, 72-89. http://dx.doi.org/10.1093/applin/amm022

DeKeyser, R., & Juffs, A. (2005). Cognitive considerations in L2 learning. In E. Hinkel (Ed.), *Handbook of research in second language teaching and learning* (pp. 757-771). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Ellis, N. (2003). Constructions, chunking, and connectionism: The emergence of second language structure. In C. J. Doughty & M. H. Long (Eds.), *The handbook of second language acquisition* (pp. 63-103). Oxford: Blackwell. http://dx.doi.org/10.1002/9780470756492.ch4

Farrokhi, F., & Modarres, V. (2012). The effects of two pre-task activities on improvement of Iranian EFL learners' listening comprehension. *Theory and Practice in Language Studies*, *2*(1), 144-150. http://dx.doi.org/10.4304/tpls.2.1.144-150

Gathercole, S., & Baddeley, A. D. (1989). Evaluation of the role of phonological STM in the development vocabulary in children: A longitudinal study. *Journal of Memory and Language*, *28*, 200-213. http://dx.doi.org/10.1016/0749-596X(89)90044-2

Goh, C. (2000). A cognitive perspective on language learners' listening comprehension problems. *System*, *28*, 55-75. http://dx.doi.org/10.1016/S0346-251X(99)00060-3

Graham, S. (2002). Experience of learning French: A snapshot at year 11, 12, and 13. *Language Learning Journal*, *25*, 15-20. http://dx.doi.org/10.1080/09571730285200051

Graham, S. (2006). Listening comprehension: The learners' perspective. *System*, *34*, 165-182. http://dx.doi.org/10.1016/j.system.2005.11.001

Gu, Y., & Johnson, R. (1996). Vocabulary learning strategies and language learning outcomes. *Language Learning*, *46*, 643-679. http://dx.doi.org/10.1111/j.1467-1770.1996.tb01355.x

Hatch, E. (1983). Simplified input and second language acquisition. In R. Anderson (Ed.), *Pidginization and creolization as language acquisition* (pp. 64-86). Rowley, MA: Newbury House.

Hayati, A., & Mohmedi, F. (2011). The effect of films with and without subtitles on listening comprehension of EFL learners. *British Journal of Educational Technology*, *42*(1), 181-192. http://dx.doi.org/10.1111/j.1467-8535.2009.01004.x

Hughes, A. (2003). *Testing for language teachers*. Cambridge: Cambridge University Press.

Hulstijn, J. H. (2003). Connectionist models of language processing and the training of listening skills with the aid of multimedia software. *Computer Assisted Language Learning*, *16*, 413-425. http://dx.doi.org/10.1076/call.16.5.413.29488

Hwang, S. Y., & Lee, M. K. (2009). Does test taking experience make a difference?. In strategy use and test scores. *Modern English Education*, *10*(2), 23-43.

Kang, L. (2009). *The effects of two enhanced pre-listening supports on Taiwanese junior high students' listening comprehension: Background knowledge pre-instruction versus vocabulary pre-teaching* (Unpublished master's thesis). National Taiwan Normal University, Taipei, Taiwan.

Kelly, P. (1991). Lexical ignorance: The main obstacle to listening comprehension with advanced foreign language learners. *IRAL*, *29*, 135-149.

Kintsch, W. (2005). An overview of top-down and bottom-up effects in comprehension. The CI perspective. *Discourse Processes*, *39*, 125-128. http://dx.doi.org/10.1080/0163853X.2005.9651676

Krashen, S. D. (1977). The monitor model for adult second language performance. In M. Burt, H. Dulay, & M. Finocchiaro (Eds.), *Viewpoint on English as a second language* (pp. 152-161). New York: Regents.

Lai, Y. H. (2008). A study on effectiveness of college English-featured courses on TOEIC. *Kaohsiung Normal University Journal*, *25*, 72-90.

Li, B-J. (2009). *The effect of pre-listening activities on the EFL listening comprehension of junior high school students* (Unpublished master's thesis). National Taiwan University of Science and Technology, Taipei, Taiwan.

Lin, C-I. (2009). *A study of the implementation of English education policy at universities of technology in Taiwan* (Unpublished doctoral dissertation). National Pingtung University of Education, Pingtung, Taiwan.

McLaughlin, B., Rossman, T., & McLeod, B. (1983). Second language learning: An information processing perspective. *Language Learning*, *33*, 135-158. http://dx.doi.org/10.1111/j.1467-1770.1983.tb00532.x

Mecartty, F. (2000). Lexical and grammatical knowledge in reading and listening comprehension by foreign language learners of Spanish. *Applied Language Learning*, *11*, 323-348.

Mortazavi, S-M. (2011). The relationship between time lapse between introducing lexical advance organizers and video viewing, and comprehension in a foreign language classroom. *Procedia Social and Behavioral Sciences*, *15*, 2023-2027. http://dx.doi.org/10.1016/j.sbspro.2011.04.047

Nation, I. S. P. (2001). *Learning vocabulary in another language*. Cambridge: Cambridge University Press. http://dx.doi.org/10.1017/CBO9781139524759

Qian, D. D. (1999). Assessing the roles of depth and breadth of vocabulary knowledge in reading comprehension. *Canadian Modern Language Review*, *56*, 282-307. http://dx.doi.org/10.3138/cmlr.56.2.282

Richards, J. C. (2003). *Teaching listening and speaking: From theory to practice*. New York: Cambridge University Press.

Rost, M. (2002). *Teaching and researching listening*. London: Longman.

Rost, M., & Ross, S. (1991). Learner use of strategies in interaction: Typology and teachability. *Language Learning*, *41*, 235-273.

Schmidt, R. (2001). Attention. In P. Robinson (Ed.), *Cognition and second language instruction* (pp. 3-32). Cambridge: Cambridge University Press. http://dx.doi.org/10.1017/CBO9781139524780.003

Schmitt, N. (2008). Instructed second language vocabulary learning. *Language Teaching Research*, *12*, 329-363. http://dx.doi.org/10.1177/1362168808089921

Shang, H-F. (2008). Listening strategy use and linguistic patterns in listening comprehension by EFL learners. *International Journal of Listening*, *22*, 29-45. http://dx.doi.org/10.1080/10904010701802147

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

Stahr, L. S. (2009). Vocabulary knowledge and advanced listening comprehension in English as a foreign language. *Studies in Second Language Acquisition*, *31*, 577-607. http://dx.doi.org/10.1017/S0272263109990039

Trew, G. (2007). *Tactics for TOEIC® listening and reading test*. Oxford: Oxford University Press.

Underwood, M. (1989). *Teaching listening*. London: Longman.

Vandergrift, L. (2007). Recent developments in second and foreign language listening comprehension research. *Language Teaching*, *40*, 191-210. http://dx.doi.org/10.1017/S0261444807004338