**RESEARCH ARTICLE**

# RESEARCH UPDATE ON L₂ LISTENING COMPREHENSION SKILL: CONNECTING THEORY TO PRACTICE

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**ABSTRACT**

This study reports the results of an empirical investigation carried out by the author on 200 Egyptian University students enrolled in the department of English, Faculty of education, Minufiya University. They were divided into two groups according to their academic status: 1) Beginners (N=100); and 2) Advanced learners (N=100). It attempts to answer three interrelated questions: 1) to what extent does the advanced students' performance in listening tasks differ from that of the beginning students before and after training?; 2) how can two types of training (intensive listening vs. improving learners' linguistic skills) affect L₂ learners' listening comprehension skill?, and 3) what does students' performance, before and after the training, tell us about their abilities to transfer?  The instruments used are (1) pre-test; (2) classroom instruction sessions; (3) post-test, and (4) interviews. The data analysis has a quantitative and a qualitative, interpretative part.  Results are obtained and discussed, and pedagogical applications are suggested.

Keywords: Beginners and advanced learners, L₂ learners', training. LC skill

## INTRODUCTION

One of the major aims of education, whether stated explicitly or implicitly, is to increase students' ability to competently interact with a varied and changing world. To meet this goal, students must be able to appropriately transfer knowledge and skills acquired in one setting to another. Therefore, psychologists and educators have long been interested in understanding how people learn, for the concept of learning is central to many different human endeavors. The problem, however, is threefold: 1) given the central importance of transfer in our educational system, it is surprising that relatively little attention has been paid to this issue by educational and psychological researchers, and linguists, as well. 2) as we think about our experiences as teachers and researchers and examine our beliefs about the learning process, it becomes clear that we have no all-encompassing theory of language acquisition that matches what we have learned from experience. Rather, we find a great deal of research on small parts of the total picture without an integrated theory to guide our work. In this connection, Hatch et al. (1990: 697) argue that "there is no theory that integrates all areas of language acquisition. Because each researcher must limit the scope of his or her research, the questions asked and answers sought

Dr. Hosni Mostafa El-dali

are almost always about one separate subsystem of the total picture". The third aspect of the problem we are encountering is that theories of how second languages are learned have been approached from a variety of perspectives: sociolinguistic, educational, neurolinguistic, psycholinguistic, and linguistic. "Because of this diversity, it is often difficult for researchers from different traditions to communicate with one another or to fully appreciate the significance of the questions being addressed (Gass, 1989: 6) Relatedly, McLaughlin (1987: 6), correctly, points out that "disciplines tend to become fragmented into 'schools', whose members are loath to accept, and are even hostile to the views of other schools using different methods and reaching different conclusions. Each group becomes convinced that it has a corner on 'truth'. Instead, it should be kept in mind that 1) linguistics is only one of the disciplines that second language acquisition research can draw on, and "multiple sources of information are needed to build up a picture of the language knowledge in the mind" (Cook, 1993: 269). 2) As McLaughlin (1987: 6) argues, "multiple ways of seeing result in multiple truths... there is no scientific truth... Scientific progress is achieved as we come to illuminate progressively our knowledge in a particular domain by taking different perspectives, each of which must be evaluated in its own right".

Specifically speaking, the field of linguistics and cognitive psychology contain separate paradigms for describing second language acquisition. As Spolsky (1985) points out, linguistic theories assume that language is learned separately from cognitive skills, operating according to different principles from most learned behaviors. As O'Malley, et al. (1987: 288) point out, "this assumption is represented in analysis of unique language properties such as developmental language order, grammar, knowledge of language structures, social and contextual influences on language use, and the distinction between language acquisition and language learning. Language and linguistic processes are often viewed as interacting with cognition but nevertheless maintaining a separate identity that justifies investigation independent from cognitive processes". In addition,

theory development in second language acquisition that addresses cognitive processes remains limited despite recent interest in the relationship between language and cognitive processes.

## 2. Statement of the Problem

In a foreign language environment, students typically learn English through formal classroom instruction and have limited exposure to the language outside formal study. In such circumstances, their ability to comprehend spoken English may be limited (Chang, 2008; Kim, 2006; Huang, 2005). To add to this problem, listening in a test situation usually requires precise comprehension and precludes opportunities to clarify or negotiate with the speaker (Buck, 2001).

$L_2$ learners often regard listening as the most difficult language skill to learn (Hasan, 2000; Graham, 2003). One of the reasons might be that learners are not taught how to learn listening effectively (Vandergrift, 2007). Another reason might be that the listener can not refer back to the text in contrast to a reader who usually has the opportunity to refer back to clarify understanding (Stahr, 2009). Consequently, listening becomes a cause of anxiety for $L_2$ learners (See Elkhafaifi, 2005; Noro, 2006).

Adding to the fact that learners recognize listening as the most difficult skill to learn, it is noticeable that $L_2$ listening remains the least researched of all four language skills (Kurita, 2012; Vandergrift, 2007). Accordingly, to investigate the listening comprehension process can provide useful insights into teaching listening. In addition, to know why students may find the listening comprehension task difficult may also provide us with opportunities to alter our teaching techniques. It is commonly believed that learners who learn to control their listening process can enhance their comprehension.

Despite its importance in the development of second language proficiency, there is little research on listening comprehension in a second language (Bloomfield et al., 2010). Unfortunately, most second language comprehension research has focused on reading rather than listening because the process of reading is more easily observed and manipulated (Osada, 2004). Moreover, research findings from reading comprehension research often

fail to map fully onto the process involved in listening comprehension (Schmidt-Rinehart, 1994). In addition, as Shohamy & Inbar (1991), Cystal (2003) and Ito (2001) point out, many factors relevant for listening comprehension have no analogue in reading comprehension. Speech may contain irregular pauses, false starts and intonation patterns that can affect comprehension. The pronunciation of words may also differ greatly from the way they appear in print and may be affected by the words with which they are presented. Developing listening comprehension ability would enable the learners to succeed in $L_2$ acquisition in terms of increasing comprehensible input. In addition, appropriate instruction for $L_2$ listening could reduce learner's anxiety (Kurita, 2012; Altenberg 2005; Chang, 2008; Chang & Read, 2006, 2008; Cross, 2009; Field, 2007, 2008, Goh, 2008; Kemp, 2010).

## 3. The Present Study: An Overview

### 3.1. Theoretical Framework

Before Chomsky, linguistics tended to be a taxonomic enterprise, involving collecting a body of data (utterances) from the external world and classifying it without reference to its source, the human mind (Carston, 1988). Since Chomsky, "linguists have thought of themselves as investigating mental representations and rules, and thus as engaged in a branch of theoretical cognitive psychology. Chomsky himself characterized the study of generative grammar as having effected a shift of focus in language study from E-language (= externalized language) to I-language (= internalized language), that is, "from behavior or the products of behaviour to states of the mind / brain that enter into behaviour" (Chomsky 1986: 3). On the other hand, cognitive approaches to $L_2$ acquisition see $L_2$ acquisition as a complex cognitive skill. As Schulz (1991: 19) points out "rather than stressing innate, universal linguistic processes, affective factors, input, or interaction as causative factors for $L_2$ development, cognitive theory sees $L_2$ acquisition as a mental process, leading through structured practice of various component subskills to automatization and integration of linguistic patterns".

### 3.2. The Subjects

The first group (Beginners) consisted of 100 first year students in the department of English, at the Faculty of Education, Minufiya University. The second group (Advanced) consisted of 100 fourth year students in the same department. Each group will be divided into two sub-groups: one group will be given visual training and the other group will be given auditory training.

### 3.3. Hypotheses

It was hypothesized that advanced students' performance before and after training would be better than that of the beginning subjects. This may seem natural because of the seemingly advanced linguistic abilities of advanced students in comparison to those of the beginning students. In addition, it was hypothesized that intensive listening training would be more beneficial than visual training for both beginners and advanced students. Finally, it was hypothesized that advanced students would be able to transfer their learned knowledge, which they had obtained throughout the training sessions, to the actual task of listening. This ability of transfer may explain why advanced students would be better performers than the beginners, regardless of their linguistic level.

### 3.4. Instruments

The instruments of this study consisted of four tasks:1) pre-test; 2) classroom instruction sessions; 3) post-test, and 4) interviews. The pre-test was made of 30 questions of part (A) from a TOEFL test; listening comprehension section. Each Correct answer was worth one point. Having accomplished the above task, the subjects were asked to truthfully report on their performance. Specifically, they were asked to pinpoint the problems they faced while working on the pre-test, and the strategies they used to overcome these problems. The subjects were asked to come the next day following the pre-test to attend a group discussion on the test they had taken the other day. Each group (either "Beginners or Advanced") was distributed into two sub-groups; one group attended a visual training and the other sub-group attended an auditory training. Each student in the auditory groups was given intensive exposure to the listening material of the pre-test. This session took place in the language lab, in which the auditory group had a chance to

listen repeatedly to the listening material. The auditory training continued as long as students want. In the end of the session, students were asked if they want to listen more; and their answer was simply "we are ready for the test". However, to be sure that the students had enough auditory training, they were asked to come the following day for further training. No discussion or explanation of the listening material was provided; the focus was mainly on just listening. Each student in the visual training groups had a copy of the sentences and conversations of the pre-test. Together we discussed them, and the purpose was to get them familiar with the vocabulary, grammatical structures, and to answer any question related to the linguistic aspects of these sentences and conversations. No student was allowed to take the papers home. In the post-test session, the subjects in both groups were asked to work on the test used before. To be sure that their performance reflects their listening ability, the order of the sentences and conversations was changed before the post-test began. Also, the post-test was given one week after the training sessions to reduce any reliance on memorization. Finally, each student in both groups was interviewed to explain his /her performance in the post-test. I interviewed the students individually. Conducting the interview with each subject took about one hour and half. During the interview, students were asked to explain why certain answer was made. No feedback on the correctness of their responses was given before the end of the interview. Students' explanations were tap-recorded and transcribed.

### 3.5. Data Analysis

The data analysis had a quantitative and a qualitative, interpretative part. The quantitative part consisted of a descriptive statistical comparison of the number of correct responses in the pre-and post-tests. The T-test was applied to determine the significance of differences among means. The qualitative part was an analysis of each student's performance in the pre-and post-tests. The analysis was inductive, based on the individual's explanations, and aimed at accounting for the differences between the tasks.

## 4. Literature Review

### 4.1. Listening comprehension: its importance

The endeavor of today's communication scholars and SLA researchers to penetrate and illuminate the mental processes involved in comprehending discourse spoken in one's native language (NL) or second / foreign language ($L_2$) is a quest that has engrossed philosophers since ancient times, has absorbed psychologists and speech communication scholars since the early part of the 20th century, and, more recently, has captured the attention of SLA researchers and practitioners of English as a second language as well as English as a foreign language. The study of listening comprehension has, in fact, become a polestar of second language acquisition theory building, research and pedagogy. According to Dunkel (1991), a major catalyst for the relatively recent and intense interest in listening comprehension research has been the realization and accumulating evidence that input plays a critical role in second language acquisition. In this regard, long (1985) points out that current theories of second language acquisition, such as the information processing model (McLaughlin, Rossman, & McLeod, 1993), monitor model (Krashen, 1982), the intake model (Chaudron, 1985), the interaction model (Hatch, 1983), all emphasize the key role listening plays in the development of a learner's second / foreign language, particularly at the beginning stages of language development.

Not only is listening comprehension important at the beginning stages of SLA, it appears to be crucially important for advanced-level learners (Power, 1985). Peterson (1991:106-107) maintains that no other type of language input is as easy to process as spoken language received through listening. At the beginning stages of language study, before students have learned to read well, it is by listening that they can have the most direct connection to the meaning of the new language. They can use spoken language to build an awareness of the interworkings of language systems at various levels and thus establish a base for productive skills. At the intermediate level, when students are refining the grammatical system of the language, listening can be used to stimulate awareness of

detail and to promote accuracy. At advanced levels, when written language becomes a viable source of input, a regular program of listening can extend the limits of learners' vocabulary and use of idioms, and build their appreciation for cultural nuances. Now, many contemporary foreign language educators and researchers regard comprehensible input (written as well as spoken) as essential to developing the ability to produce the target language fluently. Accordingly, listening comprehension has become the foundation of a number of theories of second language acquisition that focus on the beginning levels of second language proficiency. The primary assumption underlying these theories is that language acquisition is an implicit process in which linguistic rules are internalized by extensive exposure to authentic texts and particularly to comprehensible input that provides an appropriate level of challenge to the listener.

Listening is used for more than any other single language skill in normal daily life. On average, we can expect to listen twice as much as we speak, four times more than we read, and five times more than we write (River, 1981); Weaver, (1972). Relatedly, Morley (1991:82) maintains that the importance of listening cannot be underestimated; it is imperative that it not be treated trivially in second and foreign language curricula. Rankin (1962:2) points out that "essential to all interaction is the ability to understand what others are saying. Even in the native language many people are poor listeners, whether through weak powers of concentration, egocentrism, or short auditory memory. Yet it has been estimated that of the time adults spend in communication activities 45 percent is devoted to listening, only 30 percent to speaking, 16 percent to reading, and a mere 9 percent to writing". Accordingly, Morley (1991) maintains that we need to realize that listening is anything but a passive activity, and she urges practitioners not to dismiss listening in a cavalier manner. In addition, Dunkel (1991:438) maintains that listening research should be fostered to advance the state of SLA theory building, and to expand the knowledge base about the process of $L_2$ comprehension and the effective methods of teaching $L_2$ listening comprehension to beginning-, intermediate-, and

advanced level learners: "some of the investigations should be directed toward probing the impact that specific factors, internal and external to the listener, have on the success or failure of $L_2$ comprehension in order to provide guidance to $L_2$ curriculum designers and classroom teachers as well as to $L_2$ listening materials writers".

Carroll (1971:130) observed that much of the research conducted in the 1950s and 1960s seemed focused on establishing "listening ability as a valid objective for the educational program, without determining its nature and parameters in a precise manner" and bemoaned the fact that even in the seventh decade of the 20th century, "there did not seem to exist any comprehensive theory of listening behaviour in relation to language behaviour in general or to other modes of language reception"(p 130).

### 4.2.The Nature of the Listening Comprehension

Listening, as described by Wipf (1984), is an invisible mental process, making it difficult to describe. In its broadest sense, listening is a process of receiving what the speaker actually says (receptive orientation); constructing and representing meaning (constructive orientation), negotiating meaning with the speaker and responding (Collaborate orientation); and, creating meaning through involvement, imagination and empathy (transformative orientation). In this sense, listening is a complex, active process of interpretation in which listeners match what they hear with what they already know (Vandergrift, 2008; Vandergrift & Tafughodtari, 2010).

There are two distinct process involved in listening comprehension. First, listeners use "top-down" process when they use their prior knowledge to understand the meaning of a message. Second, listeners, on the other hand, also use "bottom-up' when they use their linguistic knowledge to understand the meaning of a message. In this sense, listeners build meaning from lower level sounds to words to grammatical relationships to lexical meanings in order to arrive at the final message.

Recently, listening has been described as an interactive and interpretive process where listeners use both linguistic knowledge and prior knowledge

in understanding messages. As Vandergrift (2008) points out, the degree to which listeners use the one process or the other depends on their knowledge of the language, familiarity with the topic or the purpose for listening.

Research from cognitive psychology has shown that listening comprehension is more than extracting meaning from incoming speech. As Byrners (1984) points out, it is a process of matching speech with what listeners already know about the topic and, therefore, when listeners know the context of a text or an utterance, the process is facilitated considerably because listeners can activate prior knowledge and make the appropriate inferences essential to comprehending the message. O'Malley & Chamot (1990:133) provided a practical definition of listening comprehension. "Listening comprehension is an active and conscious process in which the listener constructs meaning by using cues from contextual information and from existing knowledge, while relying upon multiple strategic resources to fulfill the task requirements".

### 4.3. Listening Comprehension and $L_2$ Competence

The importance of listening comprehension in second language teaching theory and pedagogy has moved from near no status during the 1940s and 1950s, through a period of emerging awareness of its value during the late 1960s, to an evolving position of significance over the last two decades. Modern-day concern of listening comprehension in language studies appeared first in the mid-1960s (Morley, 1990). Around the time of 1970s and 1980s, listening comprehension became significant in language earning. Some teaching methods, "Total Physical Response" and "Natural Approach" put more emphasis on students' comprehension process in one-way or two-way communication (See Chih-Yu, 2005). As Moody (1984) points out, research has demonstrated that adults spend 40-50% of communication time listening; however, the importance of listening in language learning has only been recognized relatively recently (Oxford, 1993).

Beginning in the early 1970s, work by Asher, Postovsky, Winitz and, later, Krashen, brought attention to the role of the listening as a tool for understanding and a key factor in facilitating language learning. As Feyten (1991) explains,

listening has emerged as an important component in the process of $L_2$ acquisition.

Krashen's emphasis on the role of comprehensible input was partly responsible for the importance given to listening comprehension. The importance of comprehensible input as a necessary factor in $L_2$ learning is documented in the SLA literature. Krashen (1982) urged that the most effective way to teach a second language is to give learners large amounts of comprehensible input in an environment of low anxiety.

Second language acquisition researchers seem to agree that as input is converted into intake, learners make use of listening for two purposes; comprehension and acquisition. As Sun (2008) points out, the $L_2$ listening process has the two overlapping purposes. It must be worth-mentioning, however, that not all input becomes intake; that is, not everything that is understood at the message level necessarily contributes to the learners' language development. As Vanpatten (1976) points out, only a very small subset of input ever becomes intake that has a permanent effect on the learners' acquisition of the $L_2$. Although it is plausible that comprehension is prerequisite to acquisition, research has shown that we do not learn anything from the input we hear and understand unless we notice something about it (Schmidt, 1990). In addition, Schmidt and Frota (1986) found that there was a close connection between noticing features of the input, and their later emergence in speech (See Vanpetten, 1994; Richards, 2005; Rost, 2001).

Listening comprehension is at the heart of language learning; that is, learners want to understand $L_2$ speakers and want to comprehend a variety of $L_2$ multimedia such as DVDs and the internet. At the same time, listening is an important language skill to develop in terms of $L_2$ acquisition (Kurita; 2012; Dunkel, 1991; Rost, 2001; Vandergrift, 2007). As Swain (1995) points out, second language acquisition studies have demonstrated that comprehensible input is critical for language acquisition as well as comprehensible output: "a key difference between more successful and less successful acquires relates in large part to their ability to use listening as a means of acquisition" (Rost, 2001: 94).

To summarize, listening is an important skill in second language acquisition, research, teaching, and assessment. It is a complex process and plays a significant role in the process of interlanguage development. Accordingly, acquiring good listening skills in second language has been one of the main concerns of language teaching (See Kemp, 2010; Sadighi & Sare, 2006).

The concept of "comprehensible input" brings to the surface an important issue that has to do with defining listening as a "highly complex problem solving activity" (Byrnes, 1984:9). In this regard, it has been hypothesized that background knowledge and schemata plays a significant role in the comprehension of this highly complex problem-solving activity.

Schema theory is used by cognitive psychologist to explain the psychological process involved in understanding and knowing. According to schema theory, comprehending a text requires more than linguistic knowledge. Comprehension is an interactive process; that is; the listeners or readers retrieve or construct meaning from their own, previously acquires knowledge. According to the schema theory. Meaning exists neither in oral nor in written language itself, it is in the reader's or listener's mind.

During listening, the listeners are engaged in the process of constructing meaning from the text they listened to based on their expectations, inferences, intentions, prior knowledge. That is, listeners combine their previous experiences and pre-existing knowledge with the text they hear. This means that listening comprehension is the results of the interaction between 'bottom-up' and "top-down" processing. Listeners process a listening text through bottom-up process in which they decide what they hear; that is, they construct a message from sounds, words, and phrases. In addition to their linguistic knowledge, listeners also make inferences about what the speaker intended through top-down processing (See Carcel & Eisterhold, 1984; Long 1989; Zeng, 2007; Zhang, 2006).

### 4.4. Why is listening Difficult?

According to Rubin (1994:199), there are, at least five factors that researchers believe affect listening comprehension:1) text characteristics (variation in a listening passage/text or associated visual support); 2) interlocutor characteristics (variation in the speaker's personal characteristics); 3) task characteristic (variation in the purpose for listening and associated responses); 4) listener characteristics (variation in the listener's personal characteristics) and 5) process characteristics (variation in the listener's cognitive activities and in the nature of the interaction between speaker and listener).

There remains a great deal that is not known about what makes listening materials difficult for $L_2$ learners. In this regard, Bloomfiled et al. (2010) points out that the lack of research is particularly problematic for language instructors who select and create classroom listening materials and language test developers who must predict the difficulty of listening materials.

One of the factors that may determine the difficulty of the listening passage is passage length; that is the amount of information presented in the passage is often a factor of concern (See Alderson et al., 2006; Bejar et al., 2000; Rost, 2006). There are several reasons why an increased amount of information in a passage may hurt $L_2$ listening comprehension. First, $L_2$ listeners often fixate on information they have failed to comprehend, investing additional effort in trying to understand what they missed (See Goh, 2000; O'Malley et al., 1989). Second, if listeners avoid fixating, they may be unable to comprehend later information. This means that the more information in a passage, the more likely it is that the listener will miss some of the information and the greater the amount of information that relies on the understanding of earlier materials (see Thompson & Rubin, 1996; Carell et al., 2002; Kostin, 2004; Moyer, 2006).

As Bloomfield et al. (2010) argue, beyond the increased chances for missing information presented by a passage containing more information overall, there is reason to believe that greater amounts of information may put a strain working memory, especially that working memory plays a critical role in listening. Research has indicated that listeners must hold previous information in working memory the incoming information with existing

knowledge from long-term memory (See Engle, 2002; Payne & Whiteney, 2002). Listening, however, has the added complication of requiring real-time processing without the option of returning to earlier material, which may impose an additional load on working memory (Tyler, 2001; Baddeley, 2007).

In summary, the preceding discussion shows that there are numerous difficulties to be encountered in listening comprehension, such as unknown vocabulary, unfamiliar topics, fast speech rates, and unfamiliar accents (for fuller discussion on these factors (see Rubin, 1994; Buck 2001; Chang & Read, 2008). L$_2$ listeners may show some affective reactions in the face of these difficulties such as irritation, lack of concentration, aversion, sense of resignation and loss of self confidence.

### 4.5. Listening Comprehension and Linguistic Research

Linguistic research has investigated knowledge that contributes to listening comprehension; phonology, lexis, syntax, semantics and discourse structure. As Kurita (2012:35) points out, linguistic knowledge is used for linguistic cues to understand spoken English and this knowledge can be explicit or implicit (Anderson, 2009). The focus, first, has been on how much lexical knowledge contributes to comprehension. Nation (2006), for example, investigate the size of vocabulary knowledge that is needed for satisfactory comprehension of spoken texts. As reported in Kurita (2012:35), Stahr (2009) found that vocabulary size and depth of vocabulary knowledge are both significantly correlated with listening comprehension and asserts that vocabulary size is the basic component of vocabulary knowledge in listening comprehension and that depth of vocabulary knowledge does not play a separate role. The findings from lexical coverage research provide us with evidence that vocabulary knowledge largely contributes to listening comprehension. From a pedagogical perspective, therefore, it seems significant to select appropriate leveled spoken texts for learners according to the learners' lexical knowledge in teaching listening comprehension.

In addition, linguistic investigation of the listening comprehension skill has, also, focused on the role of acoustic input such as phonological modification and prosody in improving L$_2$ learners' word perception. Field (2008) for example examined how the phonology of L$_1$ constraints the perception of L$_2$ at the phonemes level. Also, Altenberg (2005) found that learners are significantly worse that native speakers at using acoustic phonetic cues, and that some types of stimuli are easier for learners to identify than others. For research on 'stress and intonation patterns' (See Buck, 2001; Wong& Waring, 2010; Field, 2008).

Although there is a range of research arguing that there may be a strong relation between grammar and reading (Grabe, 2004), the importance of grammar knowledge for listening has been less explored. It must be emphasized, here, that ;the knowledge of the structure of English allows us to grasp the meaning of sentence in the comprehension process" (Anderson, 2009:242). This view seems to be at odds.

Mecartty (2000) who states that grammatical knowledge does not contribute significantly to either listening or reading comprehension, but vocabulary knowledge plays the important role in L$_2$ listening comprehension ability. This may be due to the fact that some learners, particularly early stage learners, have difficulty in attending to both form and content in listening. Relatedly, Field (2008) found that function words were not paid attention to when people listen.

In conclusion, recent linguistic research makes it clear that 'vocabulary knowledge is an important predictor for listening comprehension and, listeners are likely to pay attention to content words, stress and intention rather than function words and grammar in bottom-up processing' (Kurita, 2012:36)

### 4.6. Listening Comprehension and Cognitive Research

Recent cognitive research has provided us with a better understanding of the listening comprehension process. As Rost (2001) points out, understanding spoken language is essentially an inferential process. The focus, therefore, in (SLA) research has been on both top-down processing and bottom-up processing in , listening comprehension: "Top-down processing refers to the use of

background knowledge in understanding the meaning of a message. Bottom-up processing, on the other hand, refers to using the incoming inputs as the basis for understanding the message" (Kurita, 2012:32). For more information on how the two processes interact, see Hulstijin, 2003; Vandergrift, 2007; Buck, 2001). The findings in research on top-down and bottom-up process have provided listening methodologies called the top-down process approach and bottom-up process approach (See Richards, 2008; Vandergrift, 2006, 2007).

In cognitive psychology, Anderson (2009) breaks down the language comprehension process into three stages; perception, parsing and utilization. The first stage involves the perceptual process that encodes the spoken message. In the second stage, the words in the message are transformed into a mental representation of the combined meanings of the words. In the third stage, listeners use the mental representation of the sentences' meaning. These three stages are, by necessity, partly ordered in time and, partly, overlap; that is, listeners can make inferences from the first part of a sentence while they perceive a latter part.

Moreover, Kurita (2012) maintained that the research focusing on the differences between more-skilled and less skilled $L_2$ learners has provided ample evidence of the importance of the metacognitive strategies to $L_2$ listening success. Research has shown that skilled listeners reported using about twice as many metacognitive strategies as their less-skilled counterparts (See Vandergrift, 2003, 2007; Goh, 2008; Field, 1998; Cross, 2009; Chang & Read, 2006; Chang, 2008).

Research in the area of listening strategies has shown that (1) more advanced listeners use increasingly varied strategies than less-advanced listeners (Murphy, 1987; Chin & Li, 1998; Goh, 2002; Chao & Chin, 2005); (2) the better a listener's proficiency, the more metacognitive strategies he or she uses (Vandergrift, 1997 a, b); (3) when encountering more difficult texts, listeners tend to encountering more difficult texts, listeners tend to use bottom-up strategies (Volgely, 1995; Bacon, 1992). (4) successful learners can use both linguistic and background knowledge at the same time,

although poor learners may over rely on one kind of knowledge (Rost & Ross, 1991; Vandergrift, 1997 b), (5) native speakers of English and advanced learners of English mainly use semantic cues, whereas intermediate $L_2$ learners rely more on syntactic cues (Conrad, 1985), and (6) in relation to strategy instruction, no immediate effect on enhancing listening comprehension was found in most studies (Thommpson & Rubin, 1996; Vandergrift, 1999; Filed, 1998; Mandelsohn, 1994, 1995) except for Goh and Taib (2006), and higher listening proficiency was assumed to be needed to make the instruction effective (Chang, 2008:4).

### 4.7. Listening Comprehension and Affective / Psychological Factors

Many researchers have revealed that affective variables play a large role in the learners' performance. Elkhafaifi's (2005) examined the effect of general foreign language learning anxiety on students achievement in an Arabic course and of listening anxiety on students' listening comprehension. It was found that foreign language learning anxiety and listening anxiety are separate but related phenomena that both correlated negatively with achievement. That is, the listening process in easily disrupted by anxiety and separately, listening tasks themselves may cause listening anxiety. Pedagogically speaking, this finding implies that reducing students' anxiety and providing a less stressful classroom environment might help students improve both their listening comprehension proficiency as well as their over a course performance (Kurita, 2012:37). The findings of Elkhafaifi's study are supported by Noro (2006) who found that the main sources of listening difficulties are rate of speech, vocabulary and pronunciation. Chang (2008) and Chang & Read (2008) reported that their participants gave four main reasons for their anxiety before they took the listening tests, firstly, most people reported listening only once, secondly, concern about the mark they would obtain, third, worrying that the test would be very difficult, and, fourth, lack of confidence.

Moreover, because listening is an active process that requires both conscious attention and involvement (Rost, 2001), researchers paid a great amount of attention to motivation as an important

affective variable. As Vandergrift (2007:196) points out "motivation and metacognition appear to be elements that are part of clusters of variables contributing to variance in $L_2$ listening" (See Kemp, 2010, for more discussion on motivation and its role in $L_2$ listening comprehension).

## 5. Empirical Research

The reader is reminded that the present study reports the results of an experiment, which was conducted on 200 learners of English as a foreign language. It attempts to answer three interrelated questions: 1) to what extent does the advanced students' performance in listening tasks differ from that of the beginning students before and after training?; 2) how can two types of training (intensive listening vs. improving learners' linguistic skills) affect $L_2$ learners' comprehension skill?, and 3) what does students' performance, before and after the training, tell us about their abilities to transfer?

### 5.1. Discussion / Conclusion

The first question that this study attempts to answer is "to what extent does the advanced students' performance in listening comprehension skill differ from that of the beginning students before and after training?". Based on the results of the experiment reported in the present study, the following conclusions can be made:

1) Sub-group (1) of the beginning subjects (N=50) scored a total of 408 out of 1500 points in the pre-test, with a means of 8.16, and standard deviation of 3.18. After receiving visual training, they scored a total of 728 points in the post-test, with a means of 14.56, and standard deviation of 4.74.

2) Sub-group (2) of the beginning subjects (N=50) scored a total of 387 out of 1500 points in the pre-test, with a means of 7.74, and standard deviation of 3.20. After receiving auditory training, they scored a total of 526, with a means of 10.52, and standard deviation of 4.51.

3) Sub-group (1) of the advanced subjects (N=50) scored a total of 411 points out of 1500 in the pre-test, with a means of 8.22, and standard deviation of 3.44. After receiving visual training, they scored a total of 659 in the post-test, with a means of 13.18, and standard deviation of 4.59.

4) Sub-group (2) of the advanced subjects scored a total of 481 points out of 1500 in the pre-test, with a means of 9.62 and standard deviation of 3.72. After receiving auditory training, they scored a total of 695 points in the post-test, with a means of 13.90, and standard deviation of 5.82 (see Table 1).

5) Both sub-groups of the beginning subjects (N=100) scored a total of 795 points out of 3000 in the pre-test, with a means of 7.95, and standard deviation of 3.20. After receiving two types of training (visual and auditory), they scored a total of 1254 points, with a means of 12.54, and standard deviation of 5.05.

6) Both sub-groups of the advanced subjects (N=100) scored a total of 892 points out of 3000 in the pre-test, with a means of 8.92 and standard deviation of 3.65. After receiving both types of training (visual and auditory), they scored a total of 1354 points in the post-test, with a means of 13.54, and standard deviation of 5.25 (see Table 2).

**Table (1): Means and standard deviations of subjects' scores in the pre- and post- tests.**

Note:  Beginners and Advanced (1): Visual training group.
Beginners and Advanced (2): Auditory training group.

| No. | Group | N | X | $X^2$ | $\overline{X}$ | SD |
|---|---|---|---|---|---|---|
| 1 | Beginners (1) Pre-Test | 50 | 408 | 3836 | 8.16 | 3.18 |
| 2 | Beginners (1) Post-Test | 50 | 728 | 11724 | 14.56 | 4.74 |
| 3 | Beginners (2) Pre-Test | 50 | 387 | 3507 | 7.74 | 3.20 |
| 4 | Beginners (2) Post-Test | 50 | 526 | 6552 | 10.52 | 4.51 |
| 5 | Advanced (1) Pre-Test | 50 | 411 | 3971 | 8.22 | 3.44 |
| 6 | Advanced (1) Post-Test | 50 | 659 | 9741 | 13.18 | 4.59 |
| 7 | Advanced (2) Pre-Test | 50 | 481 | 5321 | 9.62 | 3.72 |

| 8 | Advanced (2) Post-Test | 50 | 695 | 11351 | 13.90 | 5.82 |

Table (2): Means and standard deviations of both beginners and advanced in the pre- and post- tests.

| No. | Group | N | X | X2 | $\overline{X}$ | SD |
|-----|-------|---|---|----|----|----|
| 1 | Beginners (1+2) Pre-Test | 100 | 795 | 7343 | 7.95 | 3.20 |
| 2 | Beginners (1+2) Post-Test | 100 | 1254 | 18276 | 12.54 | 5.05 |
| 3 | Advanced (1+2) Pre-Test | 100 | 892 | 9292 | 8.92 | 3.65 |
| 4 | Advanced (1+2) Post-Test | 100 | 1354 | 21092 | 13.54 | 5.25 |

7) Comparing the performance of sub-group (1) of the beginning subjects in the pre-test to the performance of sub-group (2) of the beginning subjects in the pre-test shows that there is no significant statistical difference between the two. The T value is 0.65 which is not statistically significant.

8) Comparing the performance of sub-group (1) of the beginning subjects in the pre-test to their performance in the post-test was in favour of the post-test. The T value is 7.85, which is statistically significant at 0.01. Also, comparing the performance of sub-group (2) of the beginning subjects in the pre-test to their performance in the post-test (auditory training) shows that the training effect is statistically significant. The T value is 3.52, which is statistically significant at 0.01.

9) Comparing the performance of all Beginners (N=100) in the pre-test to that of all Advanced (N=100) in the pre-test was in favour of the Advanced subjects. The T value is 1.99, which is statistically significant at 0.05.

10) Comparing the performance of sub-group (1) of the Beginning subjects in the pre-test to that of sub-group (1) of the advanced subjects in the pre-test shows no significant statistical difference between the two. The T value is 0.09, which is not statistically significant. In addition, comparing the performance of sub-group (2) of the Beginning subjects in the pre-test to the performance of sub-group (2) of the Advanced subjects in the pre-test shows statistical significant difference between them in favour of the Advanced sub-group. The T value is 2.68 which is statistically significant at 0.01.

11) Comparing the performance of sub-group (1) of the Advanced subjects in the pre-test to that of sub-group (2) of the Advanced subjects in the pre-test shows no significant statistical difference between the two. The T value is 1.93 which is not significant statistically (see Table 3).

12) Table (4) shows that comparing the performance of the beginning subjects (N=100) in the pre-test to their performance in the post-test was in favor of the post-test. The T value is 7.64, which is statistically significant at 0.01. Similarity, comparing the performance of the advanced subjects (N=100) in the pre-test to their performance in the post-test was in favour of the post-test. The T value is 7.19, which is statistically significant at 0.01.

**Table (3): T-Test**

| Variables | N | $\overline{X}$ | SD | T | Sign. Level | In favour of |
|-----------|---|----|----|---|-------------|--------------|
| Beginners (1) Pre-Test | 50 | 8.16 | 3.18 | 0.65 | Insign. | - |
| Beginners (2) Post-Test | 50 | 7.74 | 3.20 | | | |
| Advanced (1) Pre-Test | 50 | 8.22 | 3.44 | 1.93 | Insign. | - |
| Advanced (2) Post-Test | 50 | 9.62 | 3.72 | | | |
| Beginners (1) Pre-Test | 50 | 8.16 | 3.18 | 0.09 | Insign. | - |

Dr. Hosni Mostafa El-dali

| Variables | N | X̄ | SD | T | Sign. Level | In favour of |
|---|---|---|---|---|---|---|
| Advanced (1) Pre-Test | 50 | 8.22 | 3.44 | | | |
| Beginners (2) Pre-Test | 50 | 7.74 | 3.20 | 2.68 | 0.01 | Advanced (2) Pre-Test |
| Advanced (2) Pre-Test | 50 | 9.62 | 3.72 | | | |
| Beginners (1+2) Pre-Test | 100 | 7.95 | 3.20 | 1.99 | 0.05 | Advanced (1+2) Pre-Test |
| Advanced (1+2) Pre-Test | 100 | 8.92 | 3.65 | | | |
| Beginners (1) Pre-Test | 50 | 8.16 | 3.18 | 7.85 | 0.01 | Beginners (1) Post-Test |
| Beginners (1) Post-Test | 50 | 14.56 | 4.74 | | | |
| Beginners (2) Pre-Test | 50 | 7.74 | 3.20 | 3.52 | 0.01 | Beginners (2) Post-Test |
| Beginners (2) Pre-Test | 50 | 10.52 | 4.51 | | | |

$N_1$ = $N_2$ = 100

T = 2.60 significant at 0.01

= 1.97 significant at 0.05

13) Comparing the performance of sub-group 1) of the advanced subjects (N=50) in the pre-test to their performance in the post-test was in favour of the post-test. The T value is 6.05, which is statistically significant at 0.01. The same can be said regarding sub-group 2) of the advanced subjects. The T value is 4.34, which is statistically significant at 0.01.

14) More importantly, comparing the performance of sub-group (1) of the beginning subjects in the post-test (after receiving visual training) to the performance of sub-group (2) of the beginning subjects in the post-test (after receiving auditory training) was in favour of the visual training. the T value is 4.32 which is statistically significant at 0.01 However, this is not the case with the advanced subjects. That is, comparing the performance of sub-group (1) of the advanced subjects in the post-test (after receiving visual training) to the performance of sub-group (2) of the advanced subjects in the post-test (after receiving auditory training) shows that the effect of either training has no significant statistical value. The T value is 0.68 which is not statistically significant (see Table 4).

**Table (4) T-Test**

| Variables | N | X̄ | SD | T | Sign. Level | In favour of |
|---|---|---|---|---|---|---|
| Beginners (1+2) Pre-Test | 100 | 7.95 | 3.20 | 7.64 | 0.01 | Beginners (1+2) Post-Test |
| Beginners (1+2) Post-Test | 100 | 12.54 | 5.05 | | | |
| Advanced (1+2) Pre-Test | 100 | 8.92 | 3.65 | 7.19 | 0.01 | Advanced (1+2) Post-Test |
| Advanced (1+2) Post-Test | 100 | 13.54 | 5.25 | | | |
| Advanced (1) Pre-Test | 50 | 8.22 | 3.44 | 6.05 | 0.01 | Advanced (1) Post-Test |
| Advanced (1) Post-Test | 50 | 13.18 | 4.59 | | | |
| Advanced (2) Pre-Test | 50 | 9.62 | 3.72 | 4.34 | 0.01 | Advanced (2) Post-Test |
| Advanced (2) Post-Test | 50 | 13.90 | 5.82 | | | |
| Beginners (1) Post-Test | 50 | 14.56 | 4.74 | 4.32 | 0.01 | Beginners (1) Post-Test |
| Beginners (2) Post-Test | 50 | 10.52 | 4.51 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Advanced (1) Post-Test | 50 | 13.18 | 4.59 | 0.68 | Insign. | - |
| Advanced (2) Post-Test | 50 | | | | | |
| Beginners (1+2) Post-Test | 100 | 12.54 | 5.05 | 1.37 | Insign. | - |
| Advanced (1+2) Post-Test | 100 | 13.54 | 5.25 | | | |

$N_1 = N_2 = 50$ ; T    =    2.63 significant at 0.01

                            =    1.98 significant at 0.05

The second question that the present study seeks to answer is "how can two types of training (intensive listening vs. improving learners' linguistic skills) affect $L_2$ learners' listening comprehension skill?". Based on the results obtained, the following conclusions can be made:

1. The beginning subjects (N=100) scored a total of 795 points out of 3000 in the pre-test, with a means of 7.95, and standard deviation of 3.20. After receiving the two types of training (visual and auditory), they scored a total of 1254 points, with a means of 12.54, and standard deviation of 5.05. Similarly, the advanced subjects (N=100) scored a total of 892 points out of 3000 in the pre-test, with a means of 8.92 and standard deviation of 3.65. After receiving both types of training (visual and auditory), they scored a total of 1354 points in the post test, with a means of 13.54, and standard deviation of 5.25.

2. Comparing the performance of sub-group (1) of the beginning subjects in the post-test (after receiving visual training) to the performance of sub-group (2) of the beginning subjects in the post test (after receiving auditory training) was in favour of the visual training. The T value is 4.32 which is statistically significant at 0.01. However, this is not the case with the advanced subjects. That is, comparing the performance of sub-group (1) of the advanced subjects in the post-test (after receiving visual training) to the performance of sub-group (2) of the advanced subjects in the post-test (after receiving auditory training) shows that the effect of either training has no significant statistical value. The T value is 0.68 which is not statistically significant. Tables (5) and (6), and Figure (6) below, may clarify this point.

**Table (5): Beginners (N=100)**

| Total | Test Type | | | | Type of Training |
|---|---|---|---|---|---|
| | Post-Test | Pre-Test | | | |
| 100 | 50 | 50 | N | Beginners (1) | |
| 1136 | 728 | 408 | X | Visual | |
| 15560 | 11724 | 3836 | $X^2$ | | |
| 100 | 50 | 50 | N | Beginners (2) | |
| 913 | 526 | 387 | X | Auditory | |
| 10059 | 6552 | 3507 | $X^2$ | | |
| 200 | 100 | 100 | N | Total | |
| 2049 | 1254 | 795 | X | | |
| 25619 | 18276 | 7343 | $X^2$ | | |

**Table (6): Analysis of Variance (2x2) between the type of Training (visual vs. Auditory) and Test-Type (Pre- and Post-Tests) For Beginners**

| Source of Variance | Squares | Degree of freedom | Variance | F | Sign. |
|---|---|---|---|---|---|
| Total Score | 4627 | 199 | | | |
| Between Groups | 1465.86 | 3 | | | |
| Within Groups | 3161.14 | 196 | 16.13 | | |
| Type of Training | 248.65 | 1 | 248.65 | 15.42 | 0.01 |
| Test Type | 1053.41 | 1 | 1053.41 | 65.31 | 0.01 |
| Interaction | 163.80 | 1 | 163.80 | 10.16 | 0.01 |

F  = 6.76     significant at 0.01

= 3.89     significant at 0.05

3.  Tables (5) and (6), and Figure (1) show that the training that the beginning subjects received affected positively their performance in the post-tests. Table (6) shows that there is significant relationship between the training that beginning subjects received and their performance in the post-test. The F values that signify this result are 15.42 and 65.31, respectively. There is also a statistically significant effect of interaction of the training offered and the test type. The F value that signifies this result is 10.16. All F values are statistically significant at 0.01.

Moreover, Figure (1) clearly shows that the visual training is more effective than auditory training for the beginning subjects. Due to the visual training, sub-group (1) of the beginning subjects scored higher in the post-test (the means for their scores were 8.16 in the pre-test, and 14.56 in the post-test). Although the auditory training resulted in improving the performance of sub-group (2) of the beginning subjects in the post-test, its effect is not the same as that of the visual training.

Tables (7) and (8), and Figure (2) clarify the situation with the advanced subject.
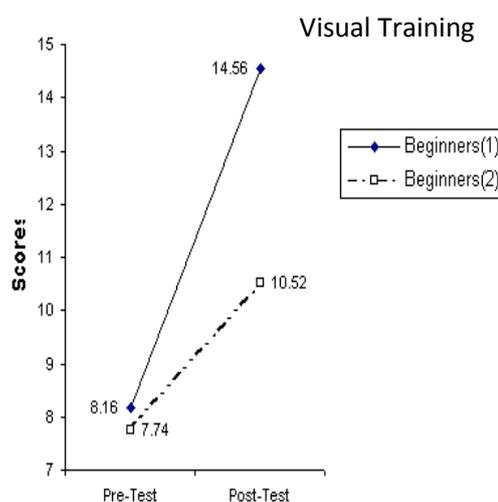


Figure (1)

**Table (7):  Advanced (1+2)**

| Total | Test Type | | | |
|---|---|---|---|---|
| | Post-Test | Pre-Test | | |
| 100 | 50 | 50 | N | Advanced (1) |
| 1070 | 659 | 411 | X | Visual |
| 13712 | 9741 | 3971 | $X^2$ | |
| 100 | 50 | 50 | N | Advanced (2) |
| 1176 | 695 | 481 | X | Auditory |
| 16672 | 11351 | 5321 | $X^2$ | |
| 200 | 100 | 100 | N | Total |
| 2246 | 1354 | 892 | X | |
| 30384 | 21092 | 9292 | $X^2$ | |

(Type of Training)

**Table (8): Analysis of variance (2x2) between the type of training (Visual vs. Auditory) and test-type (pre- and post-tests) for advanced subjects**

| Source of Variance | Squares | Degree of freedom | Variance | F | Sign. |
|---|---|---|---|---|---|
| Total Score | 5161.42 | 199 | | | |
| Between Groups | 1129.18 | 3 | | | |
| Within Groups | 4032.24 | 196 | 20.57 | | |
| Type of Training | 56.18 | 1 | 56.18 | 2.73 | Insign. |
| Test Type | 1067.22 | 1 | 1067.22 | 51.88 | 0.01 |
| Interaction | 5.78 | 1 | 5.78 | 0.28 | Insign. |

F = 6.76   significant at 0.01

= 3.89   significant at 0.05

4.  Tables (7) and (8), and Figure (2) show the extent to which the training that was given to the Advanced subjects affected their performance in the post test. Table (8) shows that neither the visual nor the auditory training significantly affected the advanced subjects' performance in the post test. The F values that signify this result are 2.73 and 0.28, respectively. Table (8) also shows that the Advanced subjects' performance in the post test was somewhat better than it was in the pre-test. The F value that signifies this result was 51.88, which is statistically significant at 0.01.

This second result may appear to contradict the first result; but it is not. This can be illustrated in Figure (2).

Figure (2) clearly shows the increase in the Advanced subjects' performance in the post-test, which implies that the training had some effect. This effect, however, is not statistically significant. The means for sub-group (1) of the advanced subjects were 8.22 in the pre-test, and 13.18 in the post-test (after visual training). Similarly, the means for sub-group (2) of the advanced subjects were 9.62 in the pre-test, and 13.90 in the post-test (after auditory

Dr. Hosni Mostafa El-dali

training). This will be, further, clarified more in tables (9) and (10) and Figure (3) next.
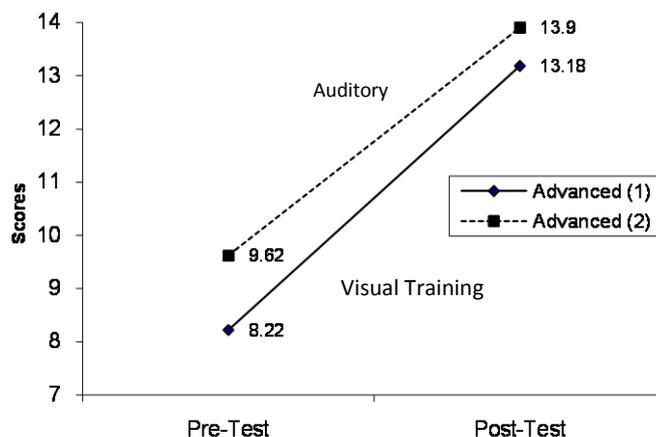


**Figure (2)**

**Table (9)**

| Total | Students' Academic status | | | | |
|---|---|---|---|---|---|
| | Advanced | Beginners | | | |
| 100 | 50 | 50 | N | | |
| 1387 | 659 | 728 | X | Visual | |
| 21465 | 9741 | 11724 | X2 | | |
| 100 | 50 | 50 | N | | Type of Training |
| 1221 | 695 | 526 | X | Auditory | |
| 17903 | 11351 | 6552 | X2 | | |
| 200 | 100 | 100 | N | | |
| 2608 | 1354 | 1254 | X | Total | |
| 39368 | 21092 | 18276 | X2 | | |

**Table (10):** Analysis of variance (2x2) between students' academic status (beginners vs. advanced) and type of training: the post-test

| Source of Variance | Squares | Degree of freedom | Variance | F | Sign. |
|---|---|---|---|---|---|
| Total Score | 5359.68 | 199 | | | |
| Between Groups | 471 | 3 | | | |
| Within Groups | 4888.68 | 196 | 24.94 | | |
| Type of Training | 137.78 | 1 | 137.78 | 5.52 | 0.05 |
| Academic Status | 50 | 1 | 50 | 2.01 | Insign. |
| Interaction | 283.22 | 1 | 283.22 | 11.36 | 0.01 |

F = 6.76    significant at 0.01

= 3.89    significant at 0.05

5.  Tables (9) and (10), and Figure (4) shows that the subjects of the study did benefit from the training they received, regardless of their academic status. That is, both beginners' and advanced' scores had been improved due to the training they received. The F values that signify this result are 5.52 and 11.36. Being beginner or advanced didn't affect their benefit of the training sessions. The question, however, is that what type of training was more effective?, and with what type of students? Figure (4) may answer these two questions. According to this Figure, the following results can be summarized in the following table:
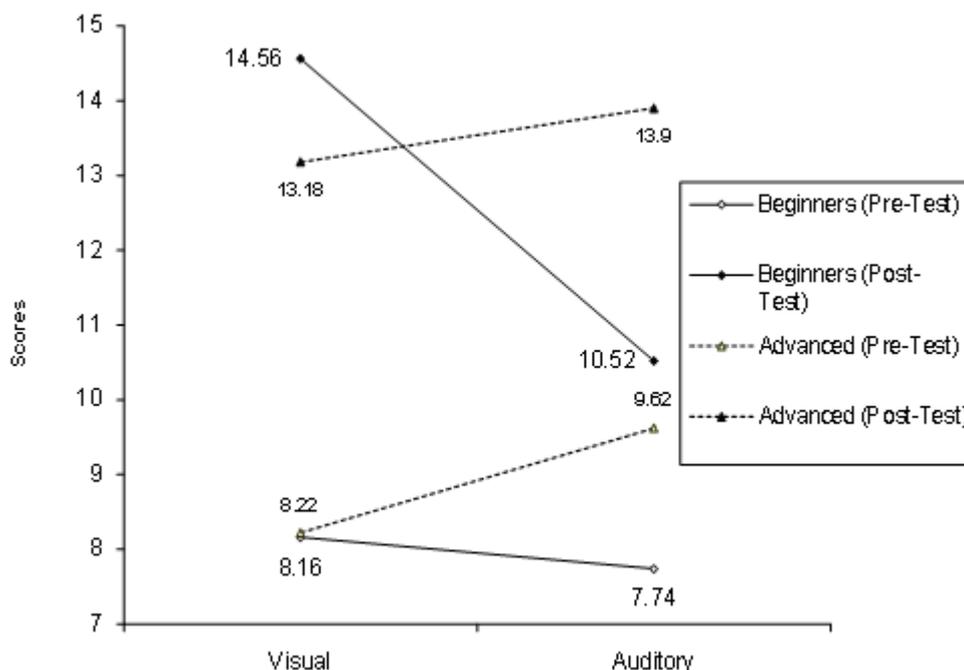


**Figure (3)**

**Table (11)**

|  | Beginners (N=100) | Advanced (N=100) |
| --- | --- | --- |
|  | Visual Training Sub-group (N=50) | Visual Training Sub-group (N=50) |
| Pre-Test | 8.16 | 8.22 |
| Post-Test | 14.56 | 13.18 |
|  | Auditory Training Sub-group (N=50) | Auditory Training Sub-group (N=50) |
| Pre-Test | 7.74 | 9.62 |
| Post-Test | 10.52 | 13.90 |

The means of the subjects' scores, which are presented in Table (11) above, will be more clearer in the following Figures.
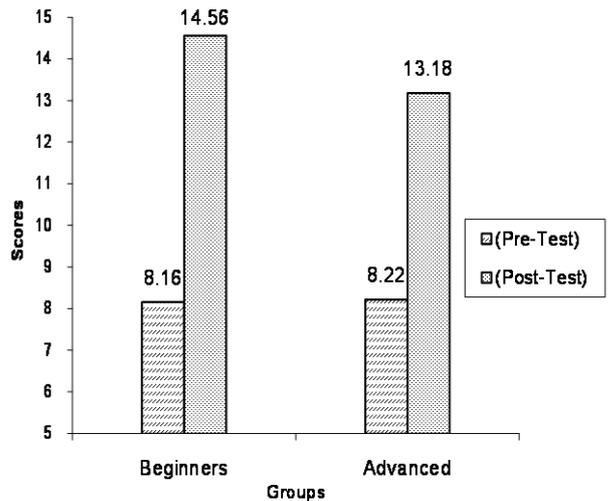
**Figure (4): Visual Training**
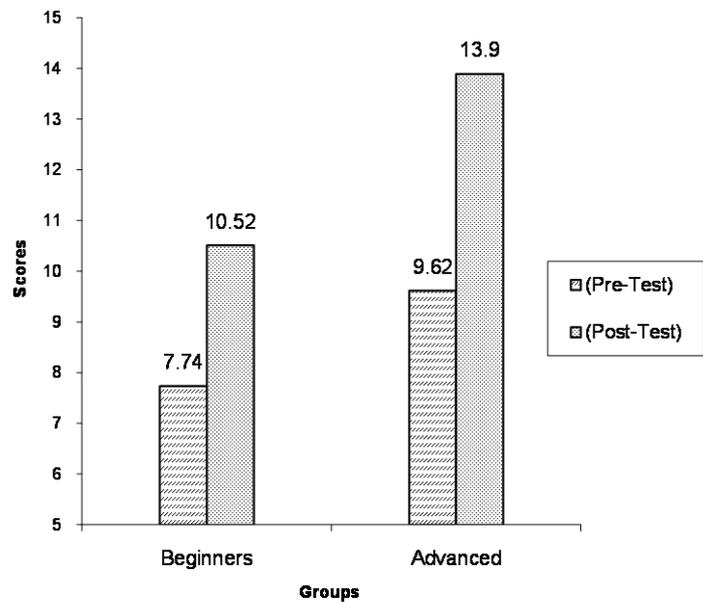


**Figure (5): Auditory Training**
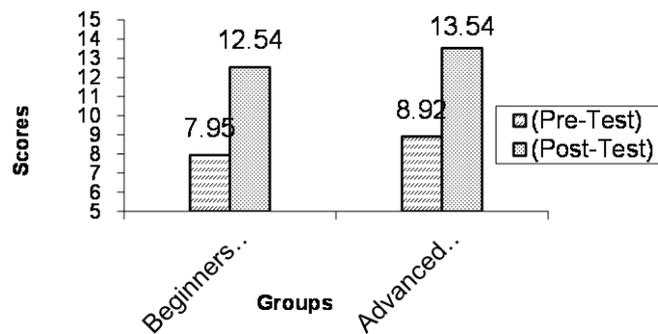


**Figure (6): Beginners vs. Advanced Before and After Training**

### 6. Concluding Remarks

In the light of the previous discussion, some remarks can be made:

1) Increased practice may lead to improved performance. And, skilled performance is due in large part to a decrease in the total amount of attentional capacity that must be devoted to a task and to an increase in the efficiency of responding through the removal of unnecessary elements.

2) The results of the present study advocate practicing consistent single-task components first, prior to having the learner perform the tasks concurrently. That is, in single-task training, components become automatic, no longer requiring attention.

3) This study provides evidence suggesting that even after substantial single-task practice, additional practice was needed to stabilize performance when a multidimensional task such as listening comprehension had to be performed concurrently. As previously mentioned, listening comprehension is characterized as a highly problem-solving activity that can be broken down into a set of distinct subskills. Two of these skills were described by Rivers (1972) as the recognition of component parts of the language (words, verb groups, simple phrases) and a memory for these elements, once they have been recognized. Recognizing linguistic elements, while essential to the process, is not sufficient for comprehending what is heard.

4) For any training program to be effective, the trainee must have some level of proficiency on the individual tasks on one hand, and the whole task on the other hand. In this regard, it can be suggested that adaptive training can be idealistic solution. In adaptive training the task is first simplified and is then made progressively more difficult as the learner acquires greater levels of expertise. Typically the learner is exposed to the whole task or almost the whole task to be mastered. In this way, each component is practiced in the context of the whole task.

5) Comparing the performance of the advanced students to that of the beginning subjects in the Pre- and Post- tests may suggest that learners' motivation and attitudes toward the skill they are to master are crucial factors in their success or failure in mastering such a skill.

6) Based on the subjects' interpretations of their performance in the Pre- and Post-tests, it can be said the skill of listening should be given due attention. Almost all of them (Beginners and Advanced) complained that they had no sufficient training, and they were not satisfied with the quality and the quantity of the care currently given to the listening comprehension skill compared to other skills. Such a compliant should be taken seriously if we really value the role played by the listening comprehension skill in language acquisition.

Based on the subjects' explanations during the interview, one can argue that listening comprehension skill is a multidimensional activity which requires L2 learners to do more than one thing simultaneously. The problem here is that the demands on short-term memory exceed human being's cognitive capacity. The argument is compatible with the principles of the attention theory. This means that the subjects' incorrect responses can he explained within the principles of attention theory. That is, some L2 learners may appear to have the necessary knowledge for successful listening; however, they are unable to display this knowledge during listening. In this regard, Foder, Bever, and Garrett (1974) suggest that native language words are held in short-term memory only long enough for the listener to organize them into clauses and to extract the meaning that they convey. As soon as the listener has interpreted the clause, the elements that made it up are purged from memory in order to make room for incoming sounds. As Call (1985) points out, foreign language input seems to be processed in the same way, but, as Rivers (1981) points out, short-term memory for target language words is often overloaded, causing words to be purged before they can be organized and interpreted. Thus, even though language learners may be able to recognize each word of n utterance in mind long

enough to interpret them.  The capacity of short-term memory is limited to about even units, plus or minus two (Miller 1956).

This study showed that the subjects relied on many strategies in reaching correct answer: (1) focusing on certain key words; (2) relying on syntactic and semantic representations; (3) setting the overall meaning even when some words are missed (4) reading the four choices in advance, and (5) complete and successful listening comprehension but, unfortunately, in only few cases.  However, their success or failure is constrained by the depth and completeness of their knowledge as well as the nature of the task they are performing.  Second language learners' strategies are, in essence, knowledge driven.  Consequently, in thinking about their performance as an object of study, the essence of the underlying knowledge that accounts for their performance must be examined. The examination of the learners' underlying knowledge will, in turn, uncover the basis for the strategies they use in solving language problems.  It must be kept in mind that when we talk about knowledge, we do not only talk about the presence versus absence of knowledge, but also the depth, completeness, and accuracy of such knowledge. And, because subjects' knowledge was not as complete as it should be, their strategies were not as successful as we all hope.  And, since their knowledge was fragmentary, some subjects failed to provide rational justifications for their correct responses.  Rather, they tended to rely on totally unrelated, even, strange reasons.

*Pedagogical Implications*

Change in the way we think about learning and what we know about the way learning occurs have important implications for those situations in which we want to facilitate changes in what people know and/or do.  In education, for example, corresponding changes are occurring in the way we think about teaching.  Since learning is an active process, the teacher's task necessary involves more than the mere dissemination of information. Rather., if students are to learn desired outcomes in

a reasonably effective manner, then the teacher's fundamental task is to get students to engage in learning activities that are likely to result in their achieving their outcomes, taking into account factors such as prior knowledge, the context in which the material is presented, and the realization that students' interpretation and understanding of new information depend on the availability of appropriate schemata.  Without taking away from the important role played by the teacher, it is helpful to remember that what the student does is actually more important in determining what is learned than what the teacher does.

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