Effects of Cognitive Strategic Instruction on Developing Listening Comprehension in EFL College Students

Dr. Mohamed Amin Mekheimer

I. INTRODUCTION

LISTENING comprehension is an important language skill that has emerged as a distinct and important ESL / EFL skill, thus leading both researchers and practitioners in the field to look for and investigate the effectiveness of new ways to enhance the learner's performance in this skill (Ashraf, Fatemi & Naderi, 2013; Barekat & Nobakhti, 2014; Jannejad, Shokouhi & Haghighi, 2012). Despite the paucity, however, in listening comprehension literature, an increasing and ongoing research has been conducted in this area in attempts to establish the role of the learner as an active interpreter and negotiator of the meaning of messages (e. g. Defillipis , 1980; Van Han & van Rensburg, 2014; Rubin et. al , 1988; Laviosa ; 1991 a; 1991b ; Jonassen, 1992). In this regard, Rubin (1994:199) points out that:

> "the ongoing dialogue among researchers about the nature of learner's interaction

M. A. Mekheimer is Assistant Professor at the Department of English, Faculty of Languages and Translation, King Khalid University, Kingdom of Saudi Arabia.

> with oral input revolves around the characteristics of five major factors: (a) text, (b) interlocutor characteristics, (c) task characteristics, (d) listener characteristics and (e) process characteristics, or variation in the learner's cognitive activities and in the nature of the interaction between the listener and the speaker or the latter's oral input".

Recently, studies in listening comprehension have been investigating the processing strategies employed by skilled and less skilled listeners in ESL / EFL contexts. Nevertheless, the findings of these investigations have been perplexing: some of them observe that skilled listeners are those who are better able to engage in top-down processing, whereas others maintain that proficient language listeners are bottom up processors. Lund (1991) in his study compared listening and reading comprehension of college students of German. His findings testify for the importance of top-down processing: students of German in his study have made misinterpretations on their recall protocols, but were far better able to invent plausible contexts for conversations. This got Lund to conclude that the subjects relied considerably on top-down processing. In this vein, the studies by Bond and Garnes (1980), Wolff (1987), Lynch (1988; 1992; 1995; 1998), VanPatten (1998), all give testimony to the predominance of top-down processing in listening comprehension.

In contrast to these findings, Conrad (1985); 1989), Bacon (1992a; 1992b), O'Malley et al. (1989) all stress the importance of bottom-up processing in listening comprehension, yet without emasculating top-down processing.

In other words, the growing body of research available and in progress (see for example, Vandergrift; 1998a; 1999b) indicate that both types of processing operate simultaneously, but the disagreement or information gap exists only in terms of what type of processing predominates the other and at which level of L2 learner proficiency one type of processing strategies dominates the other (Rubin, 1994: 210-211) and whether gender has role to play here (Markham & Michael, 1987). Therefore, this study seeks to investigate which type of processing predominates in EFL lower-intermediate students and which of them contributes to more enhancements in listening comprehension.

A. Context of the Problem

At the end of her extensive review of literature, Joan Rubin (1994) expressed her concern that "much more research in listening comprehension is sorely needed" (p. 26). This was quite a cute cue for stimulating the researcher to conduct this study.

Thus, with the emergence of listening comprehension as a skill of great significance both for second language acquisition and for effective language communication, more attention is being raptly given to training in this skill. And more importantly, with the development in cognitive approaches to learning and instruction, strategy learning and strategy-based instruction have gained much momentum (c.f.: Mendelsohn, 1994).

Consequently, the present study has been promoted first by what Rubin (1994: 199) has described as "a small body of research" that further needs more empirical testimony to determine how important each type of processing is. Furthermore, by the researcher's experience in teaching EFL at the college level (in ACTFL taxonomy, from lower-

intermediate to upper-intermediate). This experience has brought the researcher in close proximity to the students' difficulties in processing oral input, especially native and native-like spoken English. During the listening comprehension and conversational English classes at the Faculty of Education, English majors were observed as having greater problems in discriminating native speaker English, and also problems in interacting with native-like English. As well, they were observed as being in need to interpret spoken messages on a word-by-word basis, which is hard to do with the influx of spoken English.

In the light of the above, the present study investigates which type of cognitive processing, top-down processing strategies, bottom-up processing strategies, or interactive processing strategies is more effective in enhancing listening comprehension in sophomores at the College of Languages & Translation, Abha, KKU (college students of intermediate or lower-intermediate proficiency). It also seeks to investigate whether or not strategy-based instruction has a role to play in developing listening comprehension.

B. Objectives of the Study

This study seeks to investigate which type of processing strategies is most employed by EFL students at their current level of proficiency: top-down, bottom-up or interactive processing. It further seeks empirical evidence attesting to which type of processing strategies is most helpful for effective aural comprehension.

C. Research Questions

The study, therefore, seeks to find out about the following questions:

i. What are the effects of training on any of these processing models (bottom-up, top-down or interactive) on the

development of listening comprehension in sophomores?
ii. Which type of cognitive processing strategies is more effective in developing listening upon training, bottom-up, top-down or interactive processing strategies?

D. Hypotheses of the Study:

In relation to the research questions, the researcher formulated the hypotheses of the study.

1) There is a significant difference between the lower intermediate level of proficiency and the type of processing approach".
2) There are significant differences between the mean scores of students receiving top-down training far better than the mean scores of the students receiving bottom-up training on the BBC /BC English Comprehension Test—Copyright 1989".
3) There are significant differences between the mean scores of students receiving training on interactive processing strategies and students receiving either type of bottom-up or top-down processing strategy training on the BBC /BC English Video Comprehension Test—Copyright: British Council 1989".

E. Significance of the Study:

1) This study tackles an important area in EFL /ESL underestimated in previous research and reported to have suffered paucity in literature (CF. Rubin, 1994; Chamot and Kupper, 1989; 1990, Hoven, 1999).
2) This study seeks to glean more empirical testimony that supports or refutes the hypothesis that any listening comprehension processing approach is correlated to proficiency level, an hypothesis not yet empirically settled.
3) No study to the best of the researcher's knowledge has

been conducted to investigate the effects of training on any of the aural processing approaches, top-down, bottom-up or interactive, at least in Egypt.

F. Rationale of the Study:

1) Explicit teaching of listening comprehension has recently been recognized as important in a world diminishing to a global village where English is widely used. Thus arises the importance of training on listening comprehension to the abandonment of the osmosis theory of LC (students picking up how to become competent listeners without training).
2) As Mendelsohn (1994) holds, much of what we need to train our students in ESL /EFL listening comprehension is much akin to what they do in listening in their first language: they don't listen to every word; they listen to chunks, thus employing a variety of strategies as prediction, imagery, elaboration, transfer, etc.
3) The study seeks to investigate the effects of training on the "how to listen", i. e. the process of listening. As Gillian Brown (1987:168) has observed:

> "The main aim in teaching students how to understand English as it is normally spoken by native English speakers must be to make the students aware of what signal they depend on hearing in the stream of speech and to make them use these signals…. And help them predict, when only the tip of the iceberg is apparent, what the shape of the rest of the iceberg must be".

G. Research Methodology:

Research design

The research design used for the present research is the Pretest-Posttest Control Group Design. It would be used for three treatment groups and a control group.

Random assignment of groups and the presence of a pretest and a control group would serve to control for all sources of internal validity; regression and selection factors are controlled for by random assignment, while the control group controls for maturation effects, history, testing and instrumentation (Gay, 1996).

Sample of the Study

The participants in the study are randomly selected from second year students at the English Department, College of Languages & Translation, KKU. Thirty students for each of the four groups were randomly assigned to the research groups.

The first experimental group, receives training on bottom-up strategies, the second treatment group on top-down strategies, whiles the third group, and receives interactive processing strategy training. The control group studies the video listening comprehension course to no training.

Analysis of Co-variance (ANCOVA) is the statistical method most appropriate for use in this design.

Instruments:

The following instruments have been used in this research:

i. The cognitive strategies questionnaire prepared by the researcher.

ii. The BBC /British Council English Comprehension Standardized Video Test (1989).

iii. A video course, "Hello America-Level 8," by Susan Stempleski, adapted after the objectives of the present

research. Lesson plans based on the Hello, America Level 8 have been prepared for each treatment group (bottom-up/top-down/interactive processing strategies).

Procedures of the research:

The video material was adapted to serve the purposes of the present research and three different types of lesson plans had been devised for training subjects on the use of listening comprehension strategies from the bottom-up, from the top-down and interactively. The lesson plans had been revised by two lecturers in English literature and linguistics for their validity for use.

The subjects in the four groups had been pretested. One day directly after the pretest (on Feb, 26th, 2014), they started the training.

Students received the training modules beginning on Feb. 26th, 2014 and continuing for ten weeks, three hours a week. The researcher instructed students – participants in the present study – into their respective groups on the training cognitive strategies: bottom-up , top-down and interactive while they were listening to the LC video course. In the first group, they were trained on bottom-up processing strategies such as previewing new words, negotiating meaning , classifying words, listening for key words, drilling new lexicon, note-taking, summarizing, rephrasing.

In the second group, the researcher trained students on top-down strategies, such as guessing, extrapolating, elaborating, self-monitoring, analyzing, etc. For each session, there was a lesson plan where concentration was focused on one or more top-down strategies, with overt training and explanation of the nature of the strategy employed and its benefits.

For the third group, the instructor presented the strategies that were taught and provided a short explanation of what

these strategies were and how useful they could be used for comprehending aural discourse. For this group, the researcher provided a mixture both strategies classed as top-down or bottom-up. They were urged to attend to the utterance and to use their prior knowledge. Thus, they used note-taking, summarizing, deduction, induction, resourcing, analyzing conventions of language, connecting text knowledge to personal knowledge of the world, checking, evaluation, paraphrasing, predicting, inferencing, translating, etc.

On completing the training sessions, students were administered the same test (BBC/BC English Comprehension Video Test, 1989) as a posttest. The four groups received the same video test to see whether there is a change in their perceived processing strategy use.

H. Definition of Terminology:

1. Listening:

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 fulfil the task requirements (O'Malley, Chamot, and Kupper, 1989: 434). To this definition it can be more illuminating and precise to add what Byrnes (1984:319) calls "schema-based understanding", or "information stored in long-term memory as frames or scripts which directs the comprehension process.

Clark and Clark (1977) and Richards (1983) gave another definition of listening as "consisting of processing information which listeners get from visual and auditory clues in order to define what's going on and what the speakers are trying to express.

The researcher operationally defines listening comprehension as the overall scores students achieve on the BBC /British Council English Comprehension Video Test.

2. Bottom-up Processing:

Bottom-up processing involves piecing together, in a linear fashion, the parts of what's being heard , so that ultimately the whole content will be clear (Mendelsohn , 1994:14).

A thorough review of literature has revealed the following as the most used bottom-up processing strategies: note-taking, resourcing, deduction/induction, summarization, translation, classification, analyzing topics, repetition, analyzing the conventions of language, imagery, etc.

3. Top-down Processing:

Top-down processing is holistic. (Mendeloshn, ibid.). It goes from whole to part based on the premise that listening is an interpretive process (Rumelhart 1980, p. 41). Top-down processing is evoked from an internal source, from a bank of prior knowledge and global expectations about both language and the world. Here listeners bring known language to bear on the task of understanding the incoming stream of speech; this allows them to predict on the basis of context both the preceding linguistic context, the situation-and-topic, setting and participants context what the incoming message at any point can be expected to mean and how it fits into the whole (Morely, 1995: pp.194 –195).

The researcher reviewed the listening comprehension literature for top-down processing strategies finding the following as the most used strategies: elaboration, transfer, inferencing, connecting, personalizing, guessing, predicting, anticipating, etc. (Kassem. 2015; Sotoudeh, 2013).

4.Interactive Processing:

Interactive processing involves both top-down and bottom-up processes (Rumelhart, 1980; Stanovich, 1980; Samuels and Kamil, 1984; Rubin, 1994; 1995).

Operationally, interactive processing strategies involve the strategies mostly classified as top-down or bottom-up (see above) or a mixture of which in processing aural texts.

5. Strategic Instruction:

A strategy-based approach is a methodology that is rooted in strategy instruction and sees the objective of an SL /FL course as being to teach students how to listen. This is done by raising learners' awareness of how language functions, developing cognitive awareness and developing metacognitive awareness (Mendelsohn, 1995: 134, in Mendelsohn & Rubin, eds.).

The researcher defines strategy-based instruction as a teaching approach that utilizes the cognitive and metacognitive potentialities of learners through raising their awareness of how language works, and what to do so as to save time, effort, and frustration while using the language in communication. For listening, strategy-based listening is an approach employed by listeners to focus their attention on the oral message, such as note-taking, induction, deduction, guessing, etc.

II. Literature Review

Listening comprehension is an active interactive and interpretive process that can be approached either bottom-up or top-down (Mendelsohn, 1995; Pichora-Fuller & Levitt, 2012). Byrnes (1984, 319) calls the process "a schema-based understanding (in which) information is stored in the long-term memory as frames or scripts … directs the

comprehension process". Studies in listening comprehension and strategies have identified a number of cognitive strategies and metastrategies that L2 / FL listeners use (De Fillipis, 1980; Laviosa, 1991 a, and 1991 b; Murphy, 1985;O'Malley, Chamot and Kupper, 1989. Rost and Ross, 1991; Vandergrift, 1992; 1994; and 1996; Rubin 1987, 1996).

Growing research in this area is highlighting the fundamental intricacy of the cognitive and metacognitive processes involved. For listening comprehension to be effective, listeners have to integrate informationfrom a wide range of sources-- phonetic, phonological, prosodic, lexico-syntactic, semantic and pragmatic.

Schema theory and Listening Comprehension:

Bartlett (1932) and Rumelhart (1980) define what a schema theory is. They contend that schema theory is a theory about knowledge and how knowledge is represented in the human mind. Thus, schemata can be seen as the organized background knowledge, which leads us to expect or predict aspects in our interpretation of discourse. Or, as Tannin (1979: 138) describes schemata using the term "structures of expectation" to characterize the influence of schemata on cognition.

Douglas Brown (1983: 61) observes that the listener's stereotypical knowledge based on prior experiences predisposes him /her to construct expectations in terms of seven areas: speaker, listener, place, time, genre, topic, and co-text. Brown and Yule (1983) contend that the listener draws on two basic principles that they found essential to relate new information to the listener's previous experience or background knowledge: these are:

1) The principle of analogy: things will be as they were

before : and

2) The principle of minimal change; things are as like as possible to how they were before. (p. 63)

Yule and Brown (1989) describe five ways in which background knowledge is represented in memory. These are:

Frames: Our knowledge is stored in memory in the form of data structures, called frames that represent stereotyped situations

Scripts: Similar to frames, but "specialized to deal with event sequences (Schank & Abelson, 1977).

Scenarios: Sanford & Garrod (1981) use the term "scenario" to describe the "extended domain of reference" (thinking of) knowledge of settings and situations comprises an interpretative scenario behind a text / discourse. For example, coming across a text on going to a restaurant automatically brings a waiter slot into the representation even if not explicitly mentioned in the text afterwards.

Schemata: They are higher-level complex knowledge structures (Van Dijk, 1981: 141) which function as "ideational scaffolding" (Anderson, 1977). As above mentioned, they are organized background knowledge that conduces to expectation and prediction for text discourse interpretation and hence are deterministic; i.e., they predispose the experiencer to the interpretation of his / her experience in a fixed way.

Mental models: We use words in sentences as cues to build a familiar mental model. A mental model is a representation in the form of an internal model of the state of affairs characterized by a sentence. In fact, the interplay between the terms above outlined is very clear and may be the terms are used interchangeably.

Rumelhart (1980) uses the term schema as analogous to script and Schank and Abelson (1977:41) define scripts as schemata, both being predetermined stereotypic sequences of actions defining well-known situations.

Rost (1990: 70) suggests that for a listener to infer meaning from a listening text, inferential processing functions at three levels: the lexical / prepositional level, the base or schematic level, and inter- personal relevance level. He proposes editing principles and strategies to help listeners construct meaning. He defines base meaning as the "cultural and experiential frame of reference that makes a text interpretable by a listener". Other editing strategies include employing cultural schemata, filling in schematic slots, filling in supporting data for claims, and using genres to generate expectations.

Chiang and Dunkel (1992) explain the significance of the schema theory for listening comprehension:

"The basic tenet of schema theory posits that written text, or spoken discourse does not carry meaning in and of itself; rather, meaning occurs as a result of the interaction between the readers or listener's prior knowledge about the world and the text or speech" (350).

Mendelsohn (1994: 12) states that activation of schemata makes possible hypothesis formation, predicting and inferencing, which are essential processes for listening.

There are, however two types of schemata: content schemata and rhetorical schemata, the former referring to networks of knowledge on different topics stored in the brain and activated in different ways. The latter also known as organizational or textualschemata refer to the structure and organization of knowledge in discourse,.

Chiang and Dunkel (1992), Long (1989), Weissenreider

(1987) all report about the importance of both types of schemata. And despite this importance assigned to schemata and schema activation in processing listening, there is a danger which Mendelsohn notes as thus, " The activation of a schema early in a listening passage may straitjacket the mind of listeners, causing them to stick with an incorrect hypothesis, and therefore, an incorrect understanding of the whole text" (p.13). As Long (1989:33) has put it, " (schemata) work well for routine events, but tend to break down in novel contexts, which in effect always requires a hypothesis formation / hypothesis modification process. Hence, the importance of both bottom-up and top-down processing of aural discourse looms large.

The Role of Memory in Processing Aural Discourse.

According to Just and Carpenter's capacity hypothesis (1992), any listener's cognitive processes are in competition for limited processing space; that is, because current theories of cognitive psycholinguistics maintain that the human being is a limited processor with a limited working memory (Lynch, 1998). Current models of listening comprehension have proposed a trade–off between the storage and processing functions of working memory, observing marked individual variations in the listener's skill and speed in performing operations (Berquist, 1997) What is tentatively proposed here is that the working memory is fatigued in processing an L2 listening text because the listener first has a limited processing capacity and further and above all, his knowledge of L2 is limited, thus devoting more memory capacity to lower-level processes (lexico-grammatical processing , or later bottom-up processing).

Processing Models of Listening:

Listening used to be labelled a passive process in which

listeners receive aural input passively as sent by the speaker. This position has been impugned. Research has found out that listeners check aural input against schemata, that is their knowledge of language and knowledge of the world. Different models of processing have been proposed: bottom-up processing, top-down processing and parallel processing.

1. Bottom-up Processing:

In this mode, the processing of language information is worked by an external source, the incoming language itself when understanding linguistic input (aural / written) is worked out proceeding from sounds (or letters) to words, grammatical relationships and logical meaning.

Although linguistic knowledge is also stored as schemata or prepositional knowledge, the information stored consists of lexical meanings, syntactic relationships and grammatical rules. Individuals who analyze every and each individual linguistic unit for accumulating meanings to form propositions are using bottom-up modes of processing (O'Malley & Chamot, 1990) .

O'Malley, Chamot and Kupper (1989) have reached the same observation: listeners make use of linguistic knowledge utilizing propositions and schemata in long-term memory only in terms of grammatical and syntactic relationships between individual units of language.

Brian Tomlinson (1997) has suggested a brick-wall analogy to explain bottom-up / top-down processing. That is, if one is standing at the bottom, looking at the wallbrick by brick, he can easily see the details, but it is difficult, however, to get an overall view of the wall. And if one comes across a missing brick (in our case an unknown word or unfamiliar structure, they will be stuck.

However, this mode of processing is partially deficient. It

is problematic in that the sounds, segmentations, and linguistic markers are subject to interference from L1 (Byrnes, 1984). Furthermore, this type of processing leads to three types of inefficiencies (O'Malley & Chamot, 1990; 36):

First, the meaning of any word often depends on the context in which it is used. An individual attempting to comprehend written or aural discourse would need to process any word more than once if preliminarily found to be contextually irrelevant.

Second, lexical access would be faster if the context can be used to narrow the range of possible meanings that must be explored in long-term memory. In the bottom-up processing mode, context is ignored, thus lowering the processing speed.

Third, bottom-up processing or processing words without using context to project additional meaning can be expected to have inefficiencies since individuals who do make predictions about text meaning tend to have greater comprehension.

Furthermore, many researchers have noticed that less proficient learners are inclined to use bottom-up processing than top-down processing probably because their linkages to long-term memory in the second language have yet to be established (O'Malley and Chamot, 1990; Pichora-Fuller, M. & Levitt, 2012), but this finding still needs more empirical testimony.

Nunan & Miller (1995: 25-26) notes that bottom-up processing incorporates the following:

- Scanning the input to identify familiar lexical items;
- Segmenting the stream of speech into constituents, for example to recognize that "a book of mine" consists of

four words;

- Using phonological cues to identify the information focus in an utterance;
- Using grammatical cues to organize the input into constituents, for example in order to recognize that in "the book which I lent you", [the book] and [which I lent you] are major constituents, rather than [the book which I] and [lent you].

2. Top-down Processing:

In this processing mode, language information processing comes from an internal source. It is evoked from a bank of prior knowledge and global expectations about language and about the world. Individuals here rely upon meaning-based representations of knowledge to analyze and predict the content of discourse. According to the Tomlinson's analogy (ibid.), when one is sitting at the top of a wall, they would easily see the landscape, but because of distance, some details are to be missing. Top-down processing is holistic. As Rumelhart has put it, "it goes from whole to part" (Rumelhart 1980: 41). This mode is built on the assumption that listening is an interpretative process in which listeners actively formulate hypotheses about what is going to be listened to modifying these hypotheses very often during the process of comprehension.

Richards (op.cit. 26) also notes that top-down processes use background to assist in comprehension, thus they incorporate the following:

- Assigning an interaction to part of a particular event, such as story telling, joking, praying, complaining, etc.;
- Assigning places, persons, or things to categories;
- Inferring cause and effect relationships;

- Anticipating outcomes;
- Inferring topics of discourse;
- Inferring the sequence between events;
- Inferring missing details.

3. Interactive Processing:

Interactive processing involves both top-down and bottom-up processes (Rumelhart, 1980; Stanovich, 1980; Samuels and Kamil, 1984; Rubin, 1994; 1995). It involves interplay between both types of cognitive processing strategies: bottom-up and / or top-down strategies. This interplay can be simultaneous.

Other Models of Language Comprehension Processing:

Language comprehension is generally viewed in cognitive theory as consisting of active and complex processes in which individuals construct meaning from aural or written information (Anderson 1985; Byrnes, 1984; Call 1985; Howard 1985; Pearson & Fielding, 1982; Richards; 1985; 1990).

Anderson (1985) suggests a three-stage aural / writing comprehension model in which three processes are intertwined: perceptual processing, parsing and utilization. These processes are interrelated yet recursive in function in that uninterrupted shifts may occur from one process to another and then back to the previous process, and they overlap but are consistent with the listening comprehension processes.

In perceptual processing, attention is focally drawn to oral or written text, with portions of the text being retained in short –term memory.

Short-term memory is limited in capacity, thus precluding linguistic information from remaining in short-term memory for a longer time, with new information always replacing old

one all of the time. Yet, while oral information is still in short-term memory encoding, it is at work as well with some information being converted into meaningful representations, but this occurs very selectively with some aspects of the task. In listening, these aspects can be pauses, fillers, acoustic emphases, etc. which signals a stop or discourse segmentation. The individual can probably focus on contextual factors such as the immediate task characteristics. In parsing, words/phrases form meaningful mental representations of text and the listener decodes individual words by matching the aural pattern of word form represented mentally as declarative knowledge in long-term memory. This results in lexical access–or a matching of short-term memory words with the long-term memory lexicon when and where individual word meaning is identified.

In addition, in utilization, mental representations of text meaning are related to declarative knowledge retained in long-term memory (elaboration). The process whereby declarative knowledge is accessed is called spreading activation when nodes in long-term memory that have a meaningful connection with new aural input are activated.

Strategic Processing:

In many cases there occur many mismatches between input and background knowledge resulting in a comprehension hiatus (Faerch & Kasper, 1986). Research has found out that learning strategies need to be acquired for easing aural discourse processing. According to a great number of researchers (e.g. O'Malley, Chamot, Stewner-Manzanares Kupper, & Russo, 1985, Weinstein & Mayer , 1986; Derry and Murphy , 1986 , etc.) , strategic processing is required because:

1) The frequency and type of strategies used differentiates effective from ineffective learners;
2) Strategic modes of processing are learnable ; and
3) Use of strategic processing enhances learning.

Strategies and Cognition:

Anderson's cognitive theory (1983) posits that learning strategies are very much akin to other cognitive processes. In his theory, Anderson posits that strategies can be represented the same way as any other complex skill and described as a set of productions that are compiled and fine-tuned until they become procedural knowledge.

Weinstein and Mayer (1986) state that learning strategies have facilitation of learning as a goal. According to them, "the goal of strategy use is to affect the learner's motivational or affective state or the way in which the learner selects, acquires , organizes, or integrates new knowledge ibid.,(1986; 315) .

Anderson's cognitive theory (ibid.) has raised two sets of questions about learning strategies: (1) How can learning strategies be positioned in the context of Anderson's cognitive strategies? And (2) How can strategies be learned, how can they facilitate learning, what type of information do they resemble and how are they stored and retained for use with different tasks? (O'Malley & Chamot; 1990).

As for the first set of questions, Anderson proposes that defining goals is one important step in language learning and is related to planning, a metacognitive strategy. The significance of goals may be indicated by the distinction between bottom-up processing which starts at the lower levels of discourse features and top-down processing which starts the higher level of schemata activation and capitalizes on known information or background knowledge.

However, listeners may behave opportunistically alternating between bottom-up or top-down processing depending on the goals of handling aural discourse. Moreover, cognitive theory suggests that effective processing of text requires the use of both top-down and bottom-up processing (Howard, 1985). O'Malley & Chamot and Kupper (1989) suggest that effective listeners make use of both top-down and bottom-up processing strategies while ineffective listeners became embedded in determining the meanings of individual words (1990: 156). They have suggested elsewhere (O'Malley & Chamot, 1990:37) that "it seems likely that less proficient learners will be more inclined to use bottom–up processing than top-down processing, but the finding has to be evidenced.". Furthermore, Anderson (1983) in his theoretical perspective of cognition describes a set of strategy-like cognitive processes, such as imagery, organization, inferencing, elaboration, deduction and transfer. He has provided rich information about how strategies function and how they can ease learning, giving a repertoire of both comprehension directed approaches and memory directed techniques.

Learning Strategies and Listening Strategies:

Chamot (1987:71) provides a basic definition of learning strategies as follows:

"Learning strategies are techniques, approaches or deliberate actions that students take in order to facilitate the learning and recall of both linguistic and content area information".

O'Malley et al. (1990; 52) have aptly observed that learning strategies are complex procedures that individuals apply to tasks probably represented as procedural knowledge

which may be acquired through cognitive, associative and autonomous stages of learning.

Rabinowitz & Chi (1987) suggest that strategies must be conscious in order to be strategic. A person attempting to apply an unfamiliar strategy to a demanding task will have difficulties in controlled processing thatcan be anticipated from performing two complex tasks simultaneously. It is for this reason that teaching students to use new strategies with cognitive tasks is extremely difficult (O'Malley et al. , 1990: 52).However, an examination of strategy-theoretic perspectives and classroom texts over the four years past reveals clearly that, of late, attention is being paid to the application of learning strategies to listening and how to teach it (Mendelsohn , 1998 : 82).The awareness of strategies and the effectiveness of their use enhances language learning : "strategies contribute to a sense of mastery would reduce uncertainty and anxiety and maintain , or improve both attitudes and motivation" (MacIntyre and Noels 1996: 383).

Willing (1988: 7) features three aspects of learning strategies which are very much relevant to listening comprehension: these are processing, associating and categorizing and all these aspects should be addressed in a listening comprehension course. Furthermore, Spearrit (1962: 5) has long observed that "there is considerable evidence to indicate that instructional courses in listening lead to improvement in listening comprehension" . Mendelsohn (1995: 27) has observed the same claim "believing that consideration for the strategies for listening comprehension should provide the backbone of any good listening comprehension course for second language learners".

Wenden (1983: 117) has assertively ascertained to the importance of this point observing that:

“There is a need for curricular strategies, techniques and materials to provide training that would not only expand learners repertoires of efficient strategies but also make them aware of various aspects of their language learning and critically reflective of what they are aware of –in effect to refine the reflective phases of their language learning”.

The Pedagogical Aspects of Learning Strategies in Listening:

Willing (1998) has explained the relationship between learning strategies and pedagogy:

“Learning strategy can be used asa tool to construct appropriate teaching methodologies by permitting a consideration of specific cognitive techniques and how these might be best catered for…Learning strategy is a means for being specific about what is intended to be happening, cognitively, for the learner; that is, how the experience provided is expected to result in actual learning”.

Graham (1997) has classified strategies associated with listening into two groups: first are those used by students to try to improve their performance in this area and second, those employed during the process of comprehending a passage (P.49). In the first group, three main strategies were noted: two may be referred to as creating practice opportunities and naturalistic practice. The third strategy involved a certain degree of self-management philosophizing.

In terms of how students actually listened, Graham (ibid.) has observed in her study that some key strategies that have emerged include several metastrategies, such as attention strategies (selective and attentive strategies) with which students (i) listened out for specific details, (ii) concentrated on the task at hand, without letting themselves distracted , and (iii) monitored their learning. Others include advance organization, a process whereby students prepare for a

listening task by thinking about what they knew about the topic in terms, of schemata and propositions (declarative and procedural knowledge), comprehension monitoring, where students check their understanding correctly is a metastrategy used for listening comprehension but found out to be rarely used despite its vital role in effective listening comprehension (Graham, 1997: 50).

Inferencing is another strategy where clues from listening discourse context (co-text) are used to work out the meaning of unknown items; this strategy was greatly and extensively used by Graham's subjects in her study, and it was used with varying effectiveness (ibid.).

Literature is rich in a plethora of claims that advocate strategy instruction (e.g. Rubin, 1994 ; 1996; Mendelsohn , 1995 ; 1998; ,Chamot , 1995; Lynch , 1995;). It is assumed that learners can be taught to use more and more effective strategies than the ones they are using (Mendelsohn, 1998: 83). This has been a theoretical assumption only empirically evidenced in Rubin and Thompson's (1992) longitudinal empirical study of Russian as an FL at the George Washington University. The study has provided empirical testimony to support the long-claimed assumption that strategy instruction can improve listening comprehension. The study concluded that systematic instruction in the use of cognitive and metacognitive strategies has improved listening comprehension significantly (chi-square 5.5 ,p >o.o5.).

Mendelsohn (1998: 84) has cited several reasons why Rubin and colleague (1996) have conclusively supported the assumption that systematic strategy instruction is conducive to improvement in listening comprehension, a positive finding standing in stark contrast to the outcome of e.g. Allthorpe's (1997) study:

1) Provision of extensive teacher education in the efficacy of

strategies and how to deliver strategy instruction.

2) A recognition of the importance of a very strong teacher commitment to strategy instruction.
3) The gradual implementation of strategy instruction over time.
4) Strategy instruction practice over an extended period of time.
5) A focus on the listening process, that is on how to listen.
6) The use of video rather than audio recorded material.

Further recent research on effects of listening comprehension training has revealed that not only good training in listening comprehension can lead to improvement in listening comprehension but the effect can extend to other skills as well.

Aarnoutse (1998) has conducted a study to investigate the effects of training poor readers in listening comprehension strategies: results indicated that directly after the intervention period (posttests), the children trained by the programme performed better than the control group not only on the strategic listening test but also on the strategic reading test. So, in spite of the children's decoding problems , and in spite of the fact that they had practiced the strategies only on texts that had been listened to , the experimental children still transferred the acquired comprehension strategies to reading contexts. Another significant finding was that the better performance of the experimental group on the strategic listening and reading tasks was maintained on the strategy retention tests which were administered three months after termination of the programme.

However, recent literature implies some points that need to be borne in mind so as strategy instruction can be effective. Mendelsohn (1994) in upholding and promulgating his strategy-based approach to listening argues that not only do the teachers have to be well-prepared for strategy instruction

but so do the students, with the intention of further convincing them of the value of strategy instruction. MacIntyre and Noels (1996) discuss what they call the social-psychological model of strategy use examining variables that can potentially affect the use of learning strategies. Their study sought to examine several aspects of strategy use such as frequency, effectiveness and student anxiety in relation to Gardner's model of integrative motivation (1985; 1988). They concluded that mere demonstration of strategy use is inadequate and insufficient, for students' further need to:

1) Know the strategy well;
2) know when to use it and believe that it will be effective.
3) A strategy-based approach to the instruction of listening comprehension is well-grounded in strategy learning theory. This approach sees the objective of the ESL / EFL course as being to train students how to listen, by making learners aware of the strategies that will assist them in tackling the listening task. Therefore, Chamot and colleague (1987: 244) have adeptly observed this relationship between learning strategies and listening comprehension strategy-based approach remarking that:

"Suggestions for learning strategy instruction include showing students how to apply the strategies, suggestinga variety of different strategies for the language and content tasks of the curriculum, and providing many examples of learning strategies throughout the curriculum so that students will be able to generalize them to new learning activities in other classes and even outside the classroom".

Mendelsohn (1994: 36) at the very inception of his claims for the strategy-based approach maintains that a strategy–based approach to listening is designed on principles of top-down processing in claims that top-down processing

strategies make possible the conscious use of strategies. The present study therefore seeks to verify that whether a strategy–based instruction in both top-down and bottom-up processing strategies ameliorates listening comprehension.

III. Results

The data gathered were tabulated and statistically analyzed. Weighted percentages have been assessed as regards the relative weights of each of the questionnaire items and the participants' responses to each of the statements on the questionnaire.

The following table presents the responses of the subjects on each section of the questionnaire, and the relative weights of each section as a whole in top-down order:

TABLE 1
THE TOP-DOWN ORDER OF SUBJECTS' RESPONSES ON THE QUESTIONNAIRE

Order of responses	disagree	neutral	agree	Relative weight
B1	8	10	138	2.8
D2	10	9	137	2.8
C9	9	15	132	2.8
A7	11	12	133	2.8
A8	10	23	123	2.7
C10	15	19	122	2.7
B5	16	19	121	2.7
A1	18	19	119	2.6
D3	19	17	120	2.6
A3	22	12	122	2.6
B2	12	32	112	2.6

C6	24	15	117	2.6
C4	19	29	108	2.6
A2	21	30	105	2.5
B7	20	32	104	2.5
D1	29	17	110	2.5
C8	30	18	108	2.5
B8	23	33	100	2.5
A5	30	25	101	2.5
D4	27	32	97	2.4
C1	33	27	96	2.4
A6	40	16	100	2.4
B6	36	24	96	2.4
B3	29	42	85	2.4
C7	43	20	93	2.3
C3	38	37	81	2.3
B4	46	27	83	2.2
C5	57	25	74	2.1
A4	57	31	68	2.1
C2	64	22	70	2.0

TABLE 2
THE HIERARCHICAL ORDER OF THE FOUR SECTIONS OF THE QUESTIONNAIRE

Order of responses	disagree	neutral	agree	Relative weight
D	85	75	464	2.61
A	209	168	871	2.53
B	190	219	839	2.50

C	332	227	1001	2.43

It is clear from the table that the last section of the questionnaire which deals with the difficulties mostly found in processing aural texts has received the most weight (2. 61),as being the most agreed upon by participants in the study ; a relative weight of 2.61 falls within the range of (2.50: 3) which denotes agreement.

Apparently, the table shows that section A (Bottom-up processing strategies) comes second in the top-down order of relative weights 2. 53; this weight indicates that subjects agree that they mostly employ bottom-up processing strategies in their attempts to comprehend aural input. This finding verifies the first hypothesis of the study that students at this level of proficiency are mostly indulged in using the bottom-up approach in listening comprehension.

Furthermore, participants in the study agree that they also use the top-down approach (this section's relative weight = 2. 50) and this finding too is not farfetched; previous studies as the one by Carrel (1988: 101 –102) indicate that presumably skilled listeners (or even students at the intermediate level) constantly shift from one processing mode to the other as they accommodate to the demands of the tasks, though variations in proficiency can possibly lead listeners to rely too much on one or the other mode of processing.

TABLE 3

THE TOP-DOWN ORDER OF EACH STATEMENT IN THE WHOLE SECTIONS

SECTION ONE: BOTTOM-UP PROCESSING STRATEGIES

Order of responses	Disagree	Neutral	Agree	Relative weight
A7	11	12	133	2.8
A8	10	23	123	2.7
A1	18	19	119	2.6

A3	22	12	122	2.6
A2	21	30	105	2.5
A5	30	25	101	2.5
A6	40	16	100	2.4
A4	57	31	68	2.1

SECTION ONE: BOTTOM-UP PROCESSING STRATEGIES:

Order of responses	Disagree	Neutral	Agree	Relative weight
B1	8	10	138	2.8
B5	16	19	121	2.7
B2	12	32	112	2.6
B7	20	32	104	2.5
B8	23	33	100	2.5
B6	36	24	96	2.4
B3	29	42	85	2.4
B4	46	27	83	2.2

C. SECTION THREE : INTERACTIVE PROCESSING STRATEGIES & EFFECTIVE LISTENING STRATEGIES:

Order of responses	Disagree	Neutral	Agree	Relative weight
C9	9	15	132	2.8
C10	15	19	122	2.7
C6	24	15	117	2.6
C4	19	29	108	2.6
C8	30	18	108	2.5
C1	33	27	96	2.4
C7	43	20	93	2.3
C3	38	37	81	2.3
C5	57	25	74	2.1
C2	64	22	70	2.0

D. SECTION FOUR: BOTTOM-UP PROCESSING STRATEGIES

Order of responses	Disagree	Neutral	Agree	Relative weight
D2	10	9	137	2.8
D3	19	17	120	2.6
D1	29	17	110	2.5
D4	27	32	97	2.4

As shown in table (3), statement 2 in section D receives a relative weight of 2.8, a high indicator of agreement, denoting that "the difficulty of language; i.e., infrequency of vocabulary, unfamiliar accent and rate of speech, is the most common difficulty encountered by students at this level of proficiency. This is congruent with the results of the studies by Griffith (1990; 1991; 1992); Rader (1990); and Henrichsen (1984). The second most common difficulty with processing aural texts is the acoustics (tape-recording is bad; voice of interlocutor is low; over-nasalization, vocal tract drawbacks, etc.); this statement (D 3) has received a weight of 2.6, and too, is a result compatible with the finding in the research by Blau (1990; 1991) ; Dunkel (1988) and Jacobs (1988) who have concluded that phonological modification (and Sandhi effects) greatly affect the level of perception of aural texts . The third most common difficulty has to do with the unfamiliarity of the topic of discourse, with a relative weight of 2. 5. Too, This finding is in line with the finding of Schmidt-Rinehart in her study on the effects of topic familiarity an L2 listening comprehension (1994) in that topic familiarity affects the scores of aural recall and aural comprehension; besides the effect of topic familiarity works in terms of proficiency level and course level, and as Schmidt-Rinehart points out, "topic familiarity emerged as a powerful factor at all levels of proficiency". Therefore, participants in the study who are at around intermediate and lower-intermediate proficiency level have found unfamiliarity of aural texts a source of aural processing difficulty. Amazingly, statement four in D has come fourth in order as a source of difficulty in processing aural input, with a relative weight of 2.43. Though this weight indicates an agreement by subjects that suprasegmentals (intonation, rhythm, pitch, tone, and stress) constitute a source of

difficulty in listening comprehension, it was expected that suprasegmentals are a primary source of difficulty in comprehending aural input.

Furthermore, the questionnaire study also revealed that the following are characteristics of the effective L2 listener; the following strategies listed below are in top-down order (according to their relative weights) from the most effective to the least:

1) recognizing words/phrases the listener gets in aural input ;
2) using visual clues accompanying discourse to help determine meaning ;
3) getting the general idea of what the listening passage is all about ;
4) relating aural text to background knowledge ;
5) looking for details in discourse necessary for comprehension and connecting ideas;
6) determining what to listen to ;
7) skipping unknown words , and following the speaker without being trapped up in understanding individual words / phrases;
8) focusing on the morpho-grammatical structure of the input;
9) looking for specific , local in formation ; i.e. who, what, what time , when , how much , etc.
10) focusing on working out the meaning of each word / phrase.

Other findings of the questionnaire study indicate that:

1) guessing is the top-down processing strategy most utilized by students;
2) topic evaluation is the bottom-up strategy most utilized by students;
3) recognizing words (or: phrases) is the most important characteristic of an effective listener ; and .

4) linguistic difficulty , such as the infrequency of lexis (linguistic code) ; accent variations and high rates of speech production , is the most serious barrier to aural comprehension .

All these four statements have received an equal relative weight (see table 2) (2. 8) which is a high indicator to agreement by all participants in the present study.

To verify or reject the second and third hypotheses of the present study, the experimental study has been launched. Data analysis is done using the SPSS –Version 16.

TABLE 4

ONE-WAY ANALYSIS OF CO-VARIANCE FOR THE EXPERIMENTAL GROUPS

Source of variation	Sum of Squares	df	Mean Square	F
Explained (between groups)	438.519	2	219.259	6.300
Residual (within groups)	1983.665	57	34.801	
Total	2422.183	59	41.054	

Note :F is significant at .01

TABLE 5

ONE-WAY ANALYSIS OF CO-VARIANCE FOR THE EXPERIMENTAL AND CONTROL GROUPS

Source of variation	Sum of Squares	df	Mean Square	F
Explained (between groups)	13935.452	4	3483.863	111.196
Residual (within groups)	3603.048	115	31.331	
Total	17538.500	119	147.382	

Note :F is significant at .01

TABLE 6

TA EFFECTS BETWEEN THE EXPERIMENTAL GROUPS 1, 2, 3 & CONTROL GROUP

Groups	Experimental$_1$	Experimental$_2$	Experimental$_3$	Control
TA	43.93	43.50	67.73	57.83
Total population	30	30	30	30

The tables above show that there are significant differences between the experimental groups to the good of post-testing. To determine the direction of significance, a follow-up statistical study has been launched using the Tukey follow-up statistical test(Φ).

Table 7 shows the results of Tukey (Φ) multiple comparison test of the adjusted means of the experimental groups on aural comprehension as approached in the three processing strategies:

TABLE 7

THE RESULTS OF (Φ) MATRIX FOR THE X'S 1,2 & 3

	X_1 43.1	X_2 43.7	X_3 67.93
X_1 43.1	0	0.6 F=.56	24.83 F=22.99
X_2 43.7	0	0	24.44 F=22.44
X_3 67.93	0	0	0

The table shows that experimental3, which received training on the interactive processing strategies has done on the posttest much better than the other two experimental groups where F between X1 and X3 = 22. 99 and between X2 and X3 = 22.44.This result verifies the hypothesis that there are significant differences between the mean scores of students receiving training on interactive processing strategies and students receiving training on either bottom-up or top-down processing strategies on the posttest.

The statistical observation that the three treatments have borne significant differences as compared between pretesting and posttesting and against a control group testifies to the aptness and verisimilitude of Chamot's argument (1987) for strategy-based instruction in listening - an argument further advocated for by Mendelsohn (1994; 1998); Saad (1996) and O'Malley et al (1989).

King (1989) in his study testifies to the verity of the hypothesis that strategy training enhances listening comprehension; the results of the present study go in the same line, and so do several studies as the one by Herron andSeay (1991) supporting the same dictum that strategy training enhances and develops listening comprehension It may be deduced that the use of video has further developed the listening comprehension abilities of subjects, an observation not farfetched, as many authors stress the importance of using video in teaching listening comprehension (Altman, 1989;Longerman, 1984; Rubin, 1995; Thompson & Rubin, 1996; Stempleski, 2000)

However, the use of interactive listening strategies has been endorsed in this study, as the interactive processing approach to listening comprehension has been evidenced as far more effective than the use of either up-down or bottom-up processing strategies in isolation.

This result is in line with the observation of Lynch(1995,180)who has advocated that.." ,the teaching of interactive listening strategies should form part of any L2 / FL listening course.

The result also shows that conscious, strategic training is effective in enhancing listening comprehension. In treatment group3, the instructor was careful to overtly train students on inter active processing strategies. This observation goes in line with the suggestion of Rabinowitz and Chi (1987) that strategy training must be conscious in order to be strategic;

i.e., teachers of L C should develop the metalinguistic awareness of their students.

With the verification of this hypothesis, some of the dubiety in previous studies has been reasonably erased: Rumelhart (1980) and Anderson, Lynch (1988) for example assign priority to top-down processing as more important than bottom-up processing; nevertheless, the present research has now evidenced the importance of integrating both bottom-up and top-down processing for effective listening comprehension. This is reasonably upheld by the work of Van- Duzer (1997), Tsui and Fullilove 1998 and O' Malley and company (1989).

The third hypothesis stating that there are significant differences between students using top-down strategies and students using bottom-up strategies in favour of top-down strategy users has been rejected. A t-test has been utilized in analyzing the differences between mean scores of experimental1 (bottom-up strategy training model) and experimental2 (top-down strategy training model). The t-value has been determined as tantamount to 0. 11 which is not a significant difference.

TABLE 8

THE RESULTS OF T-TEST BETWEEN X1 AND X2

Group	Mean scores	SD	t-value
X_1	43.47	6.8	0.11
X_2	43.27	6.6	

01. = df =30 + 3058= 2 –

The table value of t = ˜ 2.66 which is greater than the computed value (.11), where p < .01.Therefore,we conclude that there is no significant differences between X1 and X 2 ,because 0.11 is far, far less than 2.66.With this result, the second hypothesis stating that top-down processing strategy training is conducive to better results in aural comprehension is rejected.

The picture of listening comprehension of EFL students delineated here is commensurate with the general intuitions of researchers in cognitive processing strategies (for example, Rubin, 1994; O'Malley et al, 1989; Mendelsohn, 1994; Wilson, 1988). It appears that listening comprehension is an active and interactive process, thus requiring the involvement of higher order processes to develop a meaningful message of the aural input. Usually, the proficiency level of students determines how much EFL learners rely on any of the processing modes: bottom-up or top-down.

The findings of this research endorses the current theory suggestions about listening comprehension that effective listeners simultaneously use both top-down and bottom up strategies, now that one strategy makes up for gaps in the other until the entire message of the listening text is formulated. Ineffective listeners, it was found out, make overly use of either strategies, as there were no significant differences between bottom-up strategy users and top-down strategy users as far as effective listening comprehension is concerned. This finding is partially compatible with the conclusion of the study by O'Malley et al (1989:156) that : " ..effective listeners made use of both top-down and bottom-up processing strategies, while ineffective listeners became embedded in determining the meanings of individual words". This perfectly matches the basic tenets of the schema theory that spoken discourse does not carry meaning in and of itself, but as a result of the interaction between the listeners ' prior knowledge about the world and the aural text (Rumelhart,1980 ; Chiang and Dunkel,1992 ; Mendelsohn , 1995 ; Weissenreider, 1987).

IV. CONCLUSION

This research investigates the cognitive aspects of processing aural input and students' strategies used by EFL learners when they listen to English. This research was instigated by what Rubin (1994) has described as a sorely dire need for launching research in the cognitive processes involved in listening comprehension. Literature is quite dubious about whether bottom-up, top-down, or parallel processing is effective in comprehending aural texts. This research has been designed to investigate whether training on any of these processing strategies is more effective as to the improvement of aural comprehension. For this research to be done, the researcher designed a cognitive strategies questionnaire to initially identify which type of processing is most employed by participants in the study. An English video comprehension test for pretesting and posttesting subjects has been used. Besides ,a video course for intermediate learners adapted after the objectives of this study has been administered to participants in the study. Training on the three types of strategies has continued for one semester, i.e., for ten weeks, three hours a week.

Results of the study indicate that training on interactive processing strategies is most effective in improving aural comprehension. Additionally, training EFL learners on top-down processing strategies to help them understand listening passages does not effectively lead to better results (t value = .11 , $p \leq .01$).

Findings show that group three that received training on interactive processing strategies has improved much better than the other groups.

V. RECOMMENDATIONS:

Textbooks and materials that are prepared for developing listening comprehension are recommended to display an

awareness of the trend towards more integration of listening with speaking, pronunciation, speaking plus writing and reading. This trend towards skills integration is currently more emphatically stressed in the emergent body of listening literature, the logical reason being that people do not just listen, but can simultaneously speak; and for them to listen well, they must know how to pronounce well, and this overall entails good training on the code of the language (i.e., writing skills).

There should be more teaching of LC activities incorporated in listening coursework.

There should be more attention paid by the teacher to training EFL learners on the use of both top-down and bottom-up strategies.

EFL learners need to listen to different material in different ways. This entails that listening coursework must demonstrate variety and diversity as to the type of aural texts, the manner they are set out and whether they are live (everyday conversation / native or non-native speakers) or electronically retrieved (e.g., taped or video-taped).

EFL learners need to know what they are going to be listening for and how they should be listening for it.

There should be a considerable amount of authentic material incorporated in listening coursework.

Adequate attention must be paid to scaffolded language learning, especially in listening, and its gradual removal.

The content of the courses on listening comprehension should be organized around an invariably haphazard and sparse body of topics; whereas, they should be systematically organized around strategies.

There should be more use of video material for developing listening comprehension. Video provides ample visual support that activates the listeners' schemata, which in toto enhances aural processing.

Listening material should be structured around strategy-based listening units; procedurally, this can be organized in the following sequence:

- Attend to awareness and consciousness raising. For both, teachers and learners alike need to be aware of the power and value of strategies. Therefore, they should know the strategy well; know when to use it; and believe that it will be effective.
- Use pre-listening activities for activating existing background knowledge.
- Focus the listening. This component in any listening lesson ensures that listeners know what they are going to be listening to and why.
- Provide guided activities. These activities should be especially designed to provide a large amount of practice in using a particular strategy (Mendelsohn and Vandergrift, 1999).
- Practice with real data; i.e., for students, having been trained in strategy use, to practice a lot with real authentic material .In this context, it is advisable to focus on content and meaning rather than on language (Buck.1995).
- Use what has been comprehended, involving the utilization of aural discourse put down via note taking, filling in forms, charts, etc.
- 11. Multimedia should be used in organizing listening material; multimedia would help students learn at their own pace; and they provide sufficient visual cues in the least, not to mention the immediate feedback that multimedia software provides for learners on the spot.

Suggestions for Further Research in Listening Comprehension:

Further research is needed to explore practical, classroom-based ways of enhancing listening comprehension with beginning learners. In this way, the following are recommended:

1) More empirical research is further needed to ensure the effectiveness of strategy-based instruction in listening comprehension in early childhood and K-12 pupils.
2) Exploring the effectiveness of integrating listening with the other skills, using a multimedia learning environment.
3) Exploring the effects of perceived strategy-based instruction on developing listening comprehension in ESL/EFL contexts.
4) Investigating the effects of L1 as a discriminating variable on enhancing or impeding L2 listening comprehension.
5) Investigating the effectiveness of multimedia in augmenting listening comprehension.
6) Validation of testing methods used in accessing aural comprehension.

References:

[1] Aarnoutse, Cor A. J., Bos, Kees P. van den; and Saskia Brand- Gruwel (1998): “Effects of Listening Comprehension on Listening and Reading”. The Journal of Special Education, v 32 (2) Summer 1998 p. 115-126.

[2] Allthorpe, R.(1997): “The Effects of Listening Comprehension Strategy Training on IELTS Listening Test Scores.” Deakin Australia: unpublished M. A. Thesis, Deakin University.

[3] Altman, R. (1989): “The Video Connection”. Boston: Houghton Mifflin Co.

[4] Anderson A. & T. Lynch. (1988). Listening”. New York: Oxford University. Press.

[5] Anderson, J. R. (1983): “The Architecture of Cognition”. Cambridge: Mass., Howard University Press.

[6] Anderson, J. R. (1985): “Cognitive psychology and its Implications”. (2nd ed.)New York: Freeman.

[7] Ashraf, H., Fatemi, M., Naderi, S. (2013). The Effect of Active Learning Instruction on the Intermediate Iranian EFL Learners' Listening Comprehension Ability. International Journal of Linguistics, 5(5), 225-242.

[8] Bacon, Susan M. (1992a): “Authentic Listening in Spanish: How Learners Adjust their Strategies to the Difficulty of Input”. Hispania (75) 29-43.

[9] Bacon, Susan M. (1992b). The Relationship between Gender, Comprehension, Processing Strategies, Cognitive and Affective Response in Foreign Language Listening. Modern Language Journal (76) 160-77.

[10] Bartlett, F.C. (1932): “Remembering: A Study in Experimental and Social Psychology. Cambridge: Cambridge University Press.

[11] Berquist, B. (1994): "Working Memory Constraints in L2 Listening Comprehension". Paper Presented at European Association of Second language Acquisition. Conference. Aix-en Provence France, 1994.
[12] Berquist, B. (1997): "Memory Models Applied to L2 Comprehension: A Search for Common Ground". In G. Taillefer and A. K Pugh (eds.): "Reading in the University: First, Second, and Foreign Languages". Toulouse, France: Presses de l'Universite des Sciences Socieles de Toulouse. pp. 29-44.
[13] Blau, Eileen K. (1991): "More on Comprehension," ERIC Doc. NO. ED340 234.
[14] Blau, Eileen K.(1990): "The Effect of Syntax, Speed and Pauses on Listening Comprehension". TESOL Quarterly (24) 746-53.
[15] Bond, Z. S. & Sara Garnes (1980): "Misperceptions of Fluent Perception and Production of Fluent Speech" (ed.) D. R. A. Cole. Hillsdale, NJ: Erlbaum Associates, 115-32.
[16] Brown, G. and G Yule (1983): "Teaching the Spoken Language". Cambridge: Cambridge University Press.
[17] Buck, Gary (1995): "How to Become a Good Listening Teacher". In, Mendelsohn and J. Rubin (eds.) A Guide for the Teaching L2 Listening". San Diego. Dominie Press.
[18] Byrnes, H. (1984): "The Role of Listening Comprehension: a Theoretical Base". Foreign Language Annals (17) 31-29.
[19] Call, M. (1985): "Auditory Short-term Memory Listening Comprehension, and the Input Hypothesis". TESOL Quarterly (19) 765-81.
[20] Carpenter, Patricia A., Miyakey Akira, and Marcel Adam Just (1992): "Language Comprehension:

Sentence and Discourse Processing". Available on Wilson-Nelson Online Library: <oclc-fs@oclc.org>
[21] Carrell, P. L.(1988) : "Some Causes of Text-boundedness and Schema-Interference in ESL Reading". In: Carrell and Eskey (eds.),op cit,.
[22] Chamot, Anna Uhl & Lisa Kupper (1989) "Listening Comprehension Strategies in Second Language Acquisition". Applied Linguistics (10) 18-437.
[23] Chamot, Anna Uhl (1987): " The Learning Strategies of ESL Students". In A. Wenden and J. Rubin, eds. (1987) Learning Strategies in Language Learning. Englewood Cliffs: Prentice-Hall.
[24] Chiang, Chung Shing & Patricia Dunkel (1992): "The Effect of Speech Modification, Prior Knowledge and Listening Proficiency on EFL Lecture Learning". TESOL Quarterly (26) 345-74.
[25] Clark, H. & E. Clark (1977):"Psychology and Language". New York: Harcourt Brace-Jovarovich.
[26] Conrad, Linda (1985):"Semanticversus Syntactic Cues in Listening Comprehension". Studies in Second Language Accusation (7) 59-72.
[27] Conrad, Linda (1989): "The Effects of Time-compressed Speech on Listening Comprehension". Studies in Second Language Acquisition (11) 1-16
[28] Defillipis, D. A. (1980):"A Study of the Listening strategies Used by skillful and Unskillful College French Students in Aural Comprehension Tasks". Diss., University of Pittsburgh.
[29] Derry, S. J. Murphy, D. A. (1986): "Designing Systems That Train Learning Ability: from Theory to Practice". Review of Educational Research (56): 1-39.
[30] Dunkel, P. (1988): "Academic Listening and Lecture Note Taking for L1/ L2 Students: the Need to

Investigate the Utility of the Axioms of Good Note-Taking". TESOL Canada Journal (6) 11-26.
[31] Faerch C. & Kasper, G. (1986): "The Role of Comprehension in Second Language Learning". Applied Linguistics (7): 257-274.
[32] Gay, L. R. (1996): "Educational Research: Competencies for Analysis and Application". New Jersey: Prentice-Hall.
[33] Graham, Suzanne (1997): "Effective Language Learning: Positive Strategies for Advanced Level Language Learning". Multilingual Matters Ltd.
[34] Griffiths, Roger (1990): "Speech Rate and Nonnative Speaker Comprehension: a Preliminary Study in the Time-benefit Analysis." Language Learning (40) 311-36.
[35] Griffiths, Roger (1991): "Pausological Research in an L2 Context: a Rationale and Review of Selected Studies". Applied Linguistics (12) 345-64.
[36] Griffiths, Roger (1992): "Speech Rate and Listening Comprehension: Further Evidence of the Relationship". TESOL Quarterly (26) 385-91.
[37] Henrichsen, Lynn E.(1984): "Sandhi-Variation: A Filter of Input for Learners of ESL". Language Learning 34:103-26
[38] Herron, Carol A. & Irene Seay (1991): "The Effect of Authentic Aural Texts on Student Listening Comprehension in the Foreign Language Classroom". Foreign Language Annals (24) 487 –95.
[39] Hoven, Debra (1999): "A Model for Listening and Viewing Comprehension". Language Learning and Technology (3)1 pp.88-103
[40] Howard, D. (1985): " Cognitive Psychology: Memory, Language and Thought". New York: Macmillan.

[41] Jannejad, M., Shokouhi, H., Haghighi, S. (2012). The Effects of Controlled Language Processing on Listening Comprehension and Recall. English Language Teaching, 5(9), 155-165.
[42] Jonassen, D. (1992): "What are Cognitive Tools"? In P. A. M. Komers D. H. Jonassen, & J. T. Mayes (eds.). "Cognitive Tools for Learning". pp. 1-6. Berlin: Springer Verlag.
[43] Kassem, H. (2015). The Relationship between Listening Strategies Used by Egyptian EFL College Sophomores and Their Listening Comprehension and Self-Efficacy. English Language Teaching, 8(2), 153-169.
[44] King, Alison (1989): "Improving Lecture Comprehension Effects of a Metacognitive Strategy". Applied Cognitive Psychology (5) 331 –46.
[45] Long, Donna. R. (1989): "Second Language Listening Comprehension: A Schema-Theoretic Perspective". Modern Language Journal (73): 32-40
[46] Longerman, J. (1984): "Video in Language Teaching". Cambridge: Cambridge University Press.
[47] Lund, R. Randall, J. (1991): "A Comparison of Second Language Listening and Reading Comprehension". The Modern Language Journal, 75(2) : 196-204.
[48] Lund, Randall J. (1991): "A Comparison of Second Language Listening and Reading Comprehension". Modern Language Journal (75) 2:196-211.
[49] Lund, Randall J. (1997b): "The Effectsof Listening Tasks on Comprehension". Paper presented at the Research Perspectives in Adult Language Learning and Acquisition Annual Symposium. Columbus, OH, October 11-12.
[50] Lynch, T. (1995): "The Development of Interactive Listening Strategies in Second language Academic Setting". In: Mendelsohn & Rubin (eds.) 1995.

[51] Lynch, T. (1998): "Theoretical Perspectives on Listening". Annual review of Applied Linguistics (18): 3-19.
[52] MacIntyre, P. D. and Noels, K.A. (1996): "Using Social-Psychological Variables to Predict the Use of Language Learning Strategies". Foreign Language Annals 29:373-386.
[53] Markham, P.L. & Michael, Latham (1987): "The Influence of Religion-Specific Background Knowledge on the Listening Comprehension of Adult Second Language Students". Language Learning (37) 157-70.
[54] Marlsen-Wilson, W. & Tyler L. K. (1980): "The Temporal Structure of Spoken Language Understanding". Cognition (8), 1-71.
[55] Mendelsohn, D. J. (1994): "Learning to Listen: a Strategy-based Approach for the Second Language Learner", San Diego: Dominie Press.
[56] Mendelsohn, D. J. (1998): "Teaching Listening". Annual Review of Applied Linguistics, 18, 171 –191.
[57] Murphy, J. M. (1985): "Investigation into the Listening Strategies of ESL College Students". Paper Presented at TESOL, New York 1985.
[58] Murphy, J.(1991): "Oral Communication in TESOL: Integrating Speaking, Listening and Pronunciation". TESOL Quarterly (25) 1: 51-76.
[59] O'Malley T. M., Chamot, A. U. and L. Kupper (1989): "Listening Comprehension Strategies in Second Language Acquisition". Cambridge: Cambridge University Press.
[60] O'Malley, J.M. and Chamot, A.U. (1990): " Learning Strategies in Second Language Acquisition". Cambridge: Cambridge University Press.
[61] Pichora-Fuller, M. & Levitt, H. (2012). Speech Comprehension Training and Auditory and Cognitive

Processing in Older Adults. American Journal of Audiology (Online) 21 (2), 351-7.

[62] Rabinowitz, M. & Chi, M. T.(1987): "An Interactive Model of Strategic Processing". In S. J. Ceci (ed.) " Handbook of Cognitive Social and Neuro-Psychological Aspects of Learning Disabilities". Hillsdale, NJ: Erlbaum.

[63] Rader, Karen Elizabeth (1990): "The Effects of Three Different Levels of Word Rate on the Listening Comprehension of Third Quarter University Spanish Students". DAI, Ohio State University

[64] Richards, J. C. (1983): "Listening Comprehension: Approach, Design, Procedure". TESOL Quarterly 17 (2) 219-240.

[65] Rost, M. (1990): "Listening in Language Learning" London : Longman

[66] Rost, M. and Ross, S. (1991): "Learner Use of Strategies in Interaction: Typology and Teachability". Language Learning (41)2 :235 –273

[67] Rubin .J., Quinn, John & Joann Enos (1988): "Improving Foreign Language Listening Comprehension". Report Prepared for the US Department of Education, International Research and Studies Program, Washington, DC, Sept. 1988 Project number 017 AH 70028, 1988.

[68] Rubin, J. (1994): " A Review of Second Language Listening Comprehension Research". Modern Language Journal Research , 78: 199-221.

[69] Rubin, J. (1995): " The contribution of Video to the Development of Competence in Listening". In J. Rubin and D. Mendelsohn ,1995(eds.).

[70] Rubin, J. (1996): " Language Learning Strategies Program". Videodisc. J. Rubin associates.

[71] Rubin, Joan (1987): “Learner Strategies: Theoretical Assumptions, Research History and Typology”. In Wenden and Rubin, ed.(1987) pp. 15-30
[72] Rumelhart, D. E. (1980): “Schemata: the Building Blocks of Cognition”. In, R. J. Spiro, B. C. Bruce, and W. F. Prewer (eds.) “Theoretical Issues in Reading Comprehension”. Hillsdale NJ:L. Erlbaum. 3-58.
[73] Saad, Abdel Reheim (1996): “The Relationship Between Learners Perceived Use of Listening Strategies and Performance”, Faculty of Education Journal, no 57, Aug. 1996 Azhar University.
[74] Samuels, S. J. and Kamil, K.(1984): “Models of the reading Process”. In: P. D. Pearson (ed.): handbook of Reading Research”. New York: Longman.
[75] Sanford, A.J. & S. Garrod (1981), Understanding Written Language , John Wiley & Sons, Chichester
[76] Schank, R. C. and Abelson, R. P. (1977): “Scripts, Plans, Goals and Understanding”. Hillsdale, NJ. Erlbaum.
[77] Sotoudeh, N. (2013). Effect of Listening Strategy Training on Iranian EFL Learners' Listening Comprehension and Use of Strategies, International Journal of Linguistics, 5 (6), 171-193.
[78] Spearrit, (1962): “Listening Comprehension A Factorial Analysis” Cited in Mendelsohn, 1994.
[79] Stanovich, K. (1980): “Toward an Interactive Compensatory Model of Individual Differences in the Development of Reading Fluency”. Reading Research Quarterly 16: 32-71.
[80] Stempleski, Susan (2000): “Video Materials Development”. A Workshop Attended at Assiut Sustainability and Distinction Centre, Assiut University under Aegis of USIA, February 2nd. 2000.

[81] Thompson, Irene & Rubin, Joan (1996): "Can Strategy Instruction Improve Listening Comprehension?". Foreign Language Annals, 29(3): 331-342.
[82] Tomlinson , Brian (1997): cited in : Helgeson ,Steven Brown ,and Dolores Smith (1997): "Active Listening : Understanding through Content: Student's Book 3" .
[83] Tsui, Amy B. M. and Fullilove , John (1998): "Bottom-up or Top-down Processing as a Discriminator of L2 Listening Performance". Applied Linguistics, vol. 19, no 4 December (1998), Oxford University Press.
[84] Van Duzer, Carol (1997): "Improving ESL Learners' Listening Skills: at the Workplace and Beyond". Center for Applied Linguistics. NCLE: Washington
[85] Van Han,N., van Rensburg, H. (2014). The Effect of Computer Assisted Language Learning (CALL) on Performance in the Test of English for International Communication (TOEIC) Listening Module. English Language Teaching, 7(2), 30-41.
[86] Vandergrift, L. (1999b): "Constructing Meaning in L2 Listening: Evidence from protocols. In S. Lapkin (ed.) "French as a Second".
[87] Vandergrift, Laurens (1992): "The Comprehension Strategies of Second Language (French) Listeners". Diss. University of Alberta.
[88] VanPatten, B. (1994): "Can Learners Attend to Form and Content While Processing Input". Hispania (72) 409 –17.
[89] VanPatten, B. (1998): "Cognitive Characteristics of Adult Second Language Learners" In Byrnes , Heidi (1998): "Learning Foreign and Second Languages: Perspectives in Research and Scholarship". The Modern Language Association of America, New York.

[90] Voss, Bernd (1984) : “Slips of the Ear : Investigations into the Speech Perception Behavior of German Speakers of English”.
[91] Weinstein, G. E. and Mayer, R.E. (1986): “The teaching of Learning Strategies”. In: M. C. Witrock, ed. Handbook of Research on Teaching, New York: Macmillan.
[92] Weissenreider, M. (1987) “Listening to the News in Spanish” Modern Language Journal (71) : 18-27
[93] Wenden , A (1983): “Literature Review: The Process of Intervention” .Language Learning 33 (1):103-121
[94] Willing, K. (1988): “ Learning Styles in Adult Migrant Education”. Australia: NCRC.
[95] Wilson, J. E. (1988): “ Implications of Learning Strategy Research and Training: What It Has to Say to the Practitioner?”. In: E. Goetz and P. Alexander (eds.) Learning and Study Strategies. New York: Academic Press. Pp.323-331.
[96] Wolff, D. (1987): “ Some assumptions about Second Language Text Comprehension”. Studies in Second Language Acquisition ,9:307-326.

The English Reading Comprehension Questionnaire

Appendix I

Please read the following, and choose the best level of agreement that corresponds to your perceptions of the statements on the left column:

Statement	Strongly Disagree	Disagree	Don't Know	Agree	Strongly Agree
A: Participants' Self-evaluation of Their Reading Skills, Reading Strategies and Attitudes towards English Reading					
1. I have insufficient vocabulary to read in English well.					
2. My basic grammar proficiency is poor.					
3. I don't know how to pronounce and spell words.					
4. I am not interested in learning English.					
5. I have few opportunities to contact with native-speakers and drill English.					
6. Usually I know the meaning of every word in the text, but I still can't understand the implicit meaning in whole text.					

7. I like traditional grammar-translation method.					
8. I can make graphic organizers for memorizing the text.					
9. I like to read in English in groups.					
B. Preferences for EFL Reading Instruction Methods:					
10. I prefer a communicative approach that emphasizes language fluency, conversation and situational teaching instead of syntactic and rhetoric instruction.					
11. I prefer a reciprocal approach, in which the teacher models think-aloud first, and then gradually imparts the responsibility of practice to students; that is, “guided practice”.					
12. I prefer extensive reading for general understanding of the text, using scanning and skimming.					
13. I prefer intensive reading (read the text for linguistic and semantics in					

details).					
14. I prefer interactive reading processing approach (bottom – up and top – down approach).					

Checklist of Effective English Reading Strategies

Appendix II

This checklist is for identifying the participants' ability to use specific effective reading strategies used in the course (Tapestry Reading II). This checklist taps into the participants' self-evaluation of their reading skills, reading strategies and attitudes towards English reading. Please read each statement carefully and circle the response according to your real situation.

Dimension	**Level of Agreement**				
Statement	**Strongly Disagree**	**Disagree**	**Don't Know**	**Agree**	**Strongly Agree**
1.I preview and survey the text before reading.					
2.I make predictions based on titles, subtitles and pictures before or while reading.					
3.I paraphrase and summarise what I read.					

4.I make inferences based on evidences in a text.					
5.I scan while reading to look quickly for specific information.					
6.I take notes while reading to help organize and remember important information.					
7.I figure out the meaning of a difficult word by looking at the context.					
8.I try to distinguish facts and opinions in a text.					
9.I always look for the gist of the text.					
10. I write notes in the margin of my books as well as underline or highlight to help myself read actively					
11. I use graphic organizers such as flow charts, spider maps, and cluster diagrams.					