Research article

The Impacts of Rhetorical Schema on English Majors’ Listening Comprehension in Academic Situations at University of Technology and Education HCMC

Le Thi Kim Thu
Faculty of Foreign Language, Ton Duc Thang University, Ho Chi Minh City, Vietnam

Abstract
Listening is a basic language skill which involves the interaction of diverse factors affecting learners’ listening comprehension. Learners often encounter various difficulties in listening to an oral text with a little knowledge of the reasons why it occurs. However, teachers mainly pay more attention to it as a product rather than as a process. Normally, listening comprehension problems originate from factors which are divided into two main groups: internal and external (Hedge, 2005; Luchini, 2009). The factors about listening strategies have been under-researched although they play a significant role in guiding learners through what to listen to and how to listen to it effectively. This study sought to investigate the effects of rhetorical schema including note-taking and four listening strategies, and the extent to which students change as regards strategy use and listening achievement in academic settings. 40 second-year EFL students from the two listening classes, one treated as the experimental group (EG) and the other as the control group (CG), at the Faculty of Foreign Language of the University of Technology and Education Ho Chi Minh City (HCM UTE) were invited to participate in the study. Data were collected from questionnaire sent to EG and listening tests taken from IELTS listening part 4 to both EG and CG. The findings substantiated that EG students are more open to use the strategies introduced so rhetorical schema positively enhance their listening comprehension. Notably, the scores of the rank high of distinction appeared for the first time albeit its small percentage in EG. Students also express their significant attitudinal changes towards rhetorical strategies in terms of more awareness of its importance, more frequent use, and confidence in listening to lectures in the future.

Keywords: rhetorical schema, listening strategies, note-taking strategies.
1. Introduction
No one can deny the fact that language teaching and learning has become one of the most common research topics for ages. Studies on the four English skills have been continuously conducted in order to explore the most effective method to facilitate the teaching and learning process. Of the four, listening - the ability to identify and understand what others are saying; this ability involves an understanding of a speaker’s accent or pronunciation, grammar and vocabulary, and a grasp of his/her meaning (Howatt & Dakin, 1974) - has emerged as the core factor in the process of second language acquisition and demands a much greater prominence in language teaching (Oxford, 1993, Nguyen, 2012).

Notwithstanding its crucial role, the process of teaching and learning listening still suffers from a myriad of drawbacks. To start with, learners are often fearful of listening tasks whose purpose and context they do not know or whose topics they are not familiar with. Besides, second language learners often do not approach the listening task in the most efficient way compared to what they may do in their first language. A lack of essential strategies to successfully approach a task is obviously owing to listening approaches introduced by the teacher. For their sake, teachers still tend to test listening rather than teach it. In other words, L2 learners are not taught and provided appropriate strategies to apply in different listening tasks.

Within the context of language teaching and learning in Vietnam, instructions for teaching listening mainly target its product instead of process, which makes it a problematic elemental approach. First, when it comes to the issues of information retention, especially in academic situations where one listens to a lecture, Vietnamese learners say that they can catch the speed and understand what the speakers are saying, but they find themselves unable to retain contents for post-listening questions. It is apparent that learners can govern the speed of what they hear but they cannot go back or “rewind” to listen to the lost content. Second, within the context of the classroom the listening materials are often recorded and can be replayed. All of these play no role in a genuine listening context as well as in a real listening test, for instance TOEFL iBT or IELTS. Therefore, the application of listening strategies and note-taking strategies is considered thoroughly. Nguyen (2010, p. 9) says that acquiring and mastering note-taking is more likely to become a big hindrance to learners while they often find it difficult to exploit this skill in learning experience. She also raises questions on how to equip students with note-taking strategies which significantly support their listening comprehension in any situations, especially in academic ones. Statistically, Le (2013, p. 34) has found that 82% of Vietnamese learners experience challenges in lectures or seminars in which barriers with note-taking account for 44%. Additionally, knowledge of language, culture and other kinds of background knowledge also bring obstacles to Vietnamese learners. Ton (2009, p. 3) points out that 70% of Vietnamese students lack necessary function languages. Combination between background knowledge of language and that of majoring knowledge is of great importance.

Applying suitable listening as well as note-taking strategies in a lecture consequently can be an effective and useful tool to increase attention to the listening process and enhance retention of the content (Dunkel & Davy, 1989). In relation to the development of schema theory, according to Edwards and McDonald (1993), it is concerned with the organization of information in memory and how existing knowledge influences the encoding of new information and its retrieval from memory” (p. 75). Schemas are very essential not only for interpreting information but for decoding how that information is organized as well. Orasanu (1986) states that “the schema theory highlights the fact that more than one interpretation of a text is possible. The schema that will be brought to bear on a text
depends on the reader’s age, sex, race, religion, nationality, and occupation. In short, it depends on the reader’s prior cultural reference group” (p. 34). The first outline of schema theory was developed in 1932 by Barlett, who pays much attention to the role of memory. He argued that memory is an active process, not reproductive, but constructive in its operation. “The schema is the mental map” or set of mental connections we had in our head about a particular idea of thing” (Myhill, Jones & Hopper, 2006, p. 21). Thus, Orasanu (1986) addresses that according to schema theory, listening involves “more or less simultaneous analysis at many different levels – from the textual levels of graphphonemic, morphemic, semantic, and syntactic features, to the experience-based levels of knowledge of specific content, pragmatics, and interpretative thinking” (p. 35).

In this study, the author introduced rhetorical schema including listening strategies and note-taking strategies in academic setting in order to help English majors get over these above-mentioned difficulties and improve their listening skills.

2. Listening in EFL learning and teaching
Listening is defined under different wording worldwide but widely understood as an invisible mental process (Vandergrift, 1999). As defined by Oxford (1993), “it is a complex, problem solving skill” and it is “more than just a perception of the sounds” (p. 206). Buck (2001) argues that “listening involves both linguistic and non-linguistic knowledge” (p. 247). In other words, linguistic knowledge relates to “knowledge of phonology, lexis, syntax, semantics discourse structure, pragmatics, and sociolinguistics, whereas non-linguistic one refers to “knowledge of the topic, the context and general knowledge about the world and how it works” (ibid., p. 247). The general comprehension process, therefore, appears in the following stages:

1. The listener takes in raw speech and holds an image of it in short-term memory.
2. An attempt is made to organize what was heard in constituents, identifying their content and function.
3. As constituents are identified, they are used to construct propositions, grouping the propositions together to form a coherent message.
4. Once the listener has identified and reconstructed the propositional meanings, these are held in long-term memory, and the form in which the message was originally received is deleted. (Clark & Clark 1977, p. 49)

Besides, awareness of listening orientation is far more significant in listening comprehension. In its broadest framework, Rost (2002) defines some orientation as follows:

- A receptive orientation: Receiving what the speaker actually says
- A constructive orientation: Constructing and representing meaning
- A collaborative orientation: Negotiating meaning with the speaker and responding
- A transformative orientation: Creating meaning through involvement, imagination and empathy

Each listening orientation is popular in different situations. While a receptive orientation is for radio and television programs in which listeners only receive what speakers say, collaborative orientation is common in business circumstances such as discussions, negotiations, or meetings among companies. Examples of constructive orientation include teaching and learning situations where teachers give the information; learners listen, adapt, construct their own meaning and finally present the meaning in forms of tests, presentations, and so forth.

Three models of listening, which have dominated language pedagogy since the early 1980s, can be identified as bottom-up, top-down and interactive approach. The bottom-up processing is a linear data-driven fashion. Comprehension occurs in the extent that listeners
decode the sounds they hear, from the smallest meaningful units – phonemes – to the complete text. Anderson and Lynch (1998, p. 9) call this the “listener as tape recorder view” for he/she takes in and stores aural messages sequentially, one by one, in much the same way as a tape recorder. Conversely, the top-down processing involves the listener’s active construction of meaning based on expectations, inferences, and other relevant prior knowledge (Nunan, 1991). This has been called “listener as model builder” (Anderson & Lynch, 1998, p. 11). The approach totally focuses on interpretation of meaning by integrating with contexts and situations including knowledge of the topic at hand, the speakers, and their relationship to the situations instead of recognition of sounds, words and sentences. However, meaning does not reside exclusively within the words on the tape recorder or on the page. Actually, it also remains in the head of listeners. It is widely accepted that listeners gain good understanding not only based on the messages they can recall – language schema - but also by connecting what they hear with what they have already known – knowledge schema. In other words, learners need to utilize both bottom-up and top-down process effectively. So, interactive approach, which wears down the disadvantages of bottom-up and top-down processing, is applied to enhance the comprehension (Fang, 2008). Therefore, it is noticeable that both language schema and knowledge schema are crucial in teaching listening (Wolvin & Coakley, 1993; Nunan, 2007).

3. Schema theory

Researchers have given a large number of different definitions of schema (plural of schemata). According to Alba and Hasher (1983), schema is “general knowledge a person possesses about a particular domain” (p. 129). Brewer and Nakamura (1984) explain that “schemas are the unconscious cognitive structures that underlie human knowledge and skill” (p. 136). Cohen et al (1993) define schemas as “packets of information stored in memory representing general knowledge about objects, situations, events, or actions” (p. 28). Cook (1997) regards schema as “a mental representation of a typical instance” (p. 86).

Schemata are categorized into two types: content schemata and rhetorical schemata (Carrel, 1983; Carrell & Eisterhold, 1988). The former refers to “background information” on the topic and the latter relates to “knowledge about how discourse is organized with respect to different genres, different topics, or different purposes (e.g. transactional versus interactional), including relevant sociocultural knowledge” (Celce-Murcia & Olshtain, 2000, p.102). In addition, Juan and Flor (2006) insist that “content schema are networks of knowledge on different topics and formal schema are derived from our knowledge of the structure of discourse is being listened to make it easier to engage in top-down processing strategies, such as predicting and inferencing” (p. 93). Carrel and Eisterhold (1988) assert that listeners lack culture-specific content schema seriously. It is of importance that “in English listening, the content schema must be activated for the learners to access their prior knowledge” (Lingzhu, 2003, p. 9).

4. Rhetorical schema in developing listening comprehension in academic situation

4.1 Note-taking strategies in academic situation

Taking notes in academic listening situations is commonly considered as an effective strategy with regard to student attention to the lecture and retention of academic discourse (Dunkel, 1988; Dunkel & Davy, 1989). O’Hara (2005) identifies another aspect of note-taking which involves active listening, connecting and relating information to the ideas learners already know, and seeking answers to questions that arise from the material. Since note-taking strategies can ease learners’ challenges in retaining academic discourse and support their learning process, Di Vesta and Gray (1972) and Dunkel (2005) discuss its
distinctive features in terms of two postulated functions. The facilitative effect of note-taking on the assimilation of lecture content is thought to derive from either or both of these functions: the encoding function and the external function.

According to Di Vesta and Gray (1972), Dunkel (2005), and Kiewra (1989) the encoding function is divided between note-takers who attend the listening carefully in order to avoid missing critical points, compare new information to what is already stored in their head, create a new and larger structure of information where all pieces of information is now linked and related to each other and used for the long term by encoding new knowledge and translating lecturers’ words into learners’ own words; and listeners who daydream, read other material, doodle, and lose concentration. In 1978, Hartley and Davis contrasted these functions and suggested that encoding facilitate learning and retention by activating intentional mechanisms and engaging learners’ cognitive processes of coding, integrating, synthesizing, and transforming the aurally received input into a personally meaningful form. Equally importantly, the significance of the external storage function of note-taking is recognized by those who postulate that the notes serve as an external repository of information which permits later revision and review to stimulate information recall. Additionally, Carrier and Titus (1979) named the external storage versus encoding hypotheses in relation to the utility of the product versus process dichotomy.

The process value of the encoding function

Some researchers view the encoding function of note-taking as the more important of the two (Barnett, Di Vesta, & Rogozinski, 1981; Howe, 1970). They argue that close dependence on notes as an external tool can lead to ineffective learning if the process of note-taking fails to happen. Howe (1974) stipulates that learners’ familiarity of the knowledge they are attempting to assimilate and a great processing of information are assured thanks to the aids of taking notes. Moreover, in the vast effort theory of note-taking (Peper & Mayer, 1978) and Craik and Lockhart’s (1972) principle of levels of processing, learners should put more efforts and become part of the learning process rather than just listening, and that material which requires deeper levels of activity is encoded more deeply.

The product value of the external storage function

There is a wide range of empirical studies that support the conclusion that a combination of taking and reviewing notes yields maximum immediate and delayed recall (Fisher & Harries, 1973). It is convinced that learners gain superior performance on both immediate and delayed tests of recall in lights of four significantly important points of the storage claim: (1) learners are given an additional learning trial when reviewing notes; (2) note review inhibits recall of irrelevant material; (3) learners who review their notes apparently are able to focus their retrieval efforts more effectively; and (4) notes cue reconstruction of parts of the lecture not initially recorded in them.

4.2 Listening strategies in academic situation

According to Dunkel and Davy (1989), and Dunkel et al. (1989), the quality of notes is considerably influenced by their target listening proficiency which is closely linked to the performance on the listening sub-skills that particular test items are designed to measure (Dunkel & Davy, 1989; Dunkel et al., 1989). Except for the content of the lecture and levels of performance that are necessary for academic success, students are expected to obtain different levels of information presented in listening with the help of various comprehension sub-skills or levels of understanding. An operationalization made of the component micro-skills that constitute learners’ competence as listeners is designed by Richards (1983). Within the framework of this research, of the eighteen micro-skills relevant to academic listening situations, only four are purposefully chosen, synthesized and adapted in order to be comparable with test items given in the listening test. Although
these listening strategies are taught separately, they support and closely link to each other in listening practice.

*Listening to topic and big picture of a lecture (LTOP)*

At the beginning of a lecture, the professor usually tells learners the topic, or what the lecture is going to be about. He/She also tells learners the big picture, the general plan of the lecture. It is a kind of map for them to follow that shows how he/she will present the material in the lecture. Listening for words or expressions and recognizing lecture language that she/he uses to signal the topic and big picture significantly help learners to obtain the scope as well as purposes of the lecture as a whole (Powers, 1986; Salehzadeh, 2006; Wong, 2009). Consequently, understanding the scope and purposes of the lecture directs them easily to the following information.

*Listening to signals of transition in a lecture (LTRA)*

After the topic and big picture of the lecture, professor will tell learners at the beginning of a lecture how information will be organized. During a lecture, he/she will give them signals to help them follow this organization. A variety of specific words and phrases is introduced when they move from one idea to another. These transitions tell listeners that a new idea is coming or that they have finished one idea and are beginning another idea (Powers, 1986; Salehzadeh, 2006; Wong, 2009).

*Listening to main ideas and supporting ideas in a lecture*

It is apparent that the main ideas of a lecture often follow signals of transitions. Whenever the lecturer uses lecture language to indicate the starting or ending of an idea, he/she afterward presents the main information. Therefore, listening to signals of transitions crucially gives ways to grasping the whole ideas of a lecture (Rilling, 1996; Rost, 1994; Wong, 2009). Besides, during a lecture, the lecturer will often communicate that he/she is making an important point and that listeners should pay special attention to it (Powers, 1986; Salehzadeh, 2006).

*Listening to definition, example, and explanation in a lecture*

Apart from above-noted lecture languages, ones that present definition, examples as well as explanation plays a vital role in identifying the supporting and the minor ideas in a lecture (Riling, 1996; Rost, 1994). During the lecture, it is inevitable to encounter some specialized and new words; the lecturer often uses words and phrases to explain information, meaning or ideas. Moreover, he/she also gives a plenty of examples during a lecture. These examples of specific things help students understand general ideas. Additionally, many explanations which are undeniable are also given during a lecture to describe complex processes and ideas in a way that makes them easier to comprehend (Powers, 1986; Salehzadeh, 2006; Wong, 2009).

**4.3 Rhetorical schema and listening comprehension**

Notes taken from lectures may be good indicators of test takers’ second language academic listening comprehension proficiency and performance (Narjaikaew, Emarat, & Cowie, 2009; Hayati & Jalilifar, 2009, Song, 2011). Barron (2006, p. 67) states that by learning to take better notes when listening to lectures, learners will have the information they need to respond to the listening comprehension questions. Moreover, the effectiveness of note-taking is also examined in a “Study Guides on Note-taking Strategies” by Penn State University (2002). It is stated that using an outline to take notes is easy to review by turning main points into answers for comprehension questions and reduces editing. The application of visual formats, for example mapping or charting method, in taking notes helps listeners to avoid irrelevant content and provides easy review mechanism for both memorization of facts and study of comparisons and relationships. In their research, Kiewra, Benton, Kim, Risch, and Christensen (1995) found that note-taking increases the completeness of
students’ notes and fosters more internal connections among ideas. A note-taking approach is also a supportive and motivational tool that helps learners to concentrate on the lecture, and promotes their interest in reviewing and practicing listening. It assists them in gaining attention, instructing note-taking process and giving retrieval cues (Armbruster, 2000, p. 194; Dunkel, 1988). In terms of learners’ emotions and attitudes, Hayati and Jalilifar (2009) and Song (2011) confirm that note-taking strategies can increase learners’ interest as well as motivation in listening. Besides, the researchers realize that after learning and practicing note-taking strategies in class, students are more willing to try to listen to other lectures and do their homework in their own time at home to enhance their listening skills. Chaudron (1994), Tsai (2004) and Carrell (2007) confirm that note-taking strategies can stimulate and motivate students’ interest. Additionally, they point out that note-taking strategies are so powerful and encouraging that learners can get over all the difficulties as well as barriers in language and emotions when listening to lectures. With their help, learners can create an interaction with teachers, and build a strong relationship between their listening habits and their autonomous learning. Note-taking strategies enhance learners’ positive emotions, motivation and attitudes towards learning in general, and develop a greater sense of autonomy and independence for further language learning, all of which significantly contribute to behavior change in a good direction.

5. Research questions
The purpose of the current study is to investigate (i) the impacts of rhetorical schema including note-taking strategies and listening strategies on students’ listening comprehension in academic situations and (ii) their attitudes towards the application. In particular, the research seeks answers for the following question.

*What is the educational value of applying rhetorical schema to improve learners’ listening comprehension in academic situations?*

As this question entails two aspects of comprehension ability and attitudes, the following two sub-questions are also addressed:

1. *To what extent does rhetorical schema help learners improve their listening comprehension in academic situations?*
2. *What are learners’ attitudes towards the application of rhetorical schema in academic situations?*

6. Method
6.1 Participants and context
The participants in the study were 40 students with an age range of 19-20 from Faculty of Foreign Language at University of Technology and Education. All participants were divided into two groups: the experimental group (EG, 14 females and 7 males) and the control group (CG, 15 females and 4 males). Two classes were selected since they were similar in English proficiency which was examined by a baseline test, taught by the researcher, and studied under the same context. To test the research assumptions, all the applicants undertook the academic training in which lectures are use as the primary listening material.

6.2 Instrument
Listening tests and questionnaire were the measurement instruments selected in this study. Since both pre- and post-test target at assessing the effect of rhetorical schema, they are eight-minute-long, similar in level of difficulty and taken from IELTS Cambridge 11. Each test has ten open-ended questions requiring students to write down answers with no more than one word. The pre-test from Test 1 – Section 4 was administered in week 1 of the training process about “Ocean Biodiversity”. The post-test from Test 3 – Section 4 was
implemented in week 10 after eight training sections about “Ethnography in Business” to investigate the efficiency of the intervention.

A 1-5 Likert scale questionnaire adopted from Gardner’s (1985) Attitudes/Motivation Test Battery (AMTB) and Nguyen (2012) is delivered in Vietnamese to the EG at the end of the course with the purpose of probing the learners’ thoughts and perceptions about the helpfulness of rhetorical schema in test performance, as well as comparing their attitudinal changes towards the treatment. This scale is applied in the research so as to serve the following reasons: (1) It is regarded as the most common one used in Vietnam research context; (2) a scale with a middle point helps the respondents express their opinions easily and show their perceptions precisely; (3) a symmetrical pattern is chosen for the sake of convenience for the experimenter to synthesize, analyze, and interpret the data collected.

6.3 Data analysis
The current study used SPSS 20 for windows for the statistical analysis measures (i) frequency and percentage of test scores and questionnaire to present the distributions of a single variable, (ii) the Levene’s test in order to check the equality of the variances of the two groups, (iii) t-test to compare mean scores between EG and CG in order to examine the similarity of the pre-test and the difference of the post-test, (iv) mean scores calculated for the applicants’ performance.

7. Results
Results for research question 1 and 2 were found from data from the listening tests and questionnaire, and presented as follows.
The reliability of pre-test and post-test was checked thanks to Cronbach Alpha value. Both pre-test and post-test values were greater than 0.7, which meant that these test items had high internal consistency.

<table>
<thead>
<tr>
<th>Test</th>
<th>Cronbach’s Alpha</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>.735</td>
<td>22</td>
</tr>
<tr>
<td>Post-test</td>
<td>.706</td>
<td>17</td>
</tr>
</tbody>
</table>

Table 1: Internal consistency of pre-test and post-test

7.1 Research question 1
Percentage of pre-test and post-test between EG and CG
Students’ individual scores are marked from 0 to 9 (IELTS listening scale), then grouped these scores into four levels: weak (0 – 3.5), average (4 – 5.5), fair (6 – 7.5) and good (8 – 9). The following table displayed the distributions of test scores from pretest and posttest between EG and CG.

<table>
<thead>
<tr>
<th>Test/Group</th>
<th>Weak</th>
<th>Average</th>
<th>Fair</th>
<th>Good</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EG</td>
<td>24%</td>
<td>53%</td>
<td>23%</td>
<td>0%</td>
</tr>
<tr>
<td>CG</td>
<td>24%</td>
<td>44%</td>
<td>32%</td>
<td>0%</td>
</tr>
<tr>
<td>Post-test</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EG</td>
<td>6%</td>
<td>31%</td>
<td>48%</td>
<td>5%</td>
</tr>
<tr>
<td>CG</td>
<td>10%</td>
<td>54%</td>
<td>36%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Table 2: Score distribution between EG and CG
As can be seen from this table, the pretest scores were distributed rather equally for both groups. Before the treatment, the figure showed that numbers of the students who got weak, average, fair and good score in both groups were not much different. After ten weeks under the intervention of rhetorical schema on listening comprehension, there was a difference in the post-test scores between the EG and CG. Number of students in EG getting fair score increased from 23% to 48%. Especially, the appearance of good score with 5% proved that many students improved during the course. The percentage of weak score decreased considerably by 18%. By contrast, the post-test scores for the CG illustrated a less effective
tendency. Although the percentage of weak scores dropped from 24% to 10%, average and fair scores remained relatively stable, and there was no student getting good score. In short, the results of the post-test indicated that the EG had a better score improvement compared to the CG.

**Mean comparison between pre-test and post-test from EG and CG**

<table>
<thead>
<tr>
<th>Group Statistics</th>
<th>Class</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>EG</td>
<td>21</td>
<td>5.19</td>
<td>1.569</td>
<td>.342</td>
</tr>
<tr>
<td></td>
<td>CG</td>
<td>19</td>
<td>5.26</td>
<td>1.447</td>
<td>.332</td>
</tr>
<tr>
<td>Post-test</td>
<td>EG</td>
<td>21</td>
<td>6.67</td>
<td>1.197</td>
<td>.261</td>
</tr>
<tr>
<td></td>
<td>CG</td>
<td>19</td>
<td>5.47</td>
<td>1.172</td>
<td>.269</td>
</tr>
</tbody>
</table>

Table 3: Group statistics of pre-test and post-test

As can be seen from the above table, mean for pre-test of two groups were nearly the same with a very small difference of only 0.07. However, the disparity of 1.2 from post-test clearly showed a big difference between the two groups after applying rhetorical schema on listening comprehension.

**t-test analysis**

<table>
<thead>
<tr>
<th>Independent Samples T-Test</th>
<th>Levene’s Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Pre-test</td>
<td>.000</td>
<td>.553</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>-.152</td>
<td>37.982</td>
</tr>
<tr>
<td>Post-test</td>
<td>.012</td>
<td>.913</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>3.182</td>
<td>37.748</td>
</tr>
</tbody>
</table>

Table 4: Independent samples t-test for pre-test and post-test

Results from the independent samples t-test ensured that the t-test value was valid because the two assumptions for its validity had been checked. First, the difference of only 0.122 in pre-test and 0.025 in post-test in standard deviations between the two groups was very small, so the scores in each group were normally distributed. In other words, the distributions of scores between groups were symmetric. Secondly, the p-value of the Levene’s Test for Equality of Variances also verifies the assumptions of the t-test. As clearly seen from the table, the p-value of the Levene’s Test for Equality of Variances of 0.553 and 0.913 in pre-test and post-test were much greater than 0.05 (the significance level). It proved that the variances for the scores of the two groups were equal.

In pre-test, as the variances were equal with the Sig. of .553, the t-test value in the first row was consulted. As shown in the t-test for Equality of Means, the t-value was -.152 and the 2-tailed Sig. value was .880, greater than the alpha level of .05. Therefore, the null hypothesis, or Ho, was accepted. It was concluded that there was no statistically significant disparity between the two means of two groups, and two sets of scores were equal. Hence, the researcher could inferentially conclude that the students in both groups had equal listening competence before the experiment. In post-test, as the variances were equal with the Sig. of .913, the t-test value in the first row was consulted. As shown in the t-test for Equality of Means, the t-value was .003, smaller than the alpha value of .05. Therefore, the null hypothesis, or Ho, was not accepted. It was concluded that there was a statistically
significant disparity between the two means of two groups, and two sets of scores were different. Therefore, the researcher could infer that there was a significant difference in the final scores between two groups. The EG made more improvement in listening comprehension ability after ten weeks of experimental teaching. In other words, the experimental group which had taken rhetorical schema significantly outperformed the control group in listening comprehension.

7.2 Research question 2

The Cronbach’s Alpha value for the questionnaire was .722, an acceptable value for a classroom test. The figure means that all the sub-scale questions were well-consistent to each other, and the questionnaire was reliable enough to measure learners’ reactions and thoughts towards the application of rhetorical schema in academic listening situations.

<table>
<thead>
<tr>
<th>Reliability Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cronbach's Alpha</td>
</tr>
<tr>
<td>.722</td>
</tr>
</tbody>
</table>

Table 5: Internal consistency of questionnaire

Based on the results from the analysis of the students’ views of the listening course and its teaching, the researcher found that the introduction of rhetorical schema resulted in a positive change in their attitudes with respect to nearly all of its aspects: importance, frequency, interests, motivational intensity, and desire. The specific findings for each of these aspects will be presented below.

Firstly, as for the importance of the note-taking strategies relating to rhetorical schema, generally speaking, the students expressed their positive attitudes towards the five strategies of listening to topic and big picture of a lecture, listening to main and supporting ideas, listening to signs of transition, organizing key ideas by outlining, and writing down key words.

Secondly, the strategies mentioned in the paragraph above were also used by the students more often than the others. Hence, based on the students’ views, it is clear that the teacher was successful in using rhetorical schema to improve their listening skill.

Regarding other aspects from their views, the students responded that it was a good course because it gained the aim of improving their listening skill. They felt enjoyable and interested in the application of rhetorical schema since it helped them to listen effectively. Besides, the course was said to motivate the students to overcome difficulties to understand the lectures easily. The rhetorical strategies encouraged them to practice listening to lectures more often in order to enhance listening skill. Additionally, students also expressed a strong desire towards learning listening with the help of rhetorical schema. Thus, the students’ positive attitudes towards the various aspects of the course indicated the effectiveness of introducing rhetorical schema.

Finally, students also showed their confidence towards the rhetorical schema. Most of them were convinced that they would apply these strategies on the future listening and in other listening situations. Hence, the rhetorical schema including listening strategies and note-taking strategies as a scaffolding assisted steps to listen effectively.

Overall, the intervention of rhetorical schema fostered the students’ positive attitudes and improved their motivation as Armbruster (2000), Chaudron (1994), Dunkel (1988), Hayati and Jalilifar (2009), and Tsai (2004) and Carrell (2007) said it.

8. Discussion and conclusion

The findings have shown that rhetorical schema proves its educational value in enhancing the learners’ listening comprehension and changing their attitudes towards its application. Behaviorally, the instruction of rhetorical schema strategies helps the students improve their listening comprehension. By explicitly applying listening strategies before lecture
listening, they can get the topic and the big picture of a lecture, or the main idea. While-listening strategies assist them in dealing with the specific aspects of lecture content as note-taking strategies provide them with an effective way to jot down the key information during listening. They also acknowledge what information should be taken down for answering post-listening questions by listening to lecture language of definition, explanation, and example. With the help of outlining technique from note-taking strategies, they can review notes after listening and, as a result, are no longer afraid of forgetting what they heard despite a large amount of information. All of this in the treatment attributes to their better performance in listening comprehension.

Attitudinally, the students have a rather positive attitude towards the introduction of rhetorical schema in relation to all the aspects investigated: its importance, their frequency use, their degree of interest, their motivational intensity, and their desire towards it. Generally speaking, they express their good reactions and thoughts towards its application as it can help them improve their listening skill.

The findings in this study once again confirm the effect of rhetorical schema in teaching and learning listening in an academic setting. They are in line with those findings by Titsworth and Kiewra (2004), Strangman and Hall (2010), Othman and Vanathas (2005), Eileen (2008), Alalili (2009), and Jia (2010). These researchers found out in their research studies with a similar experimental design that when applied in teaching and learning listening, rhetorical schema brought about a positive effect as the EG scored higher than the CG in the test after the treatment. Hence, the findings in these studies and those in this study together agreed with Carrel’s (2007) and Jalilifar’s (2009) perspective “the application of rhetorical schema improves the learners’ listening skill”.

In conclusion, the research achieved its purpose of improving the students’ listening skill thanks to the application of rhetorical schema strategies. Its use had a good influence and received their optimistic attitudes.

REFERENCE


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