

Application of Meta-Cognitive Strategy Instruction in Listening Comprehension to the Level III Student Teachers

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Abstract

This study investigated the impact of meta-cognitive strategy instruction on the listening comprehension of level III student-teachers. Sixty-eight student participants were selected whose listening proficiency was at the average to below average level. The selected students were randomly assigned to experimental and control groups. The experimental group (n=34) received the meta-cognitive strategy instruction but the control group (n=34) received no meta-cognitive instruction. Listening comprehension modules of their course books were utilized to test the listening skills of the participants in both groups before and after the treatment. The results of tests revealed that the experimental group significantly outperformed the control group on the post-test. The pedagogical implications of the study are discussed as well.

Keywords: Meta-cognitive strategy, student teachers, self-learning styles, organizational planning, monitoring and self-assessment

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Introduction

Listening has been a growing interest of EFL/ESL researchers and teachers in the last 50 years because the majority of learners view listening as one of the most problematic skills. Many English teachers conduct listening courses in nearly the same way. They present and explain some vocabulary items, which are assumed to be new to students, then play a tape recording of those vocabulary words once or twice. After that, listening exercises in the textbooks are required to be done. Listening exercises, which are similar to one another in different units, involve matching, filling in the blank, or ticking off the correct answers.

Non-native speakers have long been known to have trouble understanding academic lectures due to the methods followed in improving listening skills. Listening to lectures is difficult, especially for students who have just entered the university. Recently, there have been discussions on teaching listening with the emphasis on strategy instruction for better achievement in listening comprehension. Hence, the researcher designed this quantitative study to investigate how to help learners overcome their challenges. In the current study, the meta-cognitive strategy was used to promote students' awareness on meta-cognitive strategy instruction and its application in listening comprehension to find out whether meta-cognitive strategy instruction is effective in improving students' listening performance.

The goal of any strategy training is self-diagnosis, awareness of how to learn the target language most efficiently, developing problem solving skills, experimenting with familiar and unfamiliar learning strategies, making decisions about how to approach a task, monitoring and self-evaluation, transferring successful learning strategies to new learning contexts, and enabling students to become more independent, autonomous, and lifelong learners (Oxford, 2003)

Anderson (2003) classifies language learning strategies into seven major strategy categories: cognitive, meta-cognitive, mnemonic or memory related, compensatory, affective,

social, and self-motivating. O'Malley and Chamot (1990) have differentiated the range of cognitive categories into two main types: meta-cognitive and cognitive strategies. Meta-cognitive strategies oversee, direct and regulate the learning process. These kinds of strategies involve thinking about the learning process, planning, monitoring and evaluating learning. Meta-cognition asserts the awareness, analysis and knowledge that a person has of his/ her cognitive (learning, thinking) processes.

Meta-cognition

The simplest definition of meta-cognition is thinking about one's thinking. A more complex definition that is widely cited within educational literature is an appreciation of what one already knows, together with a correct apprehension of the learning task and what knowledge and skills it requires, combined with the ability to make correct inferences about how to apply one's strategic knowledge to a particular situation and to do so efficiently and reliably (Taylor, 2014). In simpler terms, this means that meta-cognition is being aware of what one knows and doesn't know, understanding what one will need to know for a certain task and having an idea of how to use one's current skills to learn what one doesn't know.

Review of Literature

O' Mally and Chamot (1990) assert that meta-cognitive strategy has a hierarchical relationship among meta-cognitive, cognitive and social/affective strategy. They give a detailed description of meta- cognitive strategy. Among the main aspects of meta-cognitive strategy are: advance organizers, directed attention, selective attention, self-management, advance preparation, self-monitoring, delayed production, self-evaluation and self-reinforcement.

Hacker (2009) encourages people to take charge of their own learning through meta-cognitive strategies. This involves awareness of how they learn, an evaluation of their learning needs, generating strategies to meet these needs and then implementing the strategies. Learners

often show an increase in self-confidence when they build meta-cognitive skills. Self-efficacy improves motivation as well as learning success. Meta-cognitive skills are generally learned during a later stage of development. Meta-cognitive strategies can often (but not always) be stated by the individual who is using them.

Vandergrift (2004) observes that initially most listening strategy studies investigated patterns and strategies used by successful compared with less successful learners. Gradually the line of research shifted to focus on effective strategies based on process-oriented approaches to teaching listening skills in order to guide the students to learn how to listen so that they can better listen to learn. Therefore, Mendelsohn (1995) asserted that listening instructors have the responsibility of teaching students to take advantage of strategies rather than merely providing students with oral passages and testing them.

Ridley et al. (1992) stated that the outcomes of utilizing meta-cognitive strategies include:

- Regulation and prediction of learning activities such as a conscious control of learning, planning and choosing strategies.
- Monitoring the process of learning, correcting errors, and analyzing the effectiveness of learning strategies.
- Changing learning behaviors and strategies when necessary.

Rubin (1975) defined meta-cognition as a construct that refers to thinking about one's thinking or the human ability to be conscious of one's mental processes. Research has shown that language learners can learn more effectively when they learn strategies that have been identified as defining characteristics of a good language learner. Anderson (2003) states that meta-cognitive strategies play a more significant role than other learning strategies in this

process because once a learner understands how to regulate his/her own learning through the use of strategies, language acquisition should proceed at a faster rate.

Movahed (2014) examined the effect of meta-cognitive strategy instruction on the listening performance, meta-cognitive awareness, and listening anxiety of EFL beginner learners. The strategy instruction to the experimental group was based on the work of Vandergrift and Tafaghodtari (2010). This study showed that the experimental group performed considerably better than the control group on the post-tests confirming the positive impact of the meta-cognitive strategy instruction on learners' listening performance, meta-cognitive awareness and listening anxiety.

According to Marcia Lovett (2008), language learners can develop their independence by applying cognitive, meta-cognitive and socio-affective strategies to gain control of their own learning. Actually, teachers can educate students to become what Lovett deems as 'expert learners'. She believes that educating students to develop their meta-cognition entails three particular processes:

- Instructing students that their ability to learn not only alters, but that they can influence how that skill extends,
- Instructing them how to sketch for achievement and set aims, and
- Providing them with many situations to monitor their learning and adjust their own learning strategies.

Seferoglu and Uzakgoren, (2004) assert that, in many educational settings, meta-cognitive strategy instruction is not an inner part of many listening course books and instructors do not focus on these strategies when they design their lessons. Listening does not obtain its due significance and learners do not look as if to be effectively taught about the listening strategies.

Goh (2008) highlights that more study is required to examine the role of meta-cognitive teaching in listening performance in diverse contexts. The more that students know how to learn, the better they learn. Hence, this study aims to investigate the impact of meta-cognitive strategy instruction on EFL learners' meta-cognitive awareness in listening to reduce the complexity of listening comprehension.

Zahra Ratibi (2013) aimed to investigate the types of meta-cognitive strategies used by Iranian university students majoring in English, and the differences in the use of these strategies between listeners across two levels of high and low proficiency. The results revealed that Iranian university students used problem-solving strategies most frequently and person-knowledge strategies less frequently. It was also found that more proficient listeners used meta-cognitive strategies more frequently than less proficient listeners and there was a significant difference in the use of person-knowledge strategies between high and low proficient listeners. The results of the study have some implications for students, teachers, syllabus designers and EFL textbook designers.

Objectives of the Study

The major objective of this study was to apply Meta-cognitive strategy in listening comprehension of the EFL student-teachers to find out whether this strategy is more effective than the traditional approach.

Hypotheses

- a) There exists no significant difference between the pre and post mean scores of the Experimental group.
- b) The Control and Experimental groups do not differ in their academic achievement scores.

Methodology

In the present study, a non-randomized control group pre-test/post-test design was adopted. The groups were formed according to the requirement for administrating meta-cognitive strategy in the course of Listening Comprehension.

Sample Selection

In the present study, the experimental group and the control group were selected. The two groups were selected from the researcher's regular classroom. Level III student-teachers of a reputed College of Education in Saudi Arabia were potential subjects. Although the two groups were equal in terms of achievement scores, the subjects in each group varied in terms of their academic abilities. The composition of the listening comprehension teams was based on the achievement scores of the learners. The subjects of the two groups were selected and the application of randomness led to the classification of the Control and Experimental groups.

Selection of the Experimental Group

The experimental group was formed on the basis of the academic achievement scores of the students. Thirty-four students were selected for the experimental group based on the first term examination scores of the Listening Comprehension Course. Below average and average students were selected.

Selection of the Control Group

The Control group consisted of 34 students who studied in the same class of the same college. This group was exposed to the traditional method of instruction and no novel treatment was given to this group.

Research Tools

The investigator's self-made achievement tests were used for the pre-test and post-tests of both the groups. The same question papers were used for both the groups to evaluate the pupils'

skills in the Listening Comprehension of the course books *Headway III* and the *Skills for Success III* covering selected topics of the content of both the books. At the beginning of the test, the instructions for answering were given and the subjects were asked to write the answer. The time allotted for answering was one hour.

Both the groups were administered a pre-test in which proper instructions were given to the students for answering. Selected topics from both books were utilized in the administration of the pre-test. In order to increase the reliability and validity of the post-test performance and to eliminate the testing effect of the pre-test, two other achievement tests were constructed. These tests were a slight modification of the pre-test. The same type of questions and same number of questions were used for these two tests. The procedures adopted in developing the pre-test tool were employed while constructing post-test tools as well. Other important units from both the books were selected for administering the other two tests.

The survey was conducted by the researcher herself during the students' regular English classes. The listening tests were conducted during the students' class time. The participants were informed about the purpose of the test and they were assured that their performance would be used for research purposes only and the scores of the tests had no relation with the final scores of the course. The researcher was present in the classroom to ensure that the subjects could fully understand what they were supposed to do and that they finished the test on their own. They were not permitted to discuss any aspects of the test with each other. No discussions or references were allowed during the process of the tests. At the end of the tests, all test papers were collected on time regardless of whether the students had finished them or not. Each of the listening tests consisted of two passages with 20 blanks in total. The listening test was designed in a 100 score scale, thus each blank was assigned a score of five. The researcher graded all tests.

Test Validity

The content of both tests was validated by a team of English language specialists. The team validated the content and instructions of the test, the relevance of the questions to the content, its suitability for attaining the goals, the number and arrangement of questions, and time allotted. The remarks and suggestions of the team were taken into consideration and the researcher made the necessary modification before application.

Test Reliability

A pilot group of 30 students were randomly selected from the population of the study and test-retest method was used to check the reliability. A test was administered to them and then repeated with them two weeks later. The reliability correlation coefficient of the tests result were calculated using Pearson correlation method. The obtained value of the Pre-test was 0.753 which was an indication of its reliability. The obtained value of the Post-test was 0.78 and 0.81 respectively.

Test Administration Procedure

Both the experimental and comparison groups followed the routine syllabus when the meta-cognitive strategy-centered model was being carried out in the experimental group. Listening comprehension tests were involved in the present study. At the very beginning of the training, a pre-test was given to every student in both the groups to serve as the starting point for the comparison of the results of present pedagogy with the results at the end of experiment. Selected topics of both books were considered for the administration of the pre-test. Then, after a semester's training, all the subjects took a post-test which resembled the parts of the pre-test in pattern, difficulty and time limitation. Both the pre-test and post-test were used to measure the subjects' listening comprehension proficiency.

Administration of Meta-Cognitive Strategy in Listening Comprehension

Planning Stage

Meta-cognitive strategy was administrated in three stages. The first stage is the Planning Stage and the meta-cognitive strategies involved in this stage were planning and directed attention. The researcher gave the definition of these strategies and provided the students with some examples to contextualize them in listening situations. The researcher also provided some pre-questioning forms of advance organizers along with explanations to highlight the significance of these strategies. Next, the topic of the given text was made familiar to the students and it was written on the board. Before listening to the oral text, students were asked to write their idea about the topic in a sentence or a few words.

Listening Stage

In this session, the students listened to the task three times. Experimental students were asked to sit in pairs. In the first listening, they were asked to write new information that they heard and understood. The meta-cognitive strategies involved in this stage were selective attention and monitoring comprehension. The teacher demonstrated these strategies for the students and assisted them with focusing on key listening points.

Students compared their information and predictions they perceived in the first listening session. They focused on the missing information in the first listening and prepared to focus on areas that needed more attention in the second stage listening. The meta-cognitive strategies involved in this stage were monitoring, planning and selective attention.

Next, students listened to the task for the second time. They attempted to focus on areas of missing information and areas that had been difficult for them in the first listening. They monitored and corrected the information that they had predicted incorrectly and also added additional points they perceived. Meta-cognitive strategies involved in this stage were problem

solving, monitoring and selective attention. The teacher drew a distinction between listening and hearing and its significance. The students explained the main points they had perceived.

In the third listening, students adapted to various conditions encountered in listening. Students listened more carefully on the points which they could not get in the previous listening. The meta-cognitive strategies involved in this stage were selective attention, problem solving and self-management.

Post-listening Stage

This stage is a self-assessment stage. Students engaged in class discussion to judge how well they accomplished a learning task. They utilized a check back system to analyze how their classmates arrived at the meaning of certain words or parts of the text that they failed to recognize. They kept a learning log and noted their peers' strategies and tactics used to listen and comprehend. Finally, students answered comprehension questions based on the task for which they listened. The meta-cognitive strategies used in this session were reflection and evaluation.

Results and Discussion

The results of the study are presented in the Tables 1-6 with interpretation. A Pre-test was administered to both the control and the experimental groups. The standard of $p < .05$ was adopted to determine significances throughout the study. That is to say, a relationship can be regarded as statistically significant if the results are significant at the special alpha of .05 (i.e., probability of chance occurrence). This means that a result is considered statistically significant if it could have occurred by chance fewer than 5 times out of 100.

Table 1

Comparison of the Pre-test Between Experimental and Control Groups

Group	N	M	SD	't'
Experimental Group	34	32	6.9	1.0
Control Group	34	30	8	

Table 2

Comparison of the Pre-test and Post-test I of the Experimental Group

Group	N	M	SD	't'
Post-Test 1	34	52.4	7.5	11.72
Pre-test	34	32	6.9	

Table 3

Comparison of the Post- test I and Post-test II of the Experimental Group

Group	N	M	SD	't'
Post-test II	34	64	8.7	5.85
Post-Test 1	34	52.4	7.5	

Table 4

Comparison of the Post-test I of the Experimental Group and the Post-test of the Control Group

Group	N	M	SD	't'
Post-Test I Experimental Group	34	52.4	7.5	6.13
Post test Control Group	34	41	7.9	

Table 5

Comparison of the Post-test II of the Experimental Group and the Post-test of the Control Group

Group	N	M	SD	't'
Post-Test II Experimental Group	34	64	8.7	11.5
Post test Control Group	34	41	7.9	

The mean score of the experimental group in the pre-test was 32 and that of the control group was 30. Both groups do not differ in their pre-test mean achievement scores as demonstrated by the 't' value of 1.0 which is not significant at 0.05 level of significance.

Achievement scores of the Pre-test and Post-test I of the experimental group were compared. The experimental group showed significant difference between its Pre- test and Post-test -1 mean achievement scores. The 't' value of this comparison was 11.72 which is significant at 0.05 level of significance. The performance of the experimental group was found better in the Post-test -1 when compared with its pre-test performance.

Achievement scores of Post-test 1 and Post-test II of the experimental group were compared and there existed significant difference between these two scores in that the 't' value was 5.85 which is significant at 0.05 level of significance. It was observed that the academic performance of the experimental group in Post-test II was far better when compared to the scores of the pre-test.

Achievement scores of the Post-test 1 of the experimental group were compared with the Post-test of the control group. The mean value of the experimental group's Post-test 1 was 52.4. The mean value of the control group's Post-test was 41. The comparison of these two scores demonstrated that a significant difference existed between these two scores in that the 't' value is 6.13 which is significant at 0.05 level of significance.

Achievement scores of the Post-test 1 of experimental group were compared with the Post-test of the control group. The mean value of the experimental group's Post-test II was 64. The mean value of the control group's Post-test was 41. The comparison of these two scores demonstrated that a significant difference existed between these two scores that the 't' value was 11.5 which was significant at 0.05 level of significance. The results showed that the application of meta-cognitive strategy instruction had reasonable impact on the listening comprehension skills of the experimental group. The results of the comparisons clearly demonstrated that both hypotheses were rejected.

Findings and Conclusion

The results of the experiment show that meta-cognitive strategy instruction facilitates English listening comprehension. Data obtained suggests that meta-cognitive instruction can improve students' awareness of meta-cognition, equip learners with meta-cognitive strategy and finally improve students' listening proficiency. Limitations of this study included that the experiment was conducted for only one term with a very small group in a single class of students. Moreover, many other variables like the attitude of the students, motivation, and learning styles were not considered in this experiment which may influence the statistical results.

In conclusion, teachers should provide a pattern and purpose for listening so that students will become aware of the specific information they need before listening. The results show that using meta-cognitive strategy instruction in listening comprehension definitely improve students' listening skills so that students become accountable for their own learning and move toward meaningful learning. It is recommended that curriculum designers incorporate this type of teaching strategy in their course books and design activities which value the importance of language learning strategy instructions, especially meta-cognitive strategies.

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