

# The Effect of Explicit Instruction of Meta Cognitive Learning Strategies on Promoting Jordanian Language Learners' reading competence

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## Abstract

The main purpose of the present study was to investigate the effect of met cognitive strategies on reading comprehension among Jordanian university students. The participants of this research consists of two classes of English Course , Level one with 60 students, 30 in the control group and 30 in the experimental group. Then, Metacognitive reading strategies instructions were administered to identify their met cognitive strategy awareness. The experimental group underwent a treatment based on Chamot and Rubin (1994) model, while control group did not receive any strategy-based treatment The students were belong to Faculty of Arts and Educational Sciences, Department of English Language and Literature .All students were considered as low proficiency in English language due to their scores obtained in the English language placement test conducted by the university at the beginning of each academic year. To answer the question of the study, an achievement reading comprehension test is used as a pre-test and a post-test to both: the experimental and the control group with some modification related to the ways each group is taught accordingly. A multiple-choice reading comprehension test of twenty questions is constructed to assess the students` comprehension of the reading text. Proper statistical analyses were used to analyze the results. For the purpose of the study, the scores of control and experimental group were compared at the end of instruction period. The results revealed that the post-test scores of the experimental group were significantly higher than those of the control group. These results prove that the teaching on the basis of the metagognitive strategies instructions was successful to develop the students' ability to learn vocabulary

**Key words:** reading strategies, reading comprehension, Metacognitive reading strategies

## Introduction

*"The use of met cognitive strategies helps students to "think about their thinking" before, during, and after they read". Boulware-Gooden et al (2007)*

English Language learning environment involves different areas such as Motivation, learners need, attitudes , learning strategies and styles and language awareness. It is difficult to ignore language learning strategies. Chamot and Kupper (1989 P.9) defined learning strategies as " techniques which students use, comprehend, store and remember information and skills ". Studies about Language learning strategies started in the mid 1960. Subsequently , the past years have seen increasingly rapid advances in the field of language learning strategies (Wenden and Rubin,1987,O'Malley and,Chamot,1990and Oxford (1990). Nevertheless , Oxford defined language learning strategies , as " specific actions taken by the learners to make learning easier, faster , more enjoyable, more self directed , more effective and more transferable to new situations " ( P.8).

Learning strategies are approaches, methods, and intentional actions learners take to fully acquire the target language. Nation (2001,p. 217) claims that" it is not easy to arrive at a definition of what a strategy is, but to deserve attention from a teacher a strategy would need to be complex, that is, there are several steps to learn, require knowledge and benefit from training and increase the efficiency of vocabulary learning and vocabulary use." Cook (2001) indicated that Language learning strategies are the choices which language learners make while they are involved in learning or utilizing a second or a foreign language.

Rubin (1987: 20) divides the strategies into three kinds, based on their contributions to language learning: learning strategies, communication strategies and social strategies. Learning strategies can directly contribute to language learning, while communication strategies and social strategies only contribute to language learning in an indirect way. Wenden & Rubin (1987: 23) discuss two major kinds of learning strategies: cognitive and meta cognitive learning strategies. The cognitive learning strategies refer to the operations used in language learning , while meta cognitive learning strategies refer to the knowledge of cognitive process and regulation of cognition through many processes such as planning, monitoring and evaluating. According to O'Malley and Chamot (1990), Meta cognitive strategies are considered as the most essential strategies to reach meaningful learning. They also claimed that without those strategies, learners have difficulties to plan, monitor, and evaluate their learning progress. Flavell (1979) states that meta-cognition is" the process of thinking about thinking". He describes meta-cognition "as referring to one's knowledge regarding one's own cognitive processes

or anything which is related to them, that is, the learning-related properties of information or data" (pp. 152-158). Nunan (1999) declares that meta-cognitive strategies are those strategies that encourage learners to focus on their mental processes underlying their learning.

The use of Meta cognitive strategies activates learners thinking and leads to improve their learning performance and achievement. Wenden (1998) indicates that learners who have meta cognitive abilities seem to have the following advantages over others who are not aware of the importance of meta cognitive role in learning another language: They are more strategic learners, their rate of progress in learning as well as the quality and speed of their cognitive engagement is faster, they are confident in their abilities to learn, they do not hesitate to obtain and have help from peers, they provide accurate assessments and evaluation of why they are successful learners, they think clearly about inaccuracies when failure occurs during an activity, their tactics match the learning task and adjustments are made to reflect changing circumstances and they perceive themselves as continual learners and can successfully cope with new situations.

Reading is one of the crucial skills in TEFL. Al Regeb (2009) and Al Khawaldeh (2011) affirmed that reading increases readers' knowledge, it increases and builds vocabulary that helps readers to communicate with others, and it improves other language skills. The National Capital Language Resource Centre (NCLRC) (2004) stated that reading is a vital part of language instruction at every level since it supports learning in several ways. One of these ways is reading the language; when giving learners a variety of materials to read, instructors provide numerous chances for learners to realize vocabulary, grammar, and sentence structure as they occur in authentic contexts. This indicates that reading is an important mean of introducing readers to other and supplying them with the newest knowledge about the world. Yuko, (2009) indicates that learners have difficulty achieving academically without comprehending much of what is written in the reading material. Tierney, 2005 asserted that reading comprehension is specifically, the basic goal for students to gain an understanding of the world and of themselves, enabling them to think about and react to what they read. The National Reading Panel (2000) (NRP) described reading comprehension thus: Comprehension is a complex process . . . often viewed as 'the essence of reading.' Reading *Comprehension is . . . intentional thinking during which meaning is constructed through interactions between text and reader. . . The content of meaning is influenced by the text and by the reader's prior knowledge and experience that are brought to bear on it*". (pp. 4-5)

The National Reading panel (2000) cited that these meta cognitive strategies as having a positive impact on comprehension: summarization, representational imagery, story grammar, question generation, question answering, and prior knowledge activation which includes the use of prediction, inferring and making connections to one's life. Teachers can improve students' comprehension through using instructional reading strategies that include modeling, thinking aloud, inferring, summarizing, making connections, questioning, predicting...etc. (Block and Israel, 2005). Research has suggested that comprehension strategies can be taught, can develop better processing systems that increase comprehension (Center, Freeman, Robertson and Outhred, 1999). Research has also shown that students become strategic readers if their teachers explain effective comprehension strategies for them (Almasi, 2003; Pressley, 2002). Carrell (1998) pointed out that effective comprehension strategies give the students opportunity to elaborate, organize, and evaluate text information. In recent years, reading research has shed light on Meta cognitive reading strategies to improve reading comprehension (Anderson, 1992; Block, 1993; Greenleaf and schoenbach, 2004). Examples of these strategies that were found to be effective include summarization, prediction, question generating, and visualization (Gambrell and Jawitz, 1993; Rosenshine, Meister and Chapman, 1996). Chamot and O'Malley's (1994 pp. 61-62) pointed out that met cognitive strategies are "determining in advance what my reading purpose is and then reading the text with that goal in mind", "looking for specific aspects of information and focusing on that information while reading the text", "checking the effectiveness in strategy use", "checking whether the goals for reading are accomplished"

Sarah (2009), states that student who actively engages in particular Meta cognitive strategies (e.g. summarizing, questioning, mental image, text structure, and predicting) are expected to comprehend and recall more of what they read because these strategies enable students to monitor and evaluate their reading process. characteristics of the met cognitive theory of reading stresses that proficient readers actively evaluate their understanding in the reading process and select appropriate reading strategies to construct meaning from the reading text. That is, skilled readers use strategies that they find effective for the kinds of tasks and activities they need to accomplish in the L2 (Chamot, 2004). Therefore, the most favorable goal for met cognitive reading strategy instruction is hoping that EFL students become regulators of reading strategies and use reading strategies flexibly according to different reading tasks they face. Carrell et al., (1998) stated that EFL students are expected to use these strategies as resources to pursue the goal of English reading as personal interpretation or meaning making rather

than confining their experience or learning to an understanding or acquisition of English linguistic knowledge only). Metacognitive Strategy Instructions are an instructional approach which emphasizes the development of thinking skills and processes as a means to enhance learning. The objective of these instruction are to enable all students to become more strategic, self-reliant, flexible, and productive in their learning endeavors (Scheid, 1993). Metacognition enables students to benefit from instruction (Carr, Kurtz, Schneider, Turner & Borkowski, 1989; Van Zile-Tamsen, 1996) and influences the use and maintenance of cognitive and met cognitive strategies. To provide a clearer picture on the influence of met cognitive strategies instruction, a number of studies have been conducted. Carrell (1989) focus on metacognition in second language reading strategy use, and to do so in a more quantitative fashion. In order to gather data on her subjects' perceptions of their reading abilities, repair strategies, preferred reading strategies, and the difficulties that they face when reading in both their first language and second language, Carrell administered a questionnaire to forty-five native Spanish-speaking intensive ESL students of intermediate and advanced proficiency and seventy five native English speaking students studying Spanish as a foreign language of three different proficiency levels at a large American university. In addition, Carrell's subjects took a reading test in which they read two passages in their L1 and two passages in their L2 and then answered multiple-choice comprehension questions. Carrell found that for both her ESL and her Spanish as a second language groups, local or bottom-up approaches to reading ( that is, decoding and sentences level strategies) negatively correlated with L1 test performance.

O'Malley and Chamot (1990) conducted a study to investigate the effect of met cognitive strategies instruction among American high school students. The students received instruction in met cognitive, cognitive, and socio-affective strategies. The students were divided into three groups: the first group received instruction in met cognitive strategies, the second group received instruction in cognitive and a socio-affective strategy only, and the third was control group which received no strategy instruction. Results showed that the experimental groups performed better than the control group, and that the met cognitive group had a better performance than the cognitive group on the post-tests.

Sheorey and Mokhtari (2001) compared the met cognitive awareness of the reading strategies of ESL college students with native speakers represented by American students. They sought to answer three questions: 1) are there any differences between ESL and US students in their perception of using strategies? 2) Are there any gender differences? and 3) is there a relationship between reported strategy and self-rated reading ability? Students answered the Survey of Reading Strategies (SORS) which is divided into three categories: 1) met cognitive, 2) cognitive, and 3) support strategies. Results showed that ESL students reported using more support strategies Sheorey and Mokhtari state that "students who gave themselves a high rating on reading ability, regardless of their language background, reported a higher use of all the reading strategies in the survey than did those students who gave themselves a low reading ability rating.

Zhang (2009) investigate EFL college student's met cognitive knowledge of reading strategies in an acquisition-poor environment in China. He suggested that the available studies on Chinese EFL readers have not adequately addressed the issue of met cognitive reading strategies and their English reading proficiency. Therefore, he tried to see the relationships between types of met cognitive knowledge of reading strategy use and language proficiency levels. Ten EFL university students were selected from a sample of 312 participants in China. Semi-structured interviews, mainly in Chinese were used under the framework of Flavell's (1987) met cognitive strategy model to elicit students' met cognitive knowledge. The interviews were recorded and transcribed and three categories of metacognition were defined: 1) person, 2) task, and 3) strategic knowledge. The findings showed that Chinese students' met cognitive knowledge of reading strategies closely resembles their English proficiency and L2 reading ability interacted with L2 proficiency level.

Tabeei, Tabrizi, and Ahmadi (2013) investigated the influence of teaching met cognitive strategies on listening comprehension among Iranian learner in Parsabad, Iran. For that purpose, 72 EFL learners were selected as the participants of the study. The learners were divided into two groups, one control and one experimental group. The Metacognitive Awareness Listening Questionnaire (MALQ) was administered to check the learners' awareness of met cognitive strategies. The experimental group was instructed to use met cognitive strategies based on Chamot and O'Malley (1994) model of met cognitive strategies, while control group did not receive any instruction. The findings of this study showed a positive effect of met cognitive strategies instruction on listening comprehension among Iranian learners. The findings also revealed that there was no difference between female learners and male with regard to listening comprehension after the instruction process.

### **Purpose and Question of the Study**

The main purpose of this study was to investigate the effect of explicit instruction of meta cognitive learning strategies on promoting Jordanian language learners' reading competence

More specifically, the study aimed at answering the following main question:

1. Does explicit instructions of meta-cognitive learning strategies have any significant effect on promoting language learners reading comprehension?

### **Significance of the Study**

This study plans to investigate the effect of met cognitive reading strategy instruction on EFL students' met cognitive awareness in reading comprehension. Thus, the significance of this study lies in its potential for contributing to our deeper understanding of met cognitive reading strategy instruction on EFL readers, it is also hoped that the findings of the study may provide teachers with insights into their reading performances in the classroom. The findings also may have an impact on improving the quality of reading comprehension through implementing the explicit instruction of met cognitive strategies. Moreover, this study should open venues for further research to provide information needed to enhance teaching pedagogy and to improve learning conditions in Jordan.

### **Definitions of Key Terms**

**Reading strategies:** Oxford and Crookall (1989) defined strategies as learning techniques, behaviors, and problem-solving or study skills which make learning more effective and efficient. Reading strategies are processes used by the learners to enhance reading comprehension and overcome comprehension failures.

**Reading comprehension:** It is defined as the language learners' ability to understand and comprehend a written text to find the main idea and specific information (Ministry of Education, 2002). In this study, it is the process of using prior knowledge to understand the various written text.

**Metacognitive reading strategies:** They are behaviors carried out by the learners to plan, arrange, and evaluate their own reading. Such strategies, include direct attention and self-evaluation, organization, setting goals and objectives, seeking practice opportunities, and self-monitoring and correction of errors (Singhal, 1999)

### **Statement of the problem**

Reading is a complex process which interactively involved the reader and the reading text, instead of a process of word decoding (Eskey, 2005; Grabe, 2004). Reading is a meaning-making process that integrates a reader's prior knowledge with a writer's intentions. Many researchers noticed that students are quite weak in English in general and reading in particular, as a result, they still find difficulties in reading comprehension. They also rely on word-to-word translation when reading English. Al Regeb (2009) stated that the Jordanian students face a lot of difficulties when they read, especially in understanding what they read. Al Ma'ani (2007) emphasized that there are two main reasons stand behind students' poor comprehension skills .Firstly, when teaching reading, most of the EFL teachers concentrate on assessing students' comprehension at the word and sentence levels rather than concentrating on teaching reading comprehension. Secondly, students' lack of reading comprehension strategies is also considered a major cause of students' poor comprehension skills

Considering the challenges of foreign language reading, especially the cognitive, cultural and linguistic aspects, all prove that EFL language reading is much more difficult and complicated than that in L1. In order to increase their control over their own reading process and to achieve a satisfactory academic performance, many researchers recommend that English teachers should develop EFL students' reading strategies repertoire and met cognitive awareness. EFL students have to know what and when to apply appropriate reading strategies in order to become the owners of their learning process and to reach to the meaningful learning.

## **METHODOLOGY**

### **Research Design**

This research deals with the experimental design as it aims to examine the influence of met cognitive strategies instruction on promoting language learners' reading competence. In this study, the participants were randomly selected and divided into experimental and control group. The experimental received explicit instruction on using met cognitive strategies, while control group did not receive any strategy-based instruction. Both groups received two tests (before and after the instruction process) to check the effect of the instruction process. These steps constitute the principles of quasi-experimental design. The independent variable in this study is the met cognitive strategy and the dependent variable is the reading comprehension of experimental and control groups.

### **Participants**

The sample of the study consists of two classes of English Course, Level one with thirty students each in Ajoun National University. The average age of the participants was 19 years. The youngest was 19 and the oldest

24. The two classes were selected randomly. One class was assigned as an experimental group whereas the second class was assigned to represent the control group. The control group will be taught the reading comprehension lesson taken from the Connection Series-level one in a traditional way while the

### **Research Instrument**

In order to achieve the study objectives, the researcher used the following:

1- An achievement reading comprehension test which is to be used as a pre-test to both: the experimental and the control group. A multiple-choice reading comprehension test of twenty questions is constructed to assess the students' comprehension of the reading text

2- An achievement reading comprehension test which is to be used as a post-test to both: the experimental and the control group with some modification related to the ways each group is taught accordingly. A multiple-choice reading comprehension test of twenty questions is constructed to assess the students' comprehension of the reading text.

### **Validity and Reliability of the Instruments**

To guarantee the validity of the reading text tests, a number of TEFL specialists in Jordanian universities will assess the test. The jury suggested to delete a number of multiple-choice items under the grammar part. To check the reliability, the researcher will conduct a pilot study and modify the test accordingly. To ensure the reliability of the tests, reliability estimates included Cronbach's alpha was used to gain a satisfactory reliability. The value of Cronbach's alpha for pre-test was .88 which indicates good and satisfactory reliability value.

### **Limitations of the Study**

The generalization of the findings of this study will be limited by the following factors:

1. This study will be restricted to the university students at Al-Balqa Applied University in the first semester in the scholastic year 2015-2016.
- 2- The duration of the study and its effect on the findings.

### **The Procedure of the Instruction**

In order to instruct learners effectively to employ met cognitive strategies, several models of met cognitive strategies instruction have been proposed. The Cognitive Academic Language Learning Approach (CALLA) model proposed by Chamot and Rubin (1994) proved to be the most effective strategy instruction model.

This model has five instruction phases as explained below (Chamot and Rubin, 1994, p. 43-44):

- 1) Preparation: students prepare for strategy instruction by identifying their prior knowledge about and the use of specific strategies. In this phase, teacher explain and discuss the meaning of met cognitive strategies to the students. teacher showed the importance of met cognitive strategies and he distributed handouts containing various met cognitive strategies.
- 2) Presentation: the teacher demonstrates the new met cognitive learning strategies and explains how and when to use them. The teacher in this phase explains the importance of the strategies and asking students when they use them. The teacher provided illustrations and examples on using such strategies.
- 3) Practice: students practice using the met cognitive strategies with regular class activities such as asking questions, cooperating with others, and seeking practice opportunities. In this phase, The teacher assisted and guided the students to monitor the various met cognitive strategies available to them. These strategies focus on reading the text with that goal in mind', 'looking for specific aspects of information and focusing on that information while reading the text', 'checking the effectiveness in strategy use', and 'checking whether the goals for reading are accomplished'.
- 4) Evaluation: students self-evaluate their use of the learning strategy and how well the strategy is working for them. The teacher used some activities to develop students' self-evaluation such as rating scale and checklists of strategies used.
- 5) Expansion: students extend the usefulness of the learning strategy by applying it to new situations or learning for them. They have told to apply those strategies in different tasks and contexts.  
The strategy training was implemented over a span of 2 months and a half. Only the experimental group received explicit instruction on using met cognitive strategies while the control group did not receive any instruction

### **Instruments of the study**

An achievement reading comprehension test which is to be used as a pre-test and a post-test to both: the experimental and the control group with some modification related to the ways each group is taught accordingly. A multiple-choice reading comprehension test of twenty questions is constructed to assess the students'

comprehension of the reading text. The pre-test was conducted to find out the homogeneity of the sample. It was used to determine whether the two groups were relatively equal in reading. The homogeneity could be seen from the average score of each group. Before the experiment, a pre-test was administered to the sample of both groups with the same items. It was expected that the different of average scores between them were not too far. In other words, the two groups were in the same level of knowledge. After the treatment, the researcher gave the students a post-test in order to see the results whether the technique was effective or not. The test of post-test was similar to the test that is lead in pre-test.

### The results and their discussion

To achieve the objective of the study, the researcher selects randomly two classes from Al-Ajloun National University with 15 students each.

The main question asks about if explicit instruction of meta-cognitive learning strategies have any significant effect on promoting language learners reading comprehension.

Independent samples T-Test was used to analyze the possible variances in reading comprehension between the two groups participated in the reading comprehension tests. The participants' scores in the pre-test were analyzed to check the homogeneity of the two groups in the reading comprehension level. The participants were considered as low proficiency students in English language due to their scores in the English language placement test administered by the university. Table 1 presents the means and standard deviations obtained by the experimental group and the control group on the pre-test and the post test.

Table (1) Means and standard Deviations for Samples' scores on the pre and post test

	Control Group			Experimental Group		
	Number	M	ST.D	Number	M	ST.D
<b>Pre- test</b>	30	37.59	3.24	30	38.15	3.94
<b>Post-test</b>	30	41.45	3.20	30	54.66	3.70

Table 1 shows that there were not significant differences between mean scores of the students in the experimental and control groups on the pre test . In other words, the two groups were homogeneous in terms of reading comprehension level before the beginning of the experiment.

Given the information above, and after the treatment ,one can clearly see that the mean score obtained by experimental group (.54) is higher than the mean score obtained by control group (.41).The table shows that there were differences between the mean scores of the students in both groups; experimental and control in the post-test. In other words, the experimental group outperformed the control group in the reading post-test. Therefore, it can be claimed that the performance after the explicit instruction on using met cognitive strategies seemed to have contributed to the reading comprehension learning improvement of students. The findings of the study show that group who used met cognitive strategies instruction performed better than the control group in the post test(comprehension test) . This indicates that these instructions have a significant effect on the teaching reading process and the students who use them manifest considerable improvement reading comprehension and vocabulary development. This is in line with the previous studies that report the benefits of met cognitive strategies instructions (O'Malley and Chamot (1990, Carrell et al.,( 1998 and Tabeei, Tabrizi, and Ahmadi (2013)

### Conclusion

Metacognition has long been recognized as the most significant component in language learning (Pintrich, 2002). As a general conclusion, the findings of this study confirm the claim that using met cognitive strategies instructions has a significant effects on reading comprehension. In other words, met cognitive strategies instructions allow students to activate learners thinking and leads to improve their learning performance . The outcome of the posttest data analysis revealed that the subjects in the experimental group significantly outperformed the subjects in the control group. Tashtosh (2008) believed that teachers need to learn how to facilitate the process of reading. This conscious learning can be achieved through strategy training . Giving instructions on how to implement and employ different strategies in the classroom helps teachers make the process of learning and teaching more meaningful and purposeful and encourages the learners to work collaboratively. The best strategy training not only teaches language learning strategies but also deals with feelings and beliefs about taking on responsibility and trust.

The findings of this study may be benefit to EFL teachers and EFL teaching in general. Using met cognitive learning strategies instructions may be beneficial in teaching reading texts because they can create new context for students and learning would be more interesting. Accordingly, when foreign language teachers do not employ the proper strategies, then they will fail to monitor their students' comprehension. Monitoring is very important for them to enable them counter the difficulties they are likely to face. Language teachers should

introduce the various learning strategies to students, find out what strategies the learners are already using, help them to monitor the use of strategies based on different tasks and instructions, and help them to evaluate the effectiveness of using these strategies (Chamot and O'Malley, 1987)

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