

The impact of metacognitive awareness in enhancing efl university students' reading comprehension

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Abstract

The strategies behind cognitive knowledge enable students to organize, plan and evaluate their own learning. The meta-cognitive strategy used to coordinate the learning process. The strategy also includes thinking about learning, observing ideas, and evaluating reading comprehension. This study aims to determine the effective of metacognitive strategy for supporting EFL students in reading comprehension, assess the reading comprehension and vocabulary achievement of students in third class to ensure whether instruction that integrated metacognitive strategies to increase students' reading comprehension and finding out the impact of the metacognitive strategies on learning vocabulary for EFL students .

This research discusses the "meta-cognitive strategy" in reading to enable EFL students to understand reading. This research shows that how cognitive strategies help students use appropriate strategies to solve reading problems. Cognitive strategies help students stop their dependence on using dictionaries. Metacognitive reading comprehension skill has a positive effect on learning a second language, so learners can improve the skills they need for effective communication in English language and find key ideas, implicit information, explicit information, references, and word meanings. This research is: First, it discusses the definition of metacognitive reading strategy, the significance of metacognitive reading strategy. Second, it reviews the process of metacognitive reading strategy. Third, definition of reading comprehension and different models of reading comprehension are reviewed. Fourth, the relationship between metacognitive reading strategy and reading comprehension will be discussed. The results show that teachers regularly should use cognitive reading strategies with their students, and are also expected to use them independently. They also are encouraged to use models beyond cognitive strategies, and then support students to learn how to use them independently.

Keywords: Metacognitive Reading Strategy, reading comprehension, efl students, classroom instruction

1. Introduction

1.1 Significance of the Study

Metacognitive strategy plays a significant role in successful learning as being closely connected to improvement of learning. Metacognition is public to learning both language learning and the content, although there is some indication that metacognition is particularly for a specific area of study. So,

metacognitive strategies is an initial step to promoting language learning autonomy that students from different cultures and the communication of these strategies are learning content knowledge and language. Understanding of learners' existing knowledge and experiences in learning the major subject discipline can provide teachers a clear guidelines on how learners can improve their individuality in learning the language. Therefore, learners will be developed with acceptable strategies of learning to improve a passion of "learning how to learn". Moreover, this study can encourage the awareness of students to the possibility of transporting learned strategies to new conditions between listening and reading or between the main content and language learning.

1.2 The Aims of the Study

This study aims to:

- 1- Determine the effective of metacognitive strategy for supporting EFL students in reading comprehension.
- 2- Assess the reading comprehension and vocabulary achievement of students in third class to ensure whether instruction that integrated metacognitive strategies to increase students' reading comprehension
- 3- Finding out the impact of the metacognitive strategies on learning vocabulary for EFL students.

1.3 Limits of the Study

This research is limited to the third class students in English department in Tikrit University. The students had pretested and post-tested at the end of the study.

2. Introduction

Brown (1987:79) states that "Metacognitive strategies, called self-directed learning skills in the methodology literature, or regulatory skills in the cognitive psychology literature, refer to executive processes that govern and direct other thought processes when planning, monitoring, evaluating, and regulating solution activity". Cognitive and emotional awareness recovered from the monitoring or evaluating process is understood the interaction of these processes in metacognition theory, supervised by "a central processor".

Flavell (1971;81) mentions that:

Metacognitive knowledge and metacognitive experiences are seen as components of metacognition". Metacognitive knowledge refers to knowledge about one's own cognitive and affective states and activities and control over this knowledge in order to achieve the specific goal. Cognitive states and activities involve knowledge of the world, of a person's knowledge and capabilities and strategic knowledge. Affective states and activities concern knowledge of abilities, attitudes and motivation. Such knowledge can be classified into declarative (e.g., what the knowledge is, why the knowledge should be learned), procedural (how to use the knowledge) and conditional knowledge (when and where to use the knowledge as well as how to evaluate its effectiveness).

Metacognitive experiences are involving the awareness the cognitive and affective processes of the learners. These experiences are recovered by aggressively monitoring the mental processes of the learners.

Fleming & Walls (1998) with esteem to language learning, expose that good learner takes active duty for his own learning and uses a choice of strategies which support him for planning, monitoring, managing and reflecting on the process of learning of foreign language. They also find that metacognitive strategies are thoroughly related to the development of independence learning.

Metacognition is viewed as the higher level of mental processes that one learns and uses to control one's thoughts or knowledge. Flavell (1987:2) states that metacognition includes metacognitive knowledge and metacognitive experiences together. Metacognitive knowledge is about "anything cognitive" and "anything psychological". Kluwe (1987:31) mention that an awareness includes learner's knowing about "cognitive states and activities, and affective states, and control over this knowledge in order to achieve a specific goal". This knowledge is referred to as "declarative knowledge" "procedural knowledge" and "conditional knowledge".

- 1- "Declarative knowledge includes: knowledge of 'what' anyone knows about cognitive states and activities and affective states. Cognitive states and activities include information of the world, understanding of anyone's own information and abilities and information of strategy. Affective states concern knowledge of emotions, attitudes and motivation and this is an inherent characteristic of the learner.
- 2- Procedural knowledge refers: to knowledge of 'how' to use world, personal and strategic knowledge, and
- 3- Conditional knowledge refers to 'when' to apply this knowledge and 'why' one should apply it. This knowledge also includes how to evaluate the effectiveness of knowledge application".

Kluwe (1982:212) refers to metacognitive procedural knowledge or executive processes are those which is monitoring, selecting and applying, as well as regulating the activities for problems solving.

Metacognitive experiences are related with awareness of anyone's own cognitive and affective processes (Flavell, 1979:99). Metacognitive experiences are recovered by active monitoring of one's own mental processes. These experiences can bring about change in one's thought processes in that they can be integrated into, discarded from, or used to justify one's current metacognitive knowledge.

Hacker (1998:11) mention the two components of metacognition that involve "knowledge and the ability" to intentionally admission and control that knowledge. Three kinds of knowledge are prominent. "Firstly, knowledge about the world. Secondly, knowledge of the person, which includes 26 individual's cognitive and affective states and processes. Finally, there is knowledge about strategies or strategic knowledge".

Metacognitive strategies have also been identified with EFL reading comprehension. Chamot and O'Malley (1987:243) state that the strategies is used in execution a reading comprehension task, i.e., 'recalling prior knowledge, self-monitoring, verifying what is known, assessing new learned knowledge and integrating new knowledge with known knowledge'.

2.1 The Significance of Metacognitive Reading Strategy Awareness in Reading Comprehension

Metacognitive reading strategy awareness acting an important role in reading comprehension and learning and teaching process. Moreover, its importance, metacognitive strategy has long been the overlooked skill in teaching English language, research, learning, and assessments. This lack of good metacognitive reading strategy skill is strengthened by the essential role of reading comprehension in education achievement. The most important solution to the problem of reducing the lack of reading comprehension is the learning of metacognitive reading strategy skills. Learning and teaching language should be focused in metacognitive reading strategy skills. The present study is an attempt to find out whether meta-cognitive reading strategy awareness enhances EFL students' reading comprehension. It also attempts to notice the relationship between metacognitive reading strategy awareness and reading comprehension. This paper focuses on the four main issues. (Pressley et al, 1998:239).

2.1.1 Meta-Cognitive Strategy

Gagne et al. (2009.9) state that "Metacognition enables pupils to be more active in their learning, ie, to mobilize all of resources in order to have a successful learning experience. In order to do this, they must know how they learn and be aware of the steps that are followed and the means that are used to acquire knowledge, solve problem, and perform task". LD online Glossary (2014: 184) defines metacognition as the process of "thinking about thinking" While Block (2006: 84) claims that "Metacognitive assessments affect to evaluating the reader's awareness and knowledge of the intellectual processes involved during reading and if a reader can monitor, regulate, and direct their thoughts before, during and after reading to obtain a complete comprehension text. "

Meta-cognitive strategies help learners become more proficient and be excessive in their learning, help learners to discover material, evaluate when they want extra resources, understand how to apply different approaches to problem, and enable the learners to learn more successfully and intentionally (Brown and Campione, 1997:229,270)

Brown (1980: 453-481) refers to meta-cognitive skills as "self-awareness of progressive cognitive activity". He adds that meta- cognitive order learners to direct, plan and monitor learners' cognitive activity. Blakey and Spence (1990: 3476) define meta-cognitive as "the process of thinking about thinking and learning how to learn". Metacognition equipping pupils with good understanding about the cognitive processes which contain problem solving and how apply the instructional interventions in teaching students how to be more aware of their thinking and how to standardize the cognitive processes for more effective teaching of the problem solving task (Huitt, 1997:11)

Efklides (2006: 1-3) states that metacognition has an important part in learning process; it make information available for learning activities for the pupils and their progress. Metacognition consists of essential components which are knowledge of cognition and regulation of cognition (Schraw and Moshman 1995: 351-373). Knowledge of cognition involves knowledge of strategies and conditional knowledge; regulation of cognition involves monitoring, planning and evaluation. If pupils infer the role of regulation and knowledge of cognition as the basic instruments for metacognition process, so they have good ability to build metacognitive knowledge through the interface of these two components. Teachers must encourage pupils to infer the importance of metacognitive knowledge and regulation (ibid)

Flavell (1981: 49) showing that teachers who use metacognition strategies help learners to be more aware of their learning abilities and be more strategic thinkers in a scientific way to assess their own thought process. He divides metacognitive strategies into metacognitive knowledge which refers to the

awareness of thinking process, and meta-cognitive regulation which refers to the students' ability to control thinking process. Cohen (2014: 50) states that "awareness of knowledge develop pupils' ability to comprehend and reflect on what they think and know". Shah (2012:50) mentions that learners depend on metacognitive strategies to achieve better academic achievement and these strategies will develop pupils' ability in comprehending what they have learned and to improve what they have acquired. Metacognitive regulation develop teaching / learning process and broaden the pupils' insight to many teaching approaches, so they will be able to solve the academic problems.

Azevedo and Aleven (2013: 51) Metacognition strategies enhancement learning experiences by enabling learners to acquire higher problem-solving and offering good guidance to evaluate their progress. Herrera et al. (2011: 51) Metacognition means knowledge and beliefs about cognition, and the skills or strategies which are enabling the self-regulation of cognitive processes .

the National Academy of Sciences (NAS, 2000, 2005) have identified

three principles of learning that are important for helping students develop understanding. These principles include (a) engaging students' preconceptions of how the world works, (b) developing a deeper understanding of content knowledge, and (c) teaching metacognitive skills that can help students learn to manage their own learning by defining learning goals and actively monitoring their progress in achieving them.

According to Everson and Tobias (2001), as well as Matanzo and Harris (1999), many students entering college have not been taught strategies for examining or improving their metacognition. In fact, a study of pre-service teaching students conducted by Matanzo and Harris reports that many students do not even know what metacognition is. In his study that examined how teachers teach metacognitively, Hartman (2001:123) states that students cannot be expected to be competent with metacognitive skills because these skills are rarely taught explicitly and not everyone develops them independently. He also reports that many students experience academic difficulty without firstly learning the metacognitive skills needed to support that effort because they constantly focus on retaining subject matter content. Wilburne (1997:89) asserts that the teaching of basic learning skills normally focused on in junior high and high school settings (i.e., (a) note taking, (b) observing, (c) drilling, (d) memorizing, and (e) test taking) is not enough for successful performance on complex academic tasks found at the college and university level.

2.1.2 Classroom Instruction Using Metacognitive Strategies

Education will be insufficient if is not practiced in classroom situations. Also, metacognitive strategies are considered to be worth for acceptable text comprehension, teachers in classroom fail in teaching this method. Pressley et al. (1998:140) showed a qualitative study in classrooms to investigate instructional practice regarding reading, writing, motivation, classroom management, use of materials, and instructional goals. They asked the teachers twice throughout a yearlong and they observed them twice observations in the month. They found that teaching of comprehension strategies was negligible. Then the teachers were acknowledged for teaching reading comprehension strategies. Some teachers mentioned the use of strategy but in a inactive way inactively and indirectly teaching the strategies. Some teachers lack in teaching and using of the strategies by using "summarizing, predicting, and imagery as an assessment tool". This does not confirm that students used these strategies through the acting of reading text. While most of the teachers did not consider that it is necessary to realize that the students were conscious of using such strategies although they use them.

Palincsar and Brown (1984:231) believe there are four activities aid in comprehension-fostering and comprehension-monitoring activities. “These activities are self-questioning, summarizing, clarifying, and predicting. The technique use by them is "reciprocal teaching (RT)". The strategy tends to be too time consuming for teachers to implement, and modifications are often necessary for implementation (Marks et al., 1993).

2.1.3 Metacognitive Learning Strategies

1- Reflective Writing

Reflective writing helps students make connections between what they are learning in their homework/class content and with how they are integrating the content into their current learning structures. Writing helps students observe themselves before, during and after their reading, watching and listening experience. Reflective writing can also take the form of jotting down their affective and other personal reactions to learning the material. The most popular reflective writing activity is the “minute paper” whereby you have students respond to prompts that ask them to think about their experiences with the homework, class activities or recent learning experiences in your class.

Metacognition: *Purposefully thinking about one’s own thinking strategies – when students are able to “learn to think” and “think to learn”*

Three critical steps to teaching metacognition:

1. Teaching students that their **ability to learn is mutable**
2. Teaching **planning and goal-setting**
3. Giving **students ample opportunities** to practice monitoring their learning and adapting as necessary

2- Think Aloud for Metacognition

As the instructor, you are an expert in your field. It can be almost impossible to remember a time when you did not think ‘the way you currently do about your discipline’. At one time you were confused or unsure about studying your discipline. If you can offer to students examples of your own self-reflective examples of your own transition into thinking like an expert in your discipline, this can help students a lot. The researchers are thinking metacognitively all the time (thinking about your own questions, how your thinking has evolved, how you incorporate new knowledge into your practice etc.)

Anytime you can talk out loud (‘think aloud’) about how you view a document or a picture or think about a book, or share your thinking processes with students you are helping them become more metacognitive in their own approaches to the subject.

Once you have modelled for them how you would solve a problem or interpret a piece of writing, have students work in pairs to talk out loud as to how they are thinking about an assignment piece of homework or an assignment.

1. One student talks out loud while the partner records what they are saying (the strategy goes to be used to complete the homework or do the assignment). The partner also guides them to think through all the steps.

2. Students switch roles and do the same for each other.
3. Now students have thought out the process for completing the assignment or homework, received some feedback from their partner and possibly have a plan written down as to how they are going to undertake the task. Debrief briefly with class as to lessons learned etc.

“It is terribly important that in explicit and concerted ways we make students aware of themselves as learners. We must regularly ask, not only ‘What are you learning?’ but ‘How are you learning?’ We must confront them with the effectiveness (more often ineffectiveness) of their approaches. We must offer alternatives and then challenge students to test the efficacy of those approaches.” (Weimer, 2012).

2.2 Reading Comprehension

Reading is fundamentally related to meaning, particularly with the transfer of meaning from mind to mind (the transfer of a message from writer to reader). Reading comprehension is commonly known as an interactive mental process between a reader's linguistic knowledge, knowledge of the world, and knowledge about a given topic. In the setting of English as a Foreign Language (EFL), it is frequently supposed that reading comprehension is the fundamental way of learning new information and it is the most significant skill required for the students' success. Comprehension relies on two kinds of information: that which is received from the text and that which is retrieved from reader's memory. The schemata of the past experiences and prior knowledge that are contained in the readers' memory are critical in assisting readers to construct meaning from the text. By relating new ideas encountered in the text to familiar ideas and mental constructions, readers construct an understanding of the text material, and comprehension occurs. Nevertheless, reading comprehension can be simply defined as the capability to perceive and understand the meanings communicated by texts. While reading, the reader is viewed as an equal and active partner with the text in the meaning-making process of comprehension. That is in accordance with schema theory comprehension is the result of the interaction between the background knowledge of the reader and the text.

2.2.1 Reading Comprehension Skills

Reading comprehension skills permit learners to read efficiently, learn effectively, problem-solve, strategize, conceptualize, and prosper in life. Reading comprehension skills are based on earlier stages of reading development, including oral reading and reading fluency. Without developing these earlier reading skills, 54 learners necessarily and continually focus on decoding letters and words to the detriment of the reading process, rather than pursuing the progression to meaning and understanding (Razi, 2004, p.19).

Reading is a process which needs the learner to interact with the text deeply to be perceived and understood. It is strongly connected with the term comprehension since the ultimate goal of all instructional reading is to create learners who are able to comprehend different sorts of texts (Lenz, 2005, p.5).

2.2.2 The Purpose of Reading Comprehension

The purpose of reading to connect the ideas on the page to what you already know. If we do not know anything about a subject, then pouring words of text into your mind is like pouring water into your hand. One does not retain much, (Martin, 1991). While Lenz (2005) states that the goal of all reading instruction is ultimately at helping a reader to comprehend the text. The researcher sees that the purpose of reading comprehension is to enable the students to understand what is being read, it is the process of

constructing meaning from a text. 60 Goldenberg (1992-1993) states that proficient reading depends on the ability to recognize words quickly and effortlessly. If word recognition is difficult, students use too much of their processing capacity to read individual words, which interferes with their ability to comprehend what is read.

2.2.3 Teaching Reading

Adams (1990:234) states that reading comprehension is a complicated process for the students to comprehend text sufficiently, their needs of awareness of printing could be attained throughout many channels to simplify the recognition of words. The lack of phonological sympathy impeded reading, but another aspects came in students progressed throughout the altered levels of reading comprehension. These aspects are obvious as children whom they received training in phonological awareness don't essentially reading in fluently (Scarborough, 2001:45). Moreover, to interpreting skills, students need many knowledge of vocabulary and metacognitive skills so they can be monitoring their understanding and reflecting on what they have been read. Experienced reader learns these mechanisms with concurrent and fluent. Since, comprehension can be impeded if each element is insufficient.

Scarborough (2001:46-50) mentions that:

Some teachers may assume that reading comprehension will develop naturally without any direct teaching of comprehension. This line of reasoning places reading in the same developmental progression as oral language development. Children are able to acquire speech without formal instruction if given enough exposure to it. This led many researchers to believe that given enough exposure to print the child would experience the same developmental pattern. Nevertheless, research has proven this line of reasoning to be faulty. Humans have been communicating through speech for thousands of years. We have used written communication for the masses for only several hundred years. This skill must be taught through formal education. Research evidence gathered over the last 20 years has shown that children need to learn phonological awareness, phonemic awareness, awareness of print, phonics, and fluency. Instruction of these components enables the child to decode unknown words. These components are the basics or prerequisites needed for reading. Learning to decode is a means to an end, and that end is to read and understand written communication created by others and to be able to write in order to communicate. In other words, reading instruction does not end when students can decode the words. They continue to need instruction that will support their understanding of what they are reading.

SECTION THREE

3.1 The Methodology

The purpose of the study was to determine the effectiveness of metacognitive strategies designing to help students to comprehend the text. Specially, in reading comprehension and achievement of vocabulary of 103 students in the third class were tested to govern that the instruction of metacognitive strategies lead to growth the reading comprehension text for them..

This research was applying in department of English in college of Education for Humanities / University of Tikrit. The students in third class had a pretested and posttested.

3.1.1 The Experiment of the Study

The lesson exemplifies the instruction that was conducted in the college. There were five parts of the lesson:

1. Introduction. The teacher asking a question, showing a picture, stating facts about a topic to took the students' attention. The teacher by asking a series of questions for stating the purposes of the lesson and stimulated the students' contextual knowledge of the topic of lesson. The students write down their own responses in a little words.
2. Vocabulary. The teacher presented some vocabularies. Most of them were adding to semantic networks. The semantic network links “the part of speech, synonyms, antonyms, and other related words to a new vocabularies”. At least six different meanings of a word were webbing on a multiple meaning web.
3. Reading the Story. Before the students reading the story they should review their responses of the questions that asked by the teacher in the beginning of the lesson. The students were reminding for thinking out loud while they were reading. During the study, the teacher reads the passages to the students in the first week to control and for the difference of the students level in translating.
4. Summary. The teacher asked the students to recognize the main ideas, the secondary ideas, and the specifics ideas in the text. The main idea was written in the top of the card. While the secondary one was putting under the main idea. The specifics ideas were written under the secondary ideas. The main idea was given number 1. The first secondary detail was given number 2, and the secondary idea's details were given number 3. The second secondary idea was in 4, with the details putting in 5 till the last secondary idea's details. The students took chances orally to summarize the text, using the order of the elements of number.
The students then wrote their own summaries that contained half of words in the given text.
5. Questions. The teacher ask some questions and the students should answer them orally. Questions were both simple and complex questions, that the simple one where were found in the text, and complex one, students had to thought and memorized them from their background knowledge

The researchers ask them to identify the important elements of the given text after they finishing the reading the text that they have just read: the main idea, the secondary ideas, and the details.

The researchers remind the students that the summary should be on more than half of the number of words of the text when they write their summaries, so they must be aware to choose the most important information. After they finishing their writing they read their passages and answer the questions.

The students respond are:

- 1- The students respond with a tool, a person, and a jacket.
- 2- The students respond with the elephant's trunk.
- 3- All the students' responses are adding to the network.

Table (1)

Comparison of the (EG) and (CG)in Pre-Test and Post-Test Scores in the Reading Comprehension by Using Metacognitive Strategy .

Group		Mean	SD	DF	T-Value	T-Table	No. of Samples
Ex	Pre	21.56	6.87	51	1.63	2.000	52
	post	22.62	6.79	51	2.54		52
Co	Pre	19.57	5.49	50	1.63	2.000	51
	post	19.53	5.51	50	2.54		51

4. DISCUSSION OF THE RESULTS

The results that the researcher has come up with are as follows :

1-There is a significant difference between students' mean scores between the (EG) and the (CG) in the post-test as compared with pre-test in reading comprehension. However, the (EG) has got more benefit from applying (metacognitive strategy) than the (CG) which has been taught by using traditional method, since the difference in mean scores of the group in the pre-test and post-test comparison is higher than that of (CG).

2-The mean score of the (EG) is higher than the mean score of the (CG). This indicates that the applying of metacognitive strategy on the acquisition of vocabulary and reading comprehension is more effective than teaching them through using traditional method which depends on mainly on the teacher while the students just take notes.

The mean of the (CG) is (19.57) and (19.53) in pre and post- test which does not mean that teaching vocabularies without metacognitive strategy is inefficient or it has totally negative effect, but the variations in scores that we have got indicate that teaching the reading comprehension by metacognitive strategy with the (EG) is more beneficial than the traditional method.

From the analysis of the collected data ,it is found that the mean scores of the experimental group is (21.56) and (22.62) in the pre and post-test which is higher than the mean scores of the control group.

This indicates that students' achievement of the experimental group is better than that of the control group. It can be concluded that this experimental turned out to demonstrate significantly more learning effect for metacognitive strategy. Learners who taught English reading comprehension by using metacognitive strategy are more successful than those taught English without it.

The obtained results of the conducted experiment may due to the following reasons:

- 1- With the applications of metacognitive strategy, the instructional material offers an opportunities for students to express their ideas, thoughts and experience.
- 2- It is found that metacognitive strategy is an enjoyable strategy which enables students to learn English through enjoyment.
- 3- Students can acquire grammatical competence naturally through it.

5. CONCLUSION

The present study in both of its theoretical and practical aspects has led to the following conclusions:

- 1- The achievement of the students of the experimental group is better than the students of the control group which indicates that those students have positively responded to the metacognitive strategy which is an effective strategy that stimulates students' creativity in generating and organizing their ideas, encourages brainstorming, and arouses motivation.
- 2- Using metacognitive strategy in teaching reading comprehension helps students to understand, organize and analyse the literary texts in the best way.
- 3- This strategy provides an active role for students and they can learn to distinguish between significant and less significant ideas and information and enable them to organize pieces of information into a comprehension component.
- 4- Metacognitive Strategy has an effective role in improving students' achievement in the preformatting of the English reading comprehension and acquiring vocabulary.

From all above the researchers conclude that using metacognitive strategy helps students become better readers and to be active thinkers while they read. It also facilitates engagement and interaction by keeping students motivated through activating their prior knowledge. On the other hand, metacognitive strategies enable the students to be more active in learning process. In metacognitive strategies the teacher doesn't direct learner, but provide support from them to be able to learn on their own. While in traditional methods there is a teacher-centered classroom which neglected the students' role. Metacognitive strategies help students to be more interactive in their learning.

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