The importance of Metacognitive Strategies to Enhance Reading Comprehension Skills of Learners: A Self-directed Learning Approach

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Abstract-_This article "The importance of Metacognitive Strategies to Enhance Reading Comprehension Skills of Learners: A Self-directed Learning Approach" deals with an in-depth study and implementation of Metacognitive strategies. This study investigates as to what extent the teaching of metacognition is feasible in the classroom and how students could get the maximum from applying metacognitive strategies and styles. This research aims at emphasizing the use of metacognitive strategies as a useful resource to enhance reading comprehension of students. The purpose of the literature review in this study is to more elaborate this topic to get the profound insights into the actual framework of metacognition so that implementations could be made as much as possible. Furthermore, to explore literature review is an authentic source to know as how much research has been conducted so far. It will be identified also that what is missing that needs to be addressed. The themes that would be explored in the review of literature are as following: Theoretical Framework, Motivation and Performance, Metacognitive strategies, Metacognitive instruction; and Empirical evidence of teaching metacognition._

Key words-_Metacognition; Strategies; Metacognitive Instruction; Self-directed learners; Reading; Comprehension Skills._

1. INTRODUCTION

Metacognition is defined as "cognition about cognition" or "knowing about knowing". It is an awareness and understanding of one's own thought processes. It can also be defined as the knowledge and awareness of one's own thinking processes and strategies, and the ability to consciously reflect and act on the knowledge of cognition to modify those processes and strategies. (Flavell, 1976) The research questions that this study wants to investigate are as following:

- _Are metacognitive strategies helpful to enhance reading comprehension skills of students?_
- _Is the teaching of metacognition an effective tool to facilitate learners in becoming self-directed learners?_

Metacognition refers to higher order thinking skills that involve more active control over the thinking processes involved in learning. This higher-level cognition was given the label metacognition by American developmental psychologist John Flavell (1976). Research on metacognition began in 1970's with the work of Flavell, whose study focused on children's metamemory with the central focus on their knowledge and control of their memory processes. During the 80s and 90s, it became a hot topic in the pedagogical circles as to how

metacognition can or should be taught so that students must gain deeper insights into comprehend their reflections and perceptions in order to overcome their weaknesses to comprehend texts. Though researchers have long seen the benefits of metacognition, but teachers and school psychologists have gradually embraced towards metacognition to measure their students' skills and knowledge. (Baker, 2008) Consequently, in recent years, the role of metacognition as a component and a source of meaningful instruction have gained currency to a great extent. There has been a debate on this issue as to how, when and why metacognition should be incorporated in the reading curriculum or as an essential teaching strategy. Different empirical studies (Haiduc, 2011, Cubukcu, 2008, Hall, 2004) show that to get dexterity in metacognition skills, to teach metacognition is crucial. Students must know that they are using metacognition because they use this strategy consciously and/or unconsciously but they need to organize their skills so that they could achieve the most of it from metacognition strategies. This is the process which leads students to be self-directed learners in the long run. As Abdullah (2001) states that self-directed learners don't need guidance if once they become experienced in metacognition skills. They have the ability to control and manage their thoughts and to put them in the right direction. (As cited by Shannon, 2008, p.14)

2. THEORETICAL FRAMEWORK

Research provides the foundation with theoretical framework of this notion that metacognition is the key source to enhance students' learning and perceptions skills. This capacity increases the speed of thought processes and reinforces what is called reflection and perception. With the passage of time, the definition of metacognition is not confined to just' thinking about thinking' or 'thoughts about thoughts'. Fauzan (2003) argues that this concept has been broadened and motives, intentions, and the ability to consciously monitor thinking is now the paraphernalia of metacognition. During the last 40 years, psychologists generally and educational psychologists particularly have been taking greater interest in metacognition. Their interest lies in knowing as to what extent it can be applied to promote critical thinking and how it can be integrated in the instructions. In a more recent study, Flavell (2004) presents a new idea by dividing metacognition theory into two areas of study: Knowledge and processes in which he describes that how mind works in general and how mind works in particular. These processes refer to different levels to monitor the thought processes and this is called 'executive processes', which is further defined as creative and associative. In the line of this background, the conceptual foundation is based on the pre-conceived notion that metacognition has and can have a conspicuous role in the development of students reading and learning skills and students' perception and reflections skills could be better polished by teaching them metacognition. This notion generates questions automatically as to what extent it is practical to teach metacognitive strategies in the class. And if to teach metacognition is possible then how the desired objectives could be achieved in terms of students' performance.

3. METACOGNITION CRUCIAL FOR MOTIVATION AND PERFORMANCE

Does metacognition play a pivotal role in enhancing motivation and performance of students is the crux of all of those studies, which have been conducted so far. In this section, the correlation of metacognition and motivation would be investigated. As a matter of fact, this is the reason that the concept of metacognition has gained this much fame. Researchers have done painstaking efforts to explore the advantages of using metacognition in an organized way. In educational domains, motivation is measured by observing students' approach and attitude towards their studies. According to Ryan and Deci (2000), motivation is something which can be judged by person's behavior as to how much a person is eager to learn or curious to know something new. Additionally, how much learner is concerned with showing better performance level? Motivation further can be divided in two levels, one is the level of eagerness and the other is an orientation (type of motivation). The other (type of motivation) depends upon the student's personal level of interest. (As cited by Fauzan, 2003, P46) Ryan and Deci also identified

two types of motivation, intrinsic and extrinsic. Intrinsic motivation is inherent and it makes a person to be indulged in something interesting and enjoyable, while extrinsic motivation needs some incentives always to go ahead and to move forward for the given object. If students know that to pass their exam; they need to do hard works then they do it due to their extrinsic motivation not because of their personal interest or intrinsic motivation. Ryan and Deci (2000) further explained Self-determination theory (SDT) in relation to intrinsic and extrinsic motivation. Self-determination is a characteristic that can change extrinsic motivation into intrinsic, if the learner is determined to achieve his/her objectives. Pintrich & De Groot (1990) argued that existing views on students' learning have emphasized that motivation is crucial for the learning process of learners. Without motivation they would be drab and dull and the integration of motivation and metacognition is a wonderful combination for successful academic performance that eventually leads students to become self-directed learners. (As cited by Fauzan, 2003, P48) This theme of study is quite relevant to the research topic and research questions as it describes the role of motivation in relation to metacognition and this is exactly what this study wants to explore.

4. USE OF METACOGNITIVE STRATEGIES

It is imperative to know that when metacognitive strategies should be used and which types of strategies are required in the given scenario. The purpose of this section is to explore the different types of strategies so that the use of such strategies could be made beneficial to learners. Summarizing is a skill that has been using on a broadened scale in the pedagogical domain. To be efficient in this skill is greatly required by students with the view that only comprehending the text is not enough, but to present the crux of the matter by applying critical thinking skills is the real task. In order to summarize, students must have the ability to assess the key points of the text. As well as they must be aware of the different strategies of metacognition. In this context, Brown and Day (1983) state that some rules are essential to summarization and students must know about them so that they could easily summarize in a perfect manner. They must know that they are required to delete redundancies from the text. In addition, they must be able to synthesize the information and to delete trivia in order to be accurate. To select a topic sentence and/or invent a topic sentence is also considered a technique in summarization. To measure the validity of these rules, Brown, Day, and Jones (1983) used constructed tests for fifth, seventh and tenth graders and they checked that how much these rules are helpful for students in summarization. They concluded that younger children were able to use the rule of deleting redundancies with 90 % accuracy as they got the basic idea of eliminating unnecessary details. Topic sentence idea worked well with upper grade students. (As cited by Fauzan, 2003, P54) Besides summarization,

questioning is also considered an important skill in enhancing the students' reflective thinking. According to Hunt and Metcalf (1968), the technique of self-questioning provides ample of opportunities with students to ponder over the text and to extract the essence of the problem. (As cited by Fauzan, 2003, P56)

The empirical study of Ander and Anderson (1978) shows that they developed this technique and tested it on high school students and they got positive results. The researchers found this technique much better than just simply reading and reading texts. Through this technique, students can develop their critical reflective skills by generating questions regarding text. (As cited by Fauzan, 2003, P56) Metacognition can also be used through verbalization, which is an instrumental technique. Weener (1974) explains it as a tool which is instrumental to know that what students' perceptions about their instructional goals are and in return what learning outcomes can be achieved. (As cited by Fauzan, 2003, P59) Verbalization is often associated with visualization. Different researches show that many students experience difficulty in expressing themselves in written and oral domains. Verbalization is also a metacognitive technique because verbal rehearsal provides students to monitor their text. In a verbal rehearsal, students can relate the text to prior knowledge including integration of personal opinions in the text. Even they get the opportunity to summarize text into their own words. The exploration of these strategies has broadened the view of using such strategies in a metacognition process. It has provided a great help to understand the purpose of this study and to answer the questions of the study.

5. METACOGNITIVE INSTRUCTIONS

At this point, it is easy to conclude that metacognition in collaboration with other different strategies is an effective tool to use during reading comprehension. Through these strategies learning process could be facilitated. The focus of this subheading is to describe different types of instructions, which work with metacognition. Metacognition does not work separately or in isolation. An integration of metacognition with other practical learning styles is the best way to get maximum advantages of metacognition. Different studies have mentioned direct instruction as an instructional method that delivers instructions explicitly. According to Winograd and Hare (1988), direct instruction provides opportunity with teachers to define explicitly what they want to teach. They can give sufficient examples and can ask so many questions to remove ambiguity from the minds of their students. (As cited by Fauzan, 2003, P69) In the same context, reciprocal teaching is another instructional method to teach metacognitive strategies. These are summarizing, questioning, clarifying and predicting. These strategies prepare students to manage and to control their thinking and learning on their own. Students get valuable chance to work with their instructor and/or in groups. The use of

these strategies makes learners effective readers who can use these strategies according to their own requirements. (Palincsar and Brown 1984, cited in Fauzan, 2003, P69) The study of Miriam (1998) shows the results where students were taught with two different approaches. The control group was taught through conventional methodology and an experimental group was taught through reciprocal teaching instructions. In the tests, experimental group showed a significant improvement with 78 % as compared to control group with 69.5 %. (As cited by Fauzan, 2003, P72) With metacognition, the concept of generative learning is also popular. Students generate ideas about the text and establish connections between their prior knowledge and the existing text and try to extract something common to arrive at a conclusion. The teaching of reading comprehension is based on the notion that students must be enriched with the ability to generate meanings from the text by applying metacognitive strategies. (Wittrock, 1991, cited in Fauzan, 2003, P70) The discussion on metacognition instructions provides comprehensive detail with overall satisfactory results. It is identified that these instructions are able to facilitate learners in improving their reflective and thinking skills. This study is quite appropriate in the background of the research topic and questions, which this study needs to clarify. All these instructions are helpful for learners in the self-directed learning process. Learners learn to navigate through the texts and to extract information and knowledge that they require in this process.

6. IS METACOGNITION TEACHABLE?

Under this discussion, it is imperative to investigate whether metacognition is teachable. Cross and Paris (1988) research explains an approach. It was aimed at improving the metacognition skills of students in reading comprehension in a self-directed learning process. 171 students of third and fifth grades were taught a curriculum with the target to make them aware of such strategies. Gradually, their awareness of the usefulness of such strategies was extended with effective reading strategies and beyond the curriculum also. In the instructions period throughout, students received training regarding metacognition and the use of different strategies according to their needs. A careful and explicit attention to self-questioning, verbalization and summarization was also included. During the period, students showed a remarkable improvement as compare to those students who didn't receive such training in the above mentioned areas. (As cited by Lai, 2011, P20)

The conceptual framework and research questions are examined and exploited in the light of literature that has been found in empirical researches. It is quite evident that past and current studies (Haiduc, 2011, Cubukcu, 2008, Hall, 2004) highlight metacognition and its importance to enhance learners' skills. Metacognition enriches them to deal with the problems they encounter in the reading comprehension process. Moreover, the practice of

metacognition with other strategies is vital to polish learners' perceptions, reflections and critical thinking skills. The literature that is searched reinforces the idea of using metacognition in the pedagogical domain. Different empirical studies (Haiduc, 2011, Cubukcu, 2008, O'Neill, 1992) have been conducted to assess the validity and reliability of metacognitive strategies in relation to other learning styles which can be taught and can be applied together. The ultimate objective of every research is to evaluate the worth of metacognition. For teachers and instructors could apply metacognitive strategies without any hitch and hesitation. It depends upon the demand of the existing situation that which strategy is useful and effective to acquire desired results. The studies (Ander and Anderson, 1978, Brown & Day, 1981, Hunt & Metcalf, 1968, Winograd& Hare, 1988 and Cross & Paris, 1988) found in literature review may have differences and similarities, but these have the same purpose and that is to examine the effectiveness of metacognition. Some of the studies have shown results through empirical research and some of the studies have presented the opinions of different researchers.

The investigation done through literature review provides scenario of past researches (Ander and Anderson, 1978, Brown & Day, 1981, Hunt & Metcalf, 1968, Winograd& Hare, 1988 and Cross & Paris, 1988) with the empirical application of metacognition. Better understanding is gained by the studies that explain the different types and uses of strategies of metacognition and their impact on students' reading comprehension skills including their reflection and perception skills. These researches (Baker, 2008, Ryan &Deci, 2000, Pintrich& De Groot, 1990, Weener, 1974) show that there is a correlation among metacognition, motivation and other strategies. These can be used in combination to achieve maximum advantages of metacognition or by using various patterns of relationship of these strategies. Different empirical studies (Ander and Anderson, 1978, Brown & Day, 1981, Hunt & Metcalf, 1968, Winograd& Hare, 1988 and Cross & Paris, 1988) show positive results of using metacognition in different scenarios. Despite the fact, these studies have been conducted on different grade level students by applying different metacognitive strategies. Nevertheless, no study is found that explains teachers' trainings of metacognitive strategies. To teach metacognition, teachers must be equipped with effective skills for teaching metacognition. Besides it, no study describes that for different grade levels, (elementary, middle and high) which strategies are most helpful and useful. This study would like to recommend additional research on these issues.

Different studies whether empirical (Baker, 2008, Ryan &Deci, 2000, Pintrich& De Groot, 1990, Weener, 1974) or non-empirical (Abdullah, 2001, Flavell, 2004, Shannon, 2008) are clearly related to research questions of this study. The major interest of the study lies in investigating options, which provide evidence enough with the possibilities of using metacognition as an effective tool. The purpose is to enhance students' reading comprehension skills in addition to improve their reflection and critical thinking skills. In this background, empirical studies of Ander and Anderson (1978-1979), Brown & Day (1981), Hunt & Metcalf (1968) Winograd& Hare (1988) and Cross & Paris (1988) are clearly related to the research questions of this study. The ultimate objective of these researches and questions of this study is the same and that is to investigate the effectiveness of metacognition and its impact on students' academic performance.

7. CONCLUSION

The final conclusion of this study can be inferred from literature review that describes the importance, effectiveness; and practical opportunities to apply metacognition as a part of teachers' instructions. Every study is agreed on the point unanimously that metacognition is worth-considering. And it is used and can be used to enhance students' comprehending skills. The base of the theoretical framework and literature review is to establish a relationship between the research purpose and research questions of the study. This study analyzes and examines not only the impact of metacognition on learners' skills but also uncovers the previously published work on the issue. This framework is directly relevant to the research questions of the study as its focus is to highlight the questions with an attempt to justify this research topic by providing relative literature review. The research questions of the study are consisted of two variables, that is, independent and dependent. Independent variable is the use of metacognition in the classroom for comprehending text and the dependent variable is the success of learners in comprehending text as a result of using metacognitive strategies. Hence, literature review is the reflection of the purpose of this study and goes hand in hand with the research questions also.

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