THE ROLE OF METACOGNITION IN READING COMPREHENSION

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Abstract
The purpose of this paper is neither to conduct such a study nor to assess students’ metacognitive awareness in reading comprehension. In particular, this paper tends to explore the theory on metacognition and the important of metacognitive strategy in enhancing ELF students’ reading comprehension. It includes a short discussion of some of the basic concepts of metacognition and review of various studies on the development of metacognition in reading comprehension. Moreover, hopefully the paper could provide teacher, educators and instructors some suggestions and to lead further studies for helping the students to increase their metacognitive awareness of reading strategies. To this end, this paper can also serve as a research reference in the field of students’ metacognitive knowledge of reading skill, particularly in reading comprehension strategies.

Keywords: metacognitive reading strategy, reading comprehension.

INTRODUCTION
The ability to understand academic reading material in a second language is needed to get succeed in higher education. However, many students enter higher education unprepared in dealing with academic reading material (Dreyer & Nel, 2003). Past researches indicated that many English as foreign language learners
(EFL) were struggling to handle the academic reading demands (Dreyer & Nel, 2003; Munsakorn, 2012). In reading contexts, Phakiti (2006) reports that second language readers often encounter “unfamiliar words, syntactic structures or topics that make them to consciously evaluate and examine alternative sources or use context clues”. The reasons are they do not have sufficient vocabulary to understand the reading materials and due to their low level of reading strategy knowledge (Ghyasi, Safdarian, & Farsani, 2011). Phakiti further argues that when readers face difficulty, “assessing situations and monitoring current comprehension are needed” because it will affects the speed and effectiveness of reading. In fact, they hardly apply monitoring of their own memory, comprehension, and other cognitive tasks (Flavell, 1979). Therefore, it is strongly recommended that the students should adopt a suitable strategy or approach towards reading comprehension.

In reading comprehension, the role of metacognitive awareness of one’s cognitive and motivational processes while reading has been focused in many studies (Mokhtari & Reichard, 2002; Pressley & Gaskins, 2006; Wilson & Bai, 2010; Zhang & Seepho, 2013). Researchers agree that important aspects of reading skill are awareness and monitoring of one’s comprehension processes (Mokhtari & Reichard, 2002). The students’ knowledge of their own cognitive process is known as metacognition. Recently, there are many research about readers’ metacognition in second language reading strategies suggested that metacognitive awareness are positively related to their success in second language reading comprehension and performance and that both reading proficiency and second language overall proficiency are connected to readers’ development of metacognition (Anderson, 2002; Carell, 1989; Mokhtari & Reichard, 2002; Sheorey & Mokhtari, 2001). For instance, Sheorey & Mokhtari (2001) explore the differences in the reported use of reading strategies of native and non-native English speakers when reading academic materials. They found that both US and ESL students displayed awareness of almost all the strategies included in the survey. Both groups showed the importance of reading strategies in the survey and also both ESL and US high-reading-ability students have comparable degrees of higher reported use for
cognitive and metacognitive reading strategies than lower-reading-ability students in the respective groups.

Another related study has done by Dreyer & Nel (2003) about strategic reading instruction. The results indicated that students who received strategic reading instruction achieved both statistically and practically significantly higher marks on the reading comprehension tests than the students in the control group did. A quite recent study has been done by Ghyasi et al. (2011) They have investigated metacognitive awareness of Iranian EFL learners at higher education level by using the Survey of Reading Strategy (SORS) questionnaire. The findings demonstrated that the participants are moderately aware of reading strategies and the most frequently used strategies were problem solving strategy, followed by global, and then support strategy. They suggest that raising language learners’ awareness of global reading strategies can be implemented as an integral part of reading comprehension classrooms. Therefore, metacognitive knowledge can be improved through classroom practices and students can be taught to use the efficient reading strategies for improving their performance on reading task.

Despite the research literature around the world on the significance of metacognitive awareness in language learning especially in academic reading, limited studies on this issue have been done in Indonesia. As a result, there is a lack of information about students’ metacognitive awareness issue in this country. Thus, this paper tries to fill in gap in the literature by focusing on the issue of learners’ metacognitive awareness of reading strategy. However, the purpose of this paper is not to conduct such a study to apply nor to assess students’ metacognitive awareness in reading comprehension. In particular, this paper tends to explore the theory on metacognition and its importance in enhancing students’ reading comprehension. It includes a short discussion of some of the basic concepts of metacognition and review of studies on the development of metacognition in reading comprehension. Moreover, it is hoped to lead further studies on the students’ awareness of the reading process and could provide teacher educators and instructors practical suggestions for helping learners increase their awareness of and use of reading strategies. To this end, this paper can also serve as a research reference in the field
of students’ metacognitive knowledge of reading skill, particularly a short
discussion of some of the basic concepts of metacognition and review of various
studies on the development of metacognition in reading comprehension.

DISCUSSION
Defining Metacognition

The term "metacognition" is often associated with John Flavell. Flavell
originally coined the term metacognition in the late 1970s as “cognition about
cognitive phenomena” (Flavell, 1979). It refers to the person’s knowledge or beliefs
about the factors that affect cognitive activities. If cognition concerns with
perceiving, remembering, recognizing and comprehending any concept or action;
on the other hand, metacognition is dealing with thinking about how a concept has
been learned and comprehended. These cognition about cognitive phenomena can
be labeled as “metaperception”, ”metacomprehension” and “metamemory” with
“metacognition” remaining the superordinate term (Louca, 2008). In addition, In
fact, Flavell’s work emphasized the critical role of metacognitive processes in the
development of memory functioning in children and led to further research not only
in psychology but education as well (Flavell, 1979).

The conceptualization of metacognition in educational sciences and language
teaching is attributed to John Flavell. According to Flavell (1979), metacognition
comprises both metacognitive knowledge and metacognitive experiences or
regulation. In the literature review of metacognition theories, many researchers
simply define metacognition as “thinking about thinking”. It can be thought as
knowledge and understanding of what we know and how we think, including the
ability to adjust our thinking as we work on a task. It refers to knowledge,
awareness, and control of one’s own learning. It also refers to thinking about what
one is doing while reading. In brief, metacognition refers to awareness of individual
systematic thinking about his/her own learning process and learning activities.

Metacognitive Knowledge

The umbrella term of “metacognition” can be divided into two separate, but
interrelated parts: Metacognitive Knowledge and Metacognitive Experiences or
Regulation (Flavell, 1979; McElwee, 2009). Metacognitive knowledge refers to acquire knowledge about cognitive processes, knowledge that can be used to control cognitive processes. Flavell (1979) states that metacognitive knowledge consists primarily of knowledge or beliefs about what factors or variables act and interact in what ways to affect the course and outcome of cognitive enterprise. In other words, the individual's beliefs about oneself and about others as learners and of the requirements involved in the learning process relate to metacognitive knowledge acquired through both conscious and unconscious means, and in formal and informal settings. The learners who have the metacognition awareness have the knowledge about their doing. They have strategies for finding out or figuring out what they need to do. There are three types of metacognitive knowledge that each plays a role in learning and problem-solving in the following: (1) person Knowledge/Declarative knowledge: “knowing what” - knowledge of one’s own learning processes, and about strategies for learning. It includes understanding of what one knows, what one does not know, and what one wants to know. For example, as a student I know that reading is important to enhance my knowledge, which is why I need to read more; (2) procedural knowledge: “knowing how” - knowing what skills and strategies to use and how to apply them. It includes understanding of cognitive tasks and the nature of what is required to complete them. This knowledge guides the individual in the management of a task in order to get succeed in completing the task; and (3) conditional knowledge: “knowing when” - knowledge about why and when various learning strategies should be used. It is includes knowledge about the types of strategies likely to be most useful. This knowledge involved identifying goals and selection of cognitive processes to use in their achievement (Flavell, 1979; McElwee, 2009).

**Metacognitive Experiences**

Metacognitive experiences or regulation refers to a set of activities that help learners to control their learning. According to Flavell (1979) metacognitive experiences involve the use of metacognitive strategies and are likely to come up “in situations that stimulate a lot of careful, highly conscious thinking in novel experiences”. It refers to the actions used to achieve an individual’s goals in
learning. Metacognitive regulation involves the ability to think strategically and to problem-solve, plan, set goals, organize ideas, and evaluate what is known and not known (Hammond, Austin, Cheung, & Martin, 2001). It has three essential skills as follows: (1) planning: involves working out how a task might be approached before you do it. It includes identifying the problem, choosing strategies, organizing our thoughts, and predicting outcomes. Planning strategy is used in the pre-reading stage. Here readers develop a plan of action before they read a text. This strategy is related to scanning and guessing what the text is about. It helps readers to predict the text or information and think about its topic; (2) monitoring: refers to the students’ task awareness of progress, comprehension and overall performance. It includes testing, revising, and evaluating the effectiveness of the strategies being used. The while-reading stage involves the monitoring strategy. This strategy is related to self-questioning and problem-solving. The readers pay attention to their reading and ask themselves questions when they face problems on the significance of the text. The monitoring occurs when they think about their strategy and check their comprehension. While they are reading the text, readers monitor their plan of action. They may ask themselves what important information they need to remember or what they need to do if they cannot understand the text; and (3) evaluation: requires the student to review the outcomes and efficiency of the learning experience. It covers the process of evaluating the outcomes based on specific criteria of efficiency and effectiveness, including revisiting goals and conclusions, deciding how to improve next time, and examining learning from others’ perspective to identify problems. The post-reading stage involves the evaluation strategy. The readers can evaluate their strategy by asking themselves questions concerning what strategies have an effect on their reading and how well they use these strategies. When these proficient readers evaluate their plan, they ask themselves how they might apply the reading strategies to other reading problems or whether they need to go back and resolve any misunderstanding (Anderson, 2002; Flavell, 1979; Hammond, et al., 2001; McElwee, 2009; Pressley & Gaskins, 2006).
The Significance of Reading Strategies for Academic Study

Reading skill is one of the most important skills that the students of English as a Foreign Language (EFL) need to acquire. It plays a significant role to the academic success of foreign language learners especially university student. In academic setting, university students will deal with many reading types and purposes. To be able to understand those written materials requires the use of reading strategies and approaches. According to Anderson (2002) “second language readers are those who are aware of and use appropriate reading strategy for learning”. In line with Anderson, Mokhtari & Reichard (2002) argue that to become “skilled reader” they have to be aware of what and why they are reading and also having “a set of tentative plans or strategies” in order to “handle potential problems” and to “monitor their comprehension”. Furthermore, Brown (2000) in his well-known book, Teaching by Principle also explains in detail that ESL students need to do “some strategies” to become “efficient readers”. In brief, it is important for the students to gain awareness and get used to reading strategies to be engaged in academic reading materials.

It has been found that effective readers were more aware of strategy use than less effective readers (Mokhtari & Reichard, 2002). This suggests that one needs to be a strategic reader to be an effective reader. In addition, Brown and Palincsar (1985) suggested that an effective reading instruction program should require the identification of complementary strategies that are modeled by an expert and acquired by the learner in a context reinforcing the usefulness of such strategies. Even unskilled readers can become skilled readers and learners of whole text if they are given instruction in effective strategies and taught to monitor and check their comprehension while reading with respect to this point. In sum, certain reading strategies need to be used to construct meaning effectively from any given written texts.

Looking at the real classroom setting, the activities that encourage a reflective and strategic stance toward learning should be embedded in the regular activities (Hammond, et al., 2001). Thus in classroom activities, teacher has an important role to guide students to develop an understanding of what they know and do not know.
Students must learn to become aware of their capabilities, strengths, and weaknesses as learners in order to develop as learners. When a student has information about her thinking (metacognitive knowledge), she is able to use this information to direct or regulate her learning. Therefore, teachers can help students develop an appreciation for what learning tasks might demand, as well as an awareness of the particular knowledge and strategies they can bring to the tasks.

Appropriate strategy use is said to be the distinct remark of efficient reading. Many empirical studies have linked success in reading to the quality and quantity of strategies used (Anderson, 2008). According to Blachowicz, Zubire et. al (2008; 2013) strategic reading involves three stages, namely, pre-reading, while-reading and post-reading. Constructing meaning from texts can begin even before reading. Research has found that strategic readers use planning strategies before they begin to read in order to make the texts more accessible during reading. During reading, effective readers use strategies to build their understanding of the text and become engaged in the reading process. Proficient readers know ‘how’ and ‘when’ to use certain reading strategies. They are also get used to monitor strategies to make sure that they understand what they are reading. Besides, well-planned response after reading is just as important as those before and during reading. Constructing meaning from texts does not end with the termination of reading. To have a deeper understanding of the texts, readers have to summarise major ideas and evaluate their readings (Blachowicz & Ogle, 2001).

Anderson (2008) also claimed that, “Research has shown that good language learners make frequent use of a wide range of metacognitive strategies”. To support this, there is an additional inventory that shows great promise in recent instrument developed by Mokhtari and Reichard (2002). Metacognitive Awareness of Reading Strategies Inventory (Marsi) focuses on metacognitive strategy use within the context of reading. The MarSI measures three categories of reading: global reading strategies (e.g. having purpose for reading, using context to guess unfamiliar vocabulary, confirming or rejecting prediction), problem-solving strategies (e.g. adjusting reading rate, focusing when concentration lost), and supporting strategies (e.g. taking notes while reading, highlighting important ideas
in the text). This concept of reading strategies help readers become more aware of kinds of strategies that good reader use. They will be able to direct their learning in the proper ways to build understanding. Therefore, using metacognitive reading strategies can be the strategies to be relying on to teach academic reading.

**The Role of Metacognitive Awareness in Reading Comprehension**

When we talk about metacognitive awareness in reading comprehension, it means that we also discuss about metacognitive reading strategies. According to Sheorey and Mokhtari (2001) the general tenor of metacognitive awareness studies is conscious monitoring of the comprehension process which is important for critical reading since metacognition is benefit to comprehension by helping readers to monitor their reading process and adjust their strategy use. Thus, when somebody is aware of metacognitive knowledge in reading, it means that he or she get used to metacognitive reading strategies. This is in line with Anderson (2002) who argues that the learners can think and make conscious decisions about the learning process when they have the metacognitive ability to select and use particular strategies in a given context for a specific purpose. Therefore, teaching readers how to use specific reading strategies is a prime consideration in reading.

Since the term metacognition coined by John Flavell (1979) emerge in the domain of education, there have been many research showing that metacognitive awareness are positively related to enhance reading comprehension. Indeed, the consensus view is that strategic awareness and monitoring of the comprehension process are important aspects of reading skill. Flavell further argues that the metacognitive strategy implementation such as self-awareness and self-evaluating is important to improve independent readers who can control their own learning. Students who effectively self-monitor take the time to stop and correct mistake and any misunderstandings that occur as they read. They know when and how to use those strategies while reading. When students reflect upon their learning strategies, they become better prepared to make conscious decisions about what they can do to promote their learning. Therefore, metacognitive reading strategy skills are emphasized in second/foreign language learning classrooms.
Many researchers have applied metacognitive theory to reading in recent years. Researchers generally agree that metacognition is one of the most important elements to influence reading comprehension. According to Mokharti and Reichard (2002), metacognitive reading strategy awareness is of interest not only for what they indicate about the ways students arrange their interaction with the context, but also for how the use of strategies is related to effective reading comprehension. Metacognitive reading strategy awareness is emphasized in the field of reading comprehension process, which has been indicated as an important factor for reading strategies while reading (Anderson, 2002; Flavell, 1979; Hacker, Dunlosky, & Graesser, 2009; Mokhtari & Reichard, 2002). Similarly, Wang et al. (2009) argued that metacognitive reading strategies have various benefits on students' reading comprehension and fostering their learning activities. Investigation on university EFL students about metacognitive beliefs and strategies for learning in China indicated that metacognitive reading strategies’ beliefs, which show learners who are confident about their ability to learn a foreign language, and also metacognitive strategies are positively associated with learners’ learning achievement results. As a result, students who have confidence in their learning process and can utilize metacognitive reading strategies such as, planning, monitoring and evaluating are more successful than those students that do not use this strategy in their learning and reading program (Wang, et al., 2009).

A study conducted by Ilustre (2011) has shown that problem solving strategies as one of three subscales of metacognitive reading strategies correlated positively with text comprehension, with those students who reported to be using this strategy obtaining relatively higher scores in the reading tasks. The findings also show that active beliefs, and not passive beliefs about reading, were positively correlated with text comprehension. Moreover, the results suggest that, over the effects of active views about reading, problem solving reading strategies contributed to text understanding. The following year, Nergis (2012) found that the strongest of the variables affecting academic reading comprehension was metacognitive awareness. Although syntactic awareness was a strong predictor of academic reading success for EAP students with the same L1 background, the effect
of metacognition on reading was significantly stronger. In the same year, another study done by Siri and Teo (2012) confirmed that training the students in using metacognitive strategies enhanced their overall reading comprehension ability as well as their reading comprehension ability at various cognitive levels. When the students used metacognitive strategies whilst reading they had a clear understanding of the contents of the text. Hence, the training allowed them to read and comprehend at a higher cognitive level.

In Turkey, Yuksel and Yuksel (2011) conducted a study which was designed to determine the Turkish university students’ metacognitive awareness of academic reading strategies by using SORS questionnaire. Based on the result of the study they come to the conclusion that metacognitive awareness is considered as the key factor for proficient strategic reading, particularly for academic reading. Similar with Yuksel and Yuksel’s study, Zhang and Seepho (2013) investigated metacognitive strategies of English major students (both high and low proficiency) in academic reading at Guizhou University in China using Metacognitive Strategy Questionnaire (MSQ), a semi-structured interview and a reading comprehension test. The results indicated that there was a significant positive correlation between metacognitive strategy use and English reading achievement. This study leads crucial pedagogical implications in the teaching of reading for EFL learners.

In Iran, a study by Tavakoli (2014) described the overall pattern of metacognitive awareness of reading strategy use and its possible relationship with reading comprehension. The finding showed a strong positive correlation between reported metacognitive awareness of reading strategies and reading comprehension achievement. It showed that the students’ knowledge of metacognitive reading strategies was significantly influenced by their levels of English proficiency. According to the findings, Iranian EFL students are moderately aware of reading strategies and the most frequently used strategies were the Support Reading Strategies (SUP), followed by Global Reading Strategies (GLOB), and then Problem-Solving Strategies (PROB). Moreover, it also revealed that no significant difference existed between male and female language learners in the use of reading strategies. Another study about the metacognitive awareness of reading strategies
to enhance students' performance in reading comprehension was done by Fitrisia et al. (2015). They found that the level of MARS for problem solving reading strategy was than for global and support reading strategies. The findings suggest direct instruction in MARS may help students increase their attention to the reading process.

Another recent study done by Pinninti (2016) who reported stage-wise frequency and conditional knowledge of reading strategies as employed by nine ninth-grade participants. He found that the most frequently used strategies were ‘previewing’ and ‘predicting’ (pre-reading strategies), ‘underlining unfamiliar words’ and ‘rereading difficult sentences’ (while-reading strategies), and ‘discussing with friends’ and ‘recalling summary’ (post-reading strategies). The least frequently used strategies were ‘recalling the past’ and ‘thinking of purpose’ (pre-reading strategies), ‘asking teacher’ and ‘discussing with friends’ (while-reading strategies), and ‘visualizing’ and ‘renaming the title’ (post-reading strategies). He concluded that the reading teachers may raise their students’ awareness of the most frequently used reading strategies to assist them become successful and effective readers. In addition, students should be made aware of the most frequently used strategies as they are useful in achieving the purposes of reading across the three stages of reading. In conclusion, those previous studies above clearly proven those metacognitive strategies play an important role in developing students’ overall reading comprehension ability as well as their ability to comprehend at various cognitive levels.

CONCLUSION

One common approach to develop metacognitive skills involves teaching strategies that ask students to think about the way they learn best. Good metacognitive thinkers can be regarded as a good learner. They are able to direct their learning in the proper ways to build understanding. They know when to use strategies and how to use them. When learners can identify the importance of metacognitive reading strategies and can grasp the metacognitive knowledge, they might be encouraged to use this knowledge with confidence to improve their
reading efficiency in real reading situations. Metacognitive activities that ask students to reflect on what they know and are able to do not only help learners develop an awareness of themselves, but also give teachers valuable information for their instruction. In brief, it is important for the students to gain awareness and get used to reading strategies to be engaged in academic reading materials. In addition, an awareness of one’s own learning process and studying strategies is essential in order to become good self-directed learners. Therefore, helping learners increase their awareness of and the use of reading strategies particularly metacognitive reading strategies is teacher’s responsibility that can be done through classroom practices.

REFERENCES


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