THE ROLE OF META-COGNITIVE SELF REGULATED LEARNING STRATEGIES IN ENHANCING LANGUAGE PERFORMANCE: A THEORETICAL AND EMPIRICAL REVIEW

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ABSTRACT

Recent research suggests a potential link between meta-cognitive awareness,self regulated learning strategies and language performances. Self-regulated learning has garnered a great deal of interest among academicians and psychologists as research indicated that it has positive effects on learners' academic achievement (Dolianac, 1994; Dckeyrel et al., 2000) whereas experts advocate that "meta-cognitive awareness" ignites one's thinking and can lead to a deeper learning and improved performance, especially among learners who are having problems in learning. Implicatively, this paper highlights the role of meta-cognitive self regulated learning strategies in enhancing performance among students by providing theoretical and empirical foundations drawn from literature on these aspects, specifically towards language achievements.

Keywords: Meta-cognitive strategies, self regulated learning (SRL), meta-cognitive awareness, language performance

BACKGROUND OF THE STUDY

In Malaysia, it has generally been acknowledged that the command of English language is poor among Malaysian ESL learners nowadays. This problem could be due to the lack of meta-cognitive self regulated learning (SRL) strategies employed by learners, particularly among engineering undergraduate students. It is believed that the practical use of meta-cognitive SRL strategies will assist students to become more self regulated in their learning. Unfortunately, many students are adapting inefficient, ineffective strategies and this led to a poor or failure in language learning.

Among all learning strategies identified, meta-cognition is found to be a strong predictor of academic success among students. According to Flavell (1979), meta-cognitive knowledge has a significant role in many cognitive activities concerning language use. Many scholars believe that, apart from being the key factor in distinguishing successful learners from less successful learners, meta-cognition also enriches students with more motivation, more engagement in learning tasks, more tolerance, more persistence, more participation, more curiosity and more confidence, as well as improving their self-esteem as learners.

Meta-cognition is the central part of self regulation. Meta-cognition refers to the awareness, knowledge, and control of cognition; the three processes that make up meta-cognitive self-regulatory activities are planning, monitoring, and regulating (Pintrich *et al.*, 1991).

With regard to language learning, Fleming and Walls (1998), reveal that good learners take active responsibility for their own learning and use a range of strategies which enable them to plan, monitor, manage and reflect on the process of learning a second/foreign language. They also find that meta-cognitive strategies are closely linked to the development of self regulated learning. Students who use self regulated strategies are intrinsically self motivated and prove to be autonomous learners (Zimmerman and Martínez Pons, 1988; Maxim, 2009). These types of learners are meta-cognitively, motivationally and behaviorally active participants in their own learning process (Zimmerman and M., 1986). Such learners successfully make use of cognitive and meta-cognitive strategies and they are always engaged in self regulated learning as well, knowing what to do, how to do and when to do. These learners are able to plan, monitor and evaluate how, when and where to use the strategies.

In line with this, researchers have tried to specify the characteristics of good learners and the type of strategies they use in specific language task (Birjandi *et al.*, 2006). Strategic learners have meta-cognitive knowledge about their own thinking and learning approaches, a good understanding of what a task entails, and the ability to orchestrate the strategies that best meet both the task demands and their own learning strengths.

Developing meta-cognition brings learners an awareness of the learning process and strategies that lead to success. When learners are equipped with this knowledge, they will understand their own thinking and learning process and accordingly, they are more likely to oversee the choice and application of learning strategies, plan how to proceed with a learning task, monitor their own performance on an ongoing basis, find solutions to problems encountered, and evaluate themselves upon task completion (Zhang and Goh, 2006). Hence, the purpose of this paper is to provide a theoretical and empirical review of studies done in highlighting the significant relationship between meta-cognition, self regulated learning strategies and language performance.

Meta-Cognitive Self Regulated Learning and Academic Achievement

A number of research studies show a significant association between self regulated learning strategies and learning performance. Research evidence suggests that students' academic achievement is indeed related to strategy use (Stipek and Gralinski, 1996; Anderman *et al.*, 1999; Broussard and Garrison, 2004; Patrick *et al.*, 2007); and self-regulated learning strategies (Pintrich, 2000; Fuchs *et al.*, 2003; Glaser and Brunstein, 2007; Patrick *et al.*, 2007); (Torrance *et al.*, 2007).

The influence of self regulation on academic success has been demonstrated by ample evidence of research studies. Chen (2002) investigated effective use of self-regulated learning strategies in a lecture and in a hands-on computer lab learning environment for an introduction to information systems course. Quantitative data collected from 197 undergraduates revealed that effort regulation led to achievement in a lecture-style learning environment. The findings also showed that students obtained higher test scores when they used appropriate strategies to handle distractions and maintain concentration in studying computer and information system concepts. With regard to self-regulated learning, the investigation in this study revealed that meta-cognitive self-regulated learning was one of the predictors of college students' academic performance. This finding is consistent with previous research (Pintrich and De Groot, 1990; Zimmerman and Martinez-Pons, 1990).

Across numerous tasks and settings, research has shown that learners with strong SRL skills do better than those who lack these skills (Pressley and Ghatala, 1990; Azevedo, 2005; White and Frederiksen, 2005; Pressley and Harris, 2006). Danuwong (2006), in her study investigating student and instructors' perceptions on the use of strategies across tasks and across disciplines in learning and teaching, revealed the importance of all four meta-cognitive processes namely planning, monitoring, problem solving and evaluating strategies in learning English independently. The findings in this research also suggest that the explicit teaching of meta-cognitive strategies should be incorporated into the classroom practices particularly of those teaching English as a foreign language.

In another study, (Al-Khatib, 2010), examined the predictive association between meta-cognitive self regulated learning, motivational beliefs and United Arab Emirates (UAE) college students' academic performance. His study revealed the influenced of four independent variables; intrinsic goal orientation, self –efficacy, test anxiety and meta cognitive SRL in learning. Data were collected via seven subscales of the Motivational Strategies for Learning Questionnaire (MSLQ) and was subjected to the following analysis: exploratory factor analysis of the 43 items of the MSLQ, multiple analyses of variance (MANOVA), and regression analysis. Based on the findings, the four independent variables were found to be the significant predictors of college students' performance.

Similarly, Garrido-vargas (2012), conducted a study to examine the relationship between SRL and academic achievement of Hispanic students in a Southern Arizona School district. The findings revealed that SRL is related to the academic achievement of students in reading, writing & Mathematics. Results of the study indicated that motivation and learning strategies were significantly related to achievement.

Recently, Lawanto and Santoso (2013), in their study, investigating engineering college students' self regulated learning (SRL) strategies while learning electric circuit concepts using enhanced guided notes (EGN) found that students who were reported to have greater awareness of planning, monitoring, and regulating strategies showed an improvement on their grade performances. On the other hand, the declined group significantly declined in those strategies after using the EGN. The findings suggest that it may be valuable to identify high and low performers according to exam scores, evaluate the content of their notes and encourage the students to share their notes with peers. The findings are important in terms of advancing the understanding of the use of note taking in engineering classrooms. This research again supported earlier findings that high-achievers utilized cognitive and meta-cognitive strategies more effectively to comprehend learning materials in contrast to low achievers [see (Corno and Mandinach, 1983; Zimmerman and M., 1986; Rahman and Philips, 2006)].

Moreover, the positive correlation between academic achievement and meta cognitive strategies has also been investigated in a research done by Zare-ee (2007). Data collected from 30 randomly selected EFL learners studying English Language and Literature at Kashan University, Iran, indicated that the correlation between reading achievement and meta cognitive was significant. MANOVA also showed that students at higher levels of reading ability, use meta-cognitive strategies more often that less successful readers. The findings of the study suggest that the use of meta-cognitive strategies can account for variation in EFL reading achievement and needs to be promoted by EFL teachers.

Nevertheless, computer-mediated learning environments have also been successful for the study of self-regulated learning and academic achievement. Examining self-regulated learning skills and strategies in the online learning environment is especially important, given that this environment has been noted as requiring individuals to be more autonomous in their learning, the prerequisite of which is being able to self-regulate (Ally, 2004).

Cobb (2003), investigated self regulated learning behaviors and their relationships with academic in web –based courses. The participants of the study were 106 distance learners taking humanities and technical courses offered by a community college in Virginia. The findings found that, the employment of self-regulated learning behaviors were differed between humanities and technical courses (p =.0138). Time and study environment management (p = .0009) and intrinsic goal orientation (p = .0373) categories reported significant findings in their relationship to academic

performance. The above-mentioned studies show support for the view that meta-cognition and self-regulated learning are both significantly related to academic achievement among university undergraduate students.Consequently, understanding the meta-cognitive processes and self regulated learning strategies applied by students is crucial because it helps explain the individual differences among students and serves as a means to improving student's achievement.

Self Regulated Learning (SRL) In Malaysian Context

A glance at literature reviews in the Malaysian context also indicates the significant relationship between meta-cognition, self regulated learning and academic achievement. A quantitative study done by Mohd Kosnin (2007), investigating the relationship between self regulated learning and academic achievement among 460 second –year engineering students revealed that self-regulated learning can also be associated with academic achievement for Malaysian undergraduate students. Data reported from the Motivated Strategies for Learning Questionnaire (MSLQ) found that high achievers used self-regulated learning strategies more effectively than low achievers. In this study, meta-cognitive strategies were found to have a significant relationship in improving low achievers' achievement. The use of meta-cognitive strategies is likely to play a significant role in achieving academic performance, because meta-cognitive skills facilitate students' ability to plan, observe and assess their performances.

In a similar design of study, Muhamad Ikhwan Mat Saad *et al.* (2009), examined the gender differences in self-regulated learning amongst 185 Malaysian science students (84 males and 101 females) as a whole, and by groups (e.g., students taking science, mathematics, and additional mathematics). Data were gathered using the revised version of the Motivated and Learning Strategies Questionnaire, and the findings indicated that successful learners have better self-regulatory learning, maintaining high levels of motivation and learning strategies. However, the gender effect was not significant across the two dimensions (i.e., motivation and learning strategies) in the group taken as a whole, in mathematics group and in additional mathematics group. It was also reported that gender effect was significant across the two dimensions in the science group where the girls reported a markedly higher level of self regulatory learning.

More recent, underpinning by socio- cognitive theory of self-regulation, Azizah Mohd Zahidi (2012), conducted a qualitative research to explore how English Language learners applied self regulated learning (SRL) strategies to complete their language tasks in the classroom. This study investigated the personal and contextual factors that act as facilitators and constraints of the participants' self regulation. Based on multiple interviews conducted with the participants, the findings revealed that personal and environmental factors do influence students' use of strategies in language learning.

All related studies discussed above, signify that research on meta-cognition and self regulation has garnered a great deal of interest not only among foreign academicians and practitioners but also

among researchers in Malaysia. Based on the studies, researchers attempt to understand and explain the psychological construct of meta-cognition and self regulated learning from various perspectives as research indicated that these two constructs have positive effects on student's academic achievement (Dckeyrel *et al.*, 2000) ; (Dolianac, 1994).

CONCLUSION

Therefore, insight into the meta-cognitive and SRL strategies that students use and the interaction of these strategies with learners' existing knowledge and experiences can provide teachers/instructors with clear and explicit guidelines on how learners can develop their autonomy in language learning. Accordingly, the teacher can implement wide range of learning instructions and tasks that promote the use of meta-cognitive SRL strategies in their teaching and consequently, learners will be enriched with adequate learning strategies to develop autonomous learning and become more successful in their learning.

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