

DEVELOPMENT OF META-COGNITIVE SKILLS AMONG STUDENTS FOR ENHANCING THEIR LEARNING

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ABSTRACT

Meta-cognitive skills mean a person's ability to regulate their own thinking & learning and consists of the self-assessment skills: planning, monitoring, and evaluating. These meta-cognitive skills reduce self-assessment errors. It is very important for learners to have skills in meta-cognition because they are used to monitor and regulate reasoning, comprehension, and problem-solving, which are fundamental components of a curriculum. This article discusses about the development of learners' meta-cognitive skills in the classroom. Therefore, some meta-cognitive skills that each student may follow are also discussed. Various meta-cognitive strategies for the development of meta-cognitive skills like; predicting outcomes, questioning by the teacher, self-questioning, self-planning, using discourse, using directed or selective thinking, selecting strategies, evaluation of work, and revision are also discussed. As we know that good meta-cognitive thinkers are also good learners. In other words, we can say that meta-cognitive skills are the techniques that instill meta-cognition and allow students a sense of control over their own learning, alleviate anxiety, enhance motivation, reduce incompetence and unwarranted confidence, and hopefully generate life-long learners.

KEYWORDS: *Meta-CoGnitiON, Meta-CoGnitive Skills, Meta-CoGnitive Strategies*

INTRODUCTION

Transfer is the ultimate goal of education, as students are expected to internalize what they learn in school and apply it in their life. For this purpose, meta-cognition should be developed in students in the context of their current goals and should enhance their learning of competencies as well as transfer of learning. Meaningful learning takes place only when students' prerequisite knowledge is related to the learning. In other words, students have meaningful learning only if the instructions comply with their competencies and experiences. Most striking, low-achieving students show substantial deficits in their awareness of the cognitive and meta-cognitive strategies that lead to effective learning. These students' struggle may be due to a gap in their knowledge about how learning works. Gagne (1985) pointed out that meta-cognition is a high-level cognitive process and also have the ultimate goal of instructions. The goals of instructions are to deliver knowledge and to develop students' abilities to plan, monitor and reorganize learning strategies.

Meta-cognitive strategies refers to methods that are used to help students understand the way they learn; in other words, it means processes designed for students to 'think' about their 'thinking'. The development of meta-cognitive

skills commences around the age of 8 years. These skills reveal a strong increment throughout late childhood and adolescence, even into adulthood. There are huge individual differences in the spontaneous development of meta-cognition. Some students remain meta-cognitively weak, whereas others outperform their peers of the same age. Meta-cognitive skills initially develop within separate domains and later transfer and generalize across domains (Veenman and Spaans, 2005). More research is needed to determine how these skills generalize across domains and how this process can be supported in the classroom. Meta-cognitive skills involve the voluntary use of specific strategies for controlling cognitive processes and also help students to transfer what they have learnt from one context to the next, or from a previous task to a new task.

Ways That Improve Meta-Cognition

- Teach students how their brains are wired for growth.
- Give students practice recognizing what they don't understand.
- Provide opportunities to reflect on coursework.
- Use a "wrapper" to increase students' monitoring skills.
- Consider essay vs. multiple-choice exams.
- Facilitate reflexive thinking.

Meta-cognitive skills have a number of tangible and important effects on learning which plays an important role in oral comprehension, reading comprehension, problem solving, attention, memory, social cognition, personality development, communication and various types of self-control and self instruction which have been considered as key concerns for schools. Meta-cognitive skills are the abilities which are used to understand and analyze one's own learning especially influenced by educational background and previous experience. Meta-cognitive skills make one aware of one's own knowledge, the ability to understand, control and manipulate one's own cognitive process. In other words, we can say that meta-cognitive skills are the techniques that instill meta-cognition and allow students a sense of control over their own learning, alleviate anxiety, enhance motivation, reduce incompetence and unwarranted confidence, and hopefully generate life-long learners. Meta-cognitive skills refer to an individual's awareness, evaluation and regulation of their own thinking activity.

Successful learners typically use meta-cognitive skills whenever they learn. Most teachers focus on content and ignore the learning process used while teaching the content. In other words, students are assumed that they can learn on their own the necessary skills needed to learn effectively. Students often lack of these skills or fail to recognize when to use them (Flavell and Wellman, 1977). Most students do not engage in meaningful learning and most of the students use rote learning as a main strategy (McGilly, 1996). He further claimed that the students should be provided with the necessary skills such as learning skills, social skills, problem solving skills and information organizations skills that should be taught and integrated across the curriculum. In this regard, the role of teachers is very important in helping students to improve their meta-cognitive skills. To be an efficient and effective thinker, the learner should be able to monitor his or her degree of understanding, be aware of the knowledge possessed, be conscious of the task demanded, and know the strategies that facilitate thinking. There are various meta-cognitive strategies for the development of meta-

cognitive skills. These meta-cognitive strategies include: predicting outcomes, questioning by the teacher, self-questioning, self-planning, using discourse, using directed or selective thinking, selecting strategies, evaluation of work, and revision (Darling-Hammond, Austin, Cheung and Martin, 2008). These strategies can be defined as:

- **Predicting Outcomes:** Teachers should help their students to understand what kinds of information they might need to solve a problem successfully. It indicates that a conscious effort should be taken by teachers to guide their students to think about how they learn.
- **Self-Questioning And Questioning By The Teacher:** During their learning, students use questions to check their own knowledge.
- **Self-Planning:** Students should be taught to make plans for their learning activities including estimating time requirements, organizing materials and scheduling procedures necessary to complete an activity. Students should know the limits of their own memory for a particular task and should create a mean of external support.
- **Using Discourse:** In the classroom, there is a discussion between students & students and students & teacher. One student talks from side to side a problem describing his thinking processes. His partner listens and asks questions to help clarify his thinking process. Student-teacher discussion focuses on how they can improve their learning.
- **Using Directed or Selective Thinking:** Students consciously choose to follow a specific line of thinking. Through the use of learning log, students reflect upon their thinking process, make note of their knowledge of ambiguities & inconsistencies and comment on how they have dealt with their difficulties.
- **Selecting Strategies:** Students must understand the available strategies and their essence in an effort to develop meta-cognitive skills.
- **Evaluation of Work:** When students recognize that learning activities in different disciplines are similar, they will begin to transfer learning strategies to new situations. Guided self-evaluation experiences can be introduced through individual conferences focusing on thinking processes.
- **Revision:** Students review their work to determine where their strengths and weaknesses lie within their work. Repeatedly rehearsing a skill will help to gain proficiency and to do self-test periodically will help to see how well they learned something.

Students have meaningful learning only if the instructions comply with their competencies and experiences. For teachers, investigating students' prerequisite knowledge first and designing materials and offering instructions based on students' prerequisite knowledge later are important tasks. In this way, meta-cognitive skills refer to methods used to help students understand the way they learn. These skills are designed for students to 'think' about their 'thinking'. These skills facilitate learning how to learn and ensure that a cognitive objective has been reached. Nevertheless, the strategies of planning, monitoring and evaluation can be clearly differentiated from a theoretical perspective. In that, the observed empirical overlap between them may be due to temporal as opposed to functional similarities.

CONCLUSIONS

Meta-cognitive skills play an important role in cognitive activities including comprehension, communication, attention, memory and problem solving to make self-regulated, positive, confident and mature learners who take responsibility for their learning experiences. A teacher plays a very huge and important role in moulding one's attitude, developing someone's skills and enhancing the knowledge of every school child. In short, a teacher is essential in putting up a brighter future for someone. Teachers are responsible for helping students to develop better meta-cognitive skills by incorporating active reflection throughout the learning process. It is proposed that teachers can enhance students' meta-cognitive skills by giving directions and explaining to them how to think about what they do (White, 1992). The collaborative efforts of teachers and students in planning a course of study can grow students as independent learners. Thus, meta-cognitive skills instill meta-cognition and enable learners to become aware of how they learn and to evaluate and adapt these skills to become increasingly effective at learning.

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