IMPORTANCE OF METAMEMORY IN LEARNING

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Abstract

Metamemory refers to our knowledge and awareness of our own memory processes. Knowledge in this case means self-knowledge about our memory processes. Metamemory is assumed to play a significant role in the development of students learning and memory performance. Students are most likely to can successfully apply appropriate learning and remembering strategies when they have been taught general information about mind works. The more we understand about how memory works the more we are to benefit from instruction in particular memory skills. We are able to recognize which skills are useful in different situations. In this it highlights the importance of metamemory in learning.

Key words: Metamemory, Procedural Knowledge, Declarative Knowledge

Introduction

Metamemory refers to a person's knowledge about the contents and regulation of memory. The term originally derives from the work of John H. Flavell in the early 1970s. Metamemory enables a person to reflect on and monitor her memory. In addition, metamemorial knowledge plays an important role in planning, allocation of cognitive resources, strategy selection, comprehension monitoring, and evaluation of performance.

Knowledge about memory is called metamemory . The two main structural components of metamemory–declarative knowledge, which enables a person to evaluate the contents of memory, and procedural knowledge, which enables a person to monitor and regulate memory performance. The declarative component corresponds to constant knowledge about the contents and contexts of memory use and includes knowledge of memory's contents, knowledge of essential intellectual tasks such as reading and problem solving, and conditional knowledge about why and when strategies are most effective. The procedural component includes knowledge about technical skills necessary to manage memory efficiently, including control processes such as planning and evaluating and monitoring processes such as judgments of learning.

The content subcomponent enables a person to assess whether he possesses enough knowledge to meet task difficulties. The task subcomponent allows a person to determine whether he fully understands task demands and possesses adequate resources to perform the task. The conditional knowledge subcomponent, the most important of the three, helps a person to determine why, when, and where to use a particular strategy or under what conditions he can achieve optimum performance. Conditional knowledge plays an especially important role in self-regulation.

In procedural component the subcomponents are control and monitoring processes. The control subcomponent includes regulatory processes such as planning, selection of relevant information, resource allocation decisions, selection of relevant strategies, and inferencing. The monitoring subcomponent includes a variety of self-assessment strategies such as ease of learning judgments, judgments of learning prior to beginning a task, feeling of knowing judgments made during learning, and comprehension monitoring judgments made during or after a task. The control processes directly regulate cognition and performance, whereas monitoring processes informs the precision of control decisions. Thus, control processes are at a higher level than monitoring processes, even though both mutually inform one another.

Metamemory and Learning

Metamemory affects learning in many ways but especially with respect to the efficient use of limited cognitive resources, strategy use, and comprehension monitoring. Learners often experiences difficulty in learning because of cognitive overload that is, too much mental work to do and too few cognitive resources at their disposal. The declarative and procedural knowledge enables learners to use available resources more efficiently because they are better able to plan, sequence, and monitor learning tasks. By increasing these knowledges, we can enhance learning

Metamemory improves learning through the flexible use of cognitive learning strategies .Self-regulated learners use a diverse use of strategies that are controlled using conditional knowledge in metamemory. Strategy use is highly correlated with skilled problem solving. Strategy training increases metamemory awareness, provided that conditional knowledge about the strategies is embedded within the instruction. Strategy instruction helps the learners to improve conditional knowledge that enables them to select the most appropriate strategy that enhances learning.

Another way that the metamemory improves learning through comprehension monitoring. Monitoring training helps learners monitor more successfully and also improves performance.Strategy Instruction also improves monitoring. Combining strategy instruction and monitoring training within the same intervention helps learners construct the control and monitoring knowledge.

Development of Metamemory

Now a days development of metamemory in classrooms plays a crucial role in enhancing learning Metamemory awareness is rather poor in children. Learners frequently find it difficult to monitor the contents of memory, estimate the resources needed to complete a task, select appropriate strategies for a task, and monitor their learning. As a consequence, self-regulation is quite poor. Poor metamemory awareness, sometimes leads to overconfidence and illusions of knowing.

Metamemory development is incremental and continuous. Development appears to be linear in nature with a steady increase in metamemory awareness, control, and monitoring from preschool through early puberty. Researches suggests a continuous development of metamemory is important in enhancing learning. Metamemory awareness continues to develop in specific domains as expertise develops. Metamemorial knowledge is self-constructed in nature through individual and interactive problem solving, as well as explicit strategy instruction and monitoring training. Self-generated and other-generated feedback increases knowledge of the contents of memory and tasks. Metamemory awareness develops independent of other individual differences in memory.

Thus metamemory facilitates strategy use and performance. Knowledge about the contents of one's memory as well as tasks clearly should affect performance. In addition, declarative knowledge appears to be correlated with regulatory awareness. The more one knows about memory, the better able one is to regulate one's performance.

Classroom Implications

The studies reveal that metamemory awareness can be improved through classroom instruction. One way is hands-on experience that provides declarative knowledge about tasks as well as procedural knowledge about optimal performance. A second way is through skilled models who provide detailed feedback–especially conditional feedback–that enables the student to distinguish between effective and less-effective strategies. A third way is through self-reflection and group reflection in which students explicitly discuss the effectiveness of different strategies and ways to improve performance in the future. Thus, there are many ways to improve metamemory awareness through classroom activities.

Several learning interventions have been developed that promote metamemory development and awareness. For example, in 1984 Annemarie S. Palincsar and Ann L. Brown described a program of reciprocal teaching that promotes the self-regulation of metamemory strategies. The program involves the teacher gradually handing over control of reading processes to the student in a small-group format. The teacher first models effective strategies (e.g., finding the main idea of a passage) then provides scaffolding to the students as they attempt to do the same while receiving feedback from their peers regarding the strategies they employ.

Conclusion

Metamemory is knowledge about memory. It refers to our knowledge and awareness of our own memory processes. Metamemory awareness develops late and incrementally yet has an important impact on memory and cognitive performance. Metamemory is not linked strongly to other cognitive factors such as intelligence and memory capacity. Rather, it develops as a function of experience, guided modelling and feedback, and individual and group reflection.