

# Thinking About Thinking

Constructivist learning theory and metacognition help students become aware of their thought process

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Although constructivist learning theory has its roots in antiquity, it has withstood the test of time, as it forms the backbone of 21st Century Learning practices. Constructivist learning theory proposes that students construct knowledge by applying new learning experiences to their prior knowledge and understanding, and that students

are active, social learners who construct and make meaning by reflecting on their own experiences. When using constructivist practices, students develop an awareness of what they need for their own personal growth and development.

A central theme of constructivism is the idea that students have control over their own learning. In the fifth century B.C., Socrates asked his students questions that led them to realize for themselves what was missing from their own thinking and understanding. In 1990, Jerome Bruner suggested that students should understand the structure and patterns of what and how they are learning. Once students develop an awareness of their strengths and weaknesses, they can make their own decisions about what they need to learn and how they will learn it. The concept of thinking about what you know and don't know, or thinking about your own thinking, is often referred to as *metacognition*.

According to Bena Kallick and Arthur Costa, metacognition includes:

- becoming aware of one's actions and their effect on others and on the environment
- forming internal questions while searching for information and meaning
- developing mental maps or plans of action
- mentally rehearsing prior to a performance
- monitoring plans as they are employed
- being conscious of the need for midcourse correction if the plan is not meeting expectations
- reflecting on the plan upon completion of implementation, for the purpose of self-evaluation

For our children to perform complex cognitive tasks well, we have to teach them to think about their own thinking. At St. Margaret's we understand the important role that metacognition plays in helping students to construct knowledge and grow as learners. As a result, we have built into our curriculum opportunities for students to reflect upon their experiences, think about their own learning strategies, and evaluate their own performance. This

has been evidenced in our student-led conferences in grades 5 to 8; through the math department's use of a post-test self-reflection questionnaire; in the writers' workshop approach to teaching the writing process; and through our faculty constantly asking students such questions as, "How did you solve that problem?" and "What strategies did you use?"

Plato explained metacognition:

"When the mind is thinking it is talking to itself."



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