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### **OVERVIEW**

#### **Pour and Store**

"Pour and store" describes the traditional model of schooling in which the teacher is the fountain of knowledge, filling students' heads with vital information. It's a model that has worked well, and many students over the years have learned this way. The teacher teaches and the students are expected to know whatever it is the teacher has taught. In essence, this model adheres to the belief that if the teacher teaches it, the kids will learn it and will be rewarded...with good grades, passing the class, and so forth. On the other hand, if students don't learn it, there will be consequences. Thus, the model of pour and store is based on a behaviorist theory of conditioned response. This model is all about teaching.

A relevant anecdote pokes fun at this teacher-directed model. In the story, the teacher is telling students, "I will fill your heads with knowledge and if you keep your mouths shut, it won't spill out again!" All kidding aside, pour and store is a viable model. Yet, it is a model of schooling that puts the onus of responsibility on the teacher.

#### How the Brain Works

By contrast, another model of schooling, the constructivist theory, is based on how the brain works. Postulated by Piaget (1954), the theory of constructivism suggests that meaning is "constructed" in the mind of the learner and that everyone comes to learning with a unique set of brain "wiring," called

schema. That schema represents understanding derived from past experiences or prior knowledge.

As the learner tries to make meaning of incoming information, the brain seeks to connect the new information to something it already knows by creating patterns and merging the information to existing data or prior knowledge. It seeks cognitive connections and creates neural pathways; the brain, literally, rewires itself as it learns. In this model of schooling, which is studentcentered, the teacher creates opportunities for students to experience learning in active and engaging ways. As opposed to the pour-and-store model, which is focused on teaching, this model is all about learning. Parnes (1975, p. 10) said, in his booklet, Aha!, that teachers can bring learning to new levels if they ask students two critical questions: "How does this connect to something you already know?" and "How might you use this in the future?" Both questions facilitate this natural connection-making process in the brain. In essence, this is how the brain learns.

## The Teaching/Learning Process

The teacher-directed pour-and-store method and the student-centered constructivist model of how the brain works together are the essence of the teaching/learning process in the modern classroom. Both models are useful and have their place in the teacher's repertoire. There is a time for teachers to provide direct instruction of input, skill-and-drill exercises, and rote learning kinds of things, that is, time for teachers to "cover" the content. But, there is also time for the students to mess around with the materials, to manipulate and experiment, and to

explore and investigate, that is, time for learners to "uncover" their understanding of the world around them.

In the teaching/learning process, the two methods enhance each other. The teacher teaches, but the kids learn! But, just because the teacher covers it doesn't mean the kids learn it. They must make their own meanings; they must, each, reinvent the wheel in their own way to make personal meaning.

Again, an anecdote readily depicts this contemporary understanding of schooling, today. In the story, one boy tells another boy about his dog, Stripe: "I taught Stripe how to whistle." His friend says, "I don't hear him whistling." The first boy replies, "I said I taught him, I didn't say he learned it."