Discussion Board #3 spans Week 3 (1/18-1/24) and invites you to share your perspectives about "Behavioral, Cognitive-Information Processing, and Constructivist Approaches to Learning and Cognition." Read my Week 3 Instructor's Commentary first. It provides you with an orientation to how learning is conceptualized from each paradigmatic perspective. Next, visit the Useful Links for Week 3. Each link provides you with additional information about these concepts. Believe it or not, there are no chapters to read this week from either text! Rather, the purpose of instruction this week is to introduce you to the "conceptual framework" of this course. Do your own individual online search on three terms: "behavioral learning," "cognitive information processing," and "constructivism." Take control over the direction of your learning and obtain information about each paradigm using electronic sources such as Google Scholar, the Internet, the Pollak library databases and journals, and full text online ebooks. Share your concepts about each of these terms and post any questions you have about these three approaches to teaching and learning. If you find an excellent website that you would like to share with us, copy the link in your discussion board posting. If you find an interesting article that you would like to share with us, upload the article in an attachment in your discussion board reply.

Behavioral learning

Our 520 textbook *Multimedia for Learning* states that behavioral psychology began "at the turn of the twentieth century" with Thorndike and Pavlov, yet this link http://allpsych.com/psychology101/learning.html states that John B. Watson was the first to "study how the process of learning affects our behavior, and he formed the school of thought known as *Behaviorism*" In fact there is so much information out there about behavioral learning theory I don't think one could ever absorb it all. Conceptually behavioral learning is more instruction centered as opposed to the constructivist view of a learner centered educational environment. According to behaviorists, learning can be defined as "the relatively permanent change in behavior brought about as the result of experience or practice." One Web site I found referred to Behaviorism as the *S-R paradigm (Stimulus → organism → Response)* which is a formula that many other seem to agree on. Behavioral learning has three schools of thought Contiguity, Classical, and Operant. Apparently Classical was the first, thus its name Classical; Pavlov was considered a Classical behaviorist. Thorndike and Skinner were operant behaviorists, focusing on the use of rewards and punishment to alter behavior. An example of Contiguity is a baseball player who wears a certain pair of socks on the day he hits three home runs and thereby associates his hitting success with the socks. I have used behavioral techniques many times during my years of teaching in the form of tutorials and drills. Our curriculum at MSJC is very much organized around the Behavioral school of thought. In developing curriculum we first define the learning objectives, followed by a course outline,

teaching methods, and assessments methods, and choices of media which are usually textbooks.

Cognitive Information Processing

The Cognitive and Schema theories of learning have really caught my interest as of late. I have been doing a lot of research in the area of Cognitive Load theory especially the work of Dr. Richard E. Mayer from the University of Santa Barbara who published some great insights from empirical studies that he has done on the positive and negative effects of multimedia on our ability to process information. I spent a lot of time reading a lot of cool info on cognitive information processing at the links below.

The Information Processing Approach to Cognition
http://chiron.valdosta.edu/whuitt/col/cogsys/infoproc.html

New Learning Strategies for Generation X
http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/14/f5/5b.pdf

Learning Styles and the Online Environment
http://www.ion.uillinois.edu/resources/tutorials/id/learningStyles.asp
Has an interesting Learning Style Quiz

Instructional Design Models
http://carbon.ucdenver.edu/~mryder/itc_data/idmodels.html

Instructional Design Resources – Kara Andrew, CSU Fullerton, Distance Education
http://fdc.fullerton.edu/teaching/programs/4cta/files/IDlinksandresources.pdf

Constructivism

I think that constructivism principals have a lot to offer even though the argument against them is that there aren't proven principals of learning. The more I learn about the subject the more I want to try and integrate its concepts into the learning experiences I offer in both the face-to-face and online environments. The trouble I seem to have with some of the concepts is figuring out exactly how and when to implement them. I agree that students could be more motivated if they are given responsibility for their learning experience, but I'm not quite sure how that would work in a programming class. I have tried it in some of my certification classes before, but didn't have a lot of success. I tried to have the students to see what was needed to develop a network infrastructure and then give them the responsibility for doing the research to learn how to implement the proper component and services, but even the brightest students seemed to be overwhelmed by the task. I think the next time I try it I will try to organize the processes

into smaller chunks and then organize the students into groups that will work on one piece and then collaborate with other groups to put the big picture together.

All-in-all I think that all of these theories have good ideas and that one theory should not exclude the others. It seems to me that the trick is to apply the right practice of a theory to the right student at the right time. For me, accomplishing this has gotten easier with experience and from a continuing desire to try and improve the learning success of my students. It seems like the more I learn and the more I try the better I get at it; but I'm not sure if it is something you can quantify and put in a book.