Differentiation and Learning Theories

The one big problem that faces teachers every year is how to reach all students on their learning level. Teachers look to different learning theories to try and find one that they agree with and think is the best for their students. The next step is to find a way to utilize that learning theory to create an effective and authentic learning experience. While differentiation and technology are creating new classroom paradigms, the result can be a teacher who feels a loss of purpose. It can seem that a teachers’ role is greatly diminished through the use of student centered learning and technology (Kaelin, 2009). However, the fact is the teacher does not have a diminished role, but now has multiple roles. They become facilitators, coordinators, instructors, and support for their students.

Having a good foundation in a learning theory can help teachers chart their course and keep themselves relevant. When taken from this point of view there are many different learning theories that can benefit from utilizing differentiation in their instruction, especially in a technologically supported classroom.

Differentiation and Constructivism

The learning theory of Constructivism seems to lend itself to differentiated instruction since both are concerned with student centered learning. These two ideas seem to go hand in hand and are sometimes considered one in the same. The main ideas that go with the idea of Constructivism is the idea that knowledge comes from prior knowledge and that learning is an active and not a passive process (Hoover, 1996). The teacher’s role in a Constructivist classroom requires a shift in thinking. Instead of standing in the front of the classroom and inputting information
to recipients with no prior knowledge, the teacher mingles with the students.

Teachers must get out from in front of the classroom and jump “into the trenches” with the students. Students are observed and guided in an effort to help with self-discovery.

Technology is an important tool in creating authentic learning experiences in a Constructivist classroom that focuses on differentiation. However, some developers have misconstrued the theory of Constructivism, and in their zeal to make software that creates a real world scenario, does not take into account what prior knowledge the students may have or lack on a certain topic (Petraglia, 1998). As mentioned earlier, working off of students knowledge is key in the Constructivist classroom. However, when technology, differentiation, Constructivism, and the student-teacher relationship work together then a relevant and personal learning experience is obtained.

**Differentiation and Cognitive Theory**

The Cognitive learning theory takes the approach that students tend to remember things that are meaningful to them, and like constructivism, works with prior knowledge. Teachers are guides to deeper learning by letting the students add to their prior knowledge through self discovery. In the Cognitive theory the prior knowledge is referred to as a “schema” or their internal knowledge structure (Mergel, 1998). The idea is that students compare new information with the information in their “schema” or their existing cognition or knowledge. Once the students receive new knowledge, the schema can be combined, extended, or modified to accept the new information. The use of organizers and mnemonic
devices are a large part of Cognitive learning. Theorists believe that using such devices help what could be seen as menial or less meaningful topics more relevant and easier to learn.

Since Cognitive theory deals with the idea that learning needs to be meaningful, both differentiation and technology are great tools to use with this theory. The idea behind differentiation is to create individual learning experiences by confronting an individual learner’s needs. Technology can be used to help better individualize activities. This in turn creates a meaningful experience that is on track with their “schema” or prior knowledge so the learner can find away to simulate the new information into their long-term memory. Through differentiation, students can receive a meaningful, personal learning experience.

**Humanism and Differentiation**

Humanism as a theory deals with the idea that student learning is centered and personalized. Again, this idea lends itself to differentiation. Unlike the Cognitive theory, Humanists downplay the importance that making learning meaningful as central. Again the teacher takes the role of a facilitator helping instead of directing students on their way to self-discovery. Humanism focuses on self-actualization of the student. Humanists believe that students should take responsibility for their learning, and curiosity. Humanism also supports group learning and believes that the teacher should serve not only as a facilitator, but as an example in attitude towards learning (Huitt, 2007).

Differentiation lends itself to creating responsible students who take control of their learning. It offers students a variety of activities and type of assessments
and creates an environment where students can choose what suits them best. In a differentiated classroom, students are able to explore their interests while learning key concepts. Here, again technology is a tool that could be used to enhance the individual learning experience through different programs or ways of presenting their knowledge. By giving them the opportunity to choose their learning experience, they take control of their own learning and in turn will ideally create a responsible learner.