261.760 Instructional Design Lorraine Taylor 11052568

**Learning Theories Assignment**

**My View of Learning – Overview**

The mere existence of more than fifty learning and teaching theories proves that no one theory can cover all the facets of teaching. Behaviorist methods of teaching often get labeled with being old fashioned. It is the way that I was primarily taught as a student and have used successfully in my teaching. My enjoyment as a teacher is when I see a student experience the ‘light bulb moment’. This is what cognitive theorists aim to achieve. Learning is something that is not seen but occurs within the mind. The use of situative methods to me has always been what has made my classroom come alive. The collaboration, social and networked learning has always been a favorite of my students as it has made mathematics fun.

Technology has changed the way that I am able to teach. I have been driven to step out of teaching for the time being. I found that the technology that I was adding to my classes, or at least wanted to add to my classes, was simply just that, an ‘add on’. I was losing myself in all the amazing resources that were available, many of which I did not have time to investigate. I knew that my teaching that incorporated technology in its ever-changing forms needed to be backed by solid pedagogy. I am fortunate that as I step out of teaching I step into student shoes. At present I am meshing my ideas as a student and a teacher together to determine what will work in a 21st century learning environment. I have found it helpful to identify methods that work within the three views of learning: behaviorist, cognitivist, and situative.

**Associationist/Empiricist (Behaviorist)**

Gagné defines curriculum as “a sequence of content units arranged in such a way that the learning of each unit may be accomplished as a single act, provided the capabilities described by specified prior units (in the sequence) have already been mastered by the learner” ([Fields, 2000](#_ENREF_6), p. 185). I have found that lower ability students often prefer this method of teaching. I started a relieving position in Term 2 for a 6 out of 8 streamed NCEA Mathematics class. Despite trying to incorporate more collaborative and social learning, the students did not respond to this, in fact, they became quite agitated with me. After discussion with them, and in subsequent lessons, I changed my teaching to a more behavioristic approach. These students were not interested in mathematics but needed to gain math credits at NCEA Level 1 as they wanted to go to University. These students positively responded to short quizzes that were similar to what they might find on the exam as well as power points that offered repetitive practice. They needed constant affirmation that they were on the right track. I modeled examples and was pleased to see more cognitive learning taking place as some students began to build new knowledge from what they already knew.

Mathletics (<http://www.mathletics.co.nz/>) is a program used by many students in New Zealand. It is an interactive resource that aligns itself closely with the New Zealand curriculum from Year 1 to Year 13. It is behavioristic in its approach. Topics are covered in small chunks that are assessed given specific responses. Students remember and respond to what they are learning. There is an online tutor that can be accessed when students run into any difficulties. Feedback is immediate and rewards are given on a weekly basis. I have used the Mathletics program in my teaching as it is an easy way to set homework on a particular topic, as well as, to provide extra support during class time. Higher ability students often get frustrated with this type of learning in that if they understand the concept it becomes too repetitive and they can not advance or expand on their thinking

**Cognitive**

John Abbott in his video, *Building Knowledge, constructivism in learning*, ([Abbott, 2008](#_ENREF_1)) explains that people start with a pool of ideas that they really understand. New knowledge is then embedded into this pool and a new idea is constructed. A teacher then tries to stimulate things in a student’s brain and expand on it. For example, in teaching how to graph a line in mathematics, knowledge is built upon ideas that are understood and new knowledge is constructed. Experience is first given in finding the slope of a line, students then extend that line to determine the y-intercept, they then notice the connection between the equation and determining the slope and y-intercept, once students gain the knowledge of this in reference to straight lines they expand these concepts to parabolas. It is very effective in mathematics to progressively build upon prior knowledge in sequential steps that, according to Kanuka, is often done using Bloom’s Taxonomy. ([Kanuka, 2006](#_ENREF_8), p. 4)

Andrew Church takes Bloom’s Taxonomy further and has written Bloom’s Digital Taxonomy. ([Churches, 2008](#_ENREF_4)) He explains that the lower order thinking skill of evaluating can be executed by ‘blog commenting’. This is a skill I am using more repeatedly as a student as I seek to understand concepts more thoroughly. I have also progressed to the fourth stage of Bloom’s Taxonomy by analyzing what I had learned. According to Church I executed this by ‘uploading’ and ‘sharing’ my own blog post. ([Taylor, 2011](#_ENREF_11)). In my blog I commented that, “Blogging gives voice to students who often feel uncomfortable speaking up in class … it allows students to learn to critically analyze others ideas and viewpoints.” Through online discussions I have been encouraged by the success that teachers are experiencing with the use of blogs. I look forward to incorporating this into my teaching in the future.

**Situative**

Situative learning is my preferred way of gaining new ideas as a teacher and as a returning student to University. “Collaborative models emphasize the importance of nurturing learning communities within which teachers try new ideas, reflect on outcomes, and co-construct knowledge about teaching and learning in the context of authentic activity” ([Butler, Lauscher, Jarvis-Selinger, & Beckingham, 2004](#_ENREF_3), p. 436). I have been frustrated in situations professionally that use “traditional models which include one-stop workshops, with a top-down approach to disseminating knowledge, in which teachers are provided with information and resources that they are expected to translate into action.” ([Butler, et al., 2004](#_ENREF_3), p. 436).

Situative cognition argues that meaningful learning will only take place if it is embedded in the social and physical context within which it will be used. ([Brown, 1989](#_ENREF_2), p. 34) Herrington states that a critical aspect of the situated learning model is the notion of the apprentice observing the ‘community of practice’ ([Herrington, 1995](#_ENREF_7), p. 2) Computer-based representations do provide a powerful and acceptable way for modern day apprenticeship to be located within a learning environment. My husband is an airline captain and is often required to complete simulator training. I have sat on the sidelines watching how this technology has developed. Computers can provide authentic environments where situative learning can occur. In fact, in the case of an airline pilot’s professional development, it offers situations that a pilot has not experienced but may one day experience. They need to be prepared for these situations. This is an essential component to effective training in many jobs. I am excited about the learning environment in the 21st century where experts model situations, knowledge is constructed collaboratively, reflection occurs upon a broad base of knowledge, and students articulate, negotiate and defend their knowledge. In this way, technology will be integrated into the learning environment and not seen as an ‘add-on’.

**Conclusion and Need for Further Research**

The teaching that I do needs to be based in good pedagogical design which ensures that there are no inconsistencies between the curriculum I teach, the teaching methods I use, the learning environment I choose, and the assessment procedures I adopt. ([Mayes, 2004](#_ENREF_10), p. 7) An essential component to designing an effective learning environment is that it reflects all the complexities of the real world in which the learners will function after the planned learning activities. ([Kanuka, 2006](#_ENREF_8), p. 5) It is easy for educators to follow an instructional systems design model and feel that is right and good because the literature on it says so. It is also easy to make learning fun by adding new technology to lessons. It is far more difficult to grapple with the complexities of our ill-structured world in which we must function ([Kanuka, 2006](#_ENREF_8), p. 5) and to ensure that our instruction meets the needs of the 21st century and is based in sound pedagogy. I need to do more research into *pedagogical content knowledge* ([Kanuka, 2006](#_ENREF_8), p. 7) as I believe that if instructors want to be effective they must incorporate both content and pedagogy into educational design. It is in this way that instructional designers develop a repertoire of teaching strategies that reflect the uniqueness of the subjects that they teach.

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