ED591 M/2 Models of Teaching, Learning, and Technology

THE CHALLENGE

"The teacher must orient his work not on yesterday's development in the child but on tomorrow's." (Mahn) This insight is a guiding principle for the educator in understanding the factors that influence levels of development, while promoting individualized learning activities that help each student reach his or her maximum potential.

Vygotsky's Zone of Proximal Development helps to differentiate between two levels of learning: the level of development reached by independent problem solving and the potential level of development achieved by instruction from a teacher or peer. I believe that Vygotsky has pinpointed a major challenge that faces educators in the 21st Century. The careful assessment and individualized instruction required to help students achieve their potential level of development is an ongoing process. In my middle school media and technology class, my challenge as a teacher is to facilitate active discovery and inquiry learning, as noted by Piaget and Bruner, while at the same time keeping an eye toward each student's maximum potential for learning through ongoing social, cultural and academic guidance.

I believe Piaget has perceptive views regarding cognitive development that can be applied to the classroom setting. Participation of the learner is essential. Students must be active and learning objectives must be meaningful. (Ginn) In my technology class, I have set up a child-centered environment with opportunities for students to explore, manipulate, experiment, question and search out answers for themselves. For example, students have hands-on access to computers and the Internet and I encourage them to freely research information with minimal technical assistance from me. Students are naturally captivated by these beautiful beige boxes and therefore are motivated to explore what they can do on a computer on their own. A Piagetian-inspired curriculum emphasizes meaningful learning with opportunities to communicate with one another. In my class, I encourage students to assist and tutor each other. For example, if a student does not know how to save a file to the file server, I will ask for a volunteer to help that student. Peer tutoring is essential to active learning, as students must be able to "communicate their understanding of the subject to those around them." (Ginn) Piaget was a founder of cognitive learning. His interest in knowledge and how students learn have provided a foundation for educators to build a framework for helping students meet their potential. As much as my classroom does reflect the views of Piaget, I feel there are several factors of learning not addressed in his theory of cognitive development.

Piaget's view that learning is always related to their stage of intellectual development is somewhat narrow in my opinion. Bruner's views of inquiry learning seems to appeal more to higher grade levels although his theory can be applied to lower grade levels in a judicious manner. In my middle school classes, most of the students are in Bruner's

enactive or iconic stages with very few in the symbolic stage. Asking open-ended questions sounds great and forward thinking but I see rising frustration levels in some of my students when posed such questions. Vygotsky asserted that "development is complex and is effected by social and cultural contexts." (Vygotsky) Vygotsky's theory best fits the overall mix of my curriculum. He believed intellectual development was continually evolving without an endpoint.

"With the growing recognition of the central roles played by social and cultural factors in learning and development, sociocultural theories have received increased attention." (Mahn) I agree with Vygotsky's observation that learning is not only affected by classroom environments but is also influenced by cultural and social factors. Throughout my teaching experience, I have observed a wide range of levels and abilities within my student population. In regards to my technology class, students with prior knowledge and experience using computers have an accelerated rate of learning and higher success. This contrasts with Piaget's theory that developmental growth is independent of experience. The study of three influential 20th Century theorists of cognitive development (Piaget, Bruner, Vygotsky) provides helpful insight and relevance to the educator of the 21st Century. I believe my classroom environment, teaching style and curriculum reflects the views of all three with an overall emphasis on Vygotsky.

Technology Integration

The concept of Technology Integration poses an interesting problem for me as a teacher of technology. Should I use technology as a curriculum or should I use technology to support curriculum? It is easy to insulate my classroom and teach just technology skills without taking into consideration other areas of curriculum (Math, Science, Literature, etc.) When I first began teaching last year, this was my focus. I limited my lesson plans to segmented blocks that were not inter-related. I would teach students how to use Excel, Word and PowerPoint without posing any real-world problems. This was a survival instinct to keep my curriculum as simple as possible after I was thrown into the classroom under a transitional license. As I progress as an educator, I am continually re-evaluating my definition of technology integration. A simplistic approach to integration could be placing a computer in a classroom. However, as we become more immersed in curriculum development, we need to realize that technology plays an important support role in all forms of education. I now see technology as a means to an end rather than the end itself. Educators need to embrace technology for what it is, a tool no different than a textbook or calculator. Yes, we need to teach our students to effectively use technology in the 21st Century but certainly not focus everything around it. Computers and the Internet make fine information delivery vehicles. Our goal is to put this tool into some meaningful context to help students better understand the subject matter at hand. As stated before, teaching Excel to students without proper context will provide for an empty learning experience. Yes, they will know how to add a column of numbers but will they understand why they are doing it? Learning is ensured only if it is applied to a meaningful, tangible concept. As a second year teacher, it seems very obvious to me to

relate what I am teaching to students' other classes and experiences. Collaboration is a key factor. As the Media Specialist for my district as well as the technology teacher, I am in a unique position to collaborate with teachers on a variety of issues: computer technology, research and reading literacy to name a few. It is important for me to be a facilitator of information and resources so that all the teachers in my school become effective disseminators of that information. Because this is a new concept, at least at our school, I have a huge ladder to climb to reach what I think is an acceptable level of technological and information literacy within the staff. However, I am gratified to see more and more teachers appreciating the use of technology and how it will enhance their respective curriculum and classroom environments.

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