Instructional Technology Philosophy

"Do not train a child to learn by force or harshness; but direct them to it by what amuses their minds, so that you may be better able to discover with accuracy the peculiar bent of the genius of each." - *Plato*

Teaching is an opportunity to inspire and empower students to learn. My goal as a teacher is to enhance student's knowledge by motivating them to learn by providing hands-on, project-based relevant activities. Using instructional technology in the classroom is essential in changing the way educators view the learning process. I believe that technology in the classroom serves two purposes. First, it will help to motivate students by introducing exciting and creative methods of learning while providing hands-on projects and a great way to keep students excited about the learning process. Second, students being introduced to technology will only prove to be beneficial to them later on in life, no matter where life should take them. Using technology can affect teaching and learning in many ways. Instructional methods are greatly affected by the use of technology. Teachers may now act as more of a guide or facilitator in the classroom. There are several theories behind these instructional methods. The theories of Project-Based Learning and Multiple Intelligences are conducive to using Instructional Technology in the classroom.

The theory behind Project-Based Learning emerged from John Dewey's philosophy of "learning by doing." Early educational theories focused on

behavioral models. Today's teaching methods have evolved to reflect changes in today's world. According to Dewey's theory, learning is now viewed as a "social activity that takes place in the context of culture, community and past experiences."(Buck Institute) Students use their previous experience and knowledge to "explore, negotiate, interpret and create." In Michael Grant's article, "Getting a Grip on Project-Based Learning: Theory, Cases and Recommendations," Project-Based Learning is described as "an instructional method centered on the learner and affords learner the opportunity for in-depth investigations of worthy topics." As students perform these in-depth investigations they create "personally meaningful artifacts." Some of these artifacts may include a multimedia project or oral presentation. Grant also states that students become, "active constructors of knowledge." When creating project-based learning activities, teachers should introduce the activity, beginning with some form of motivation, then ask a guiding question to engage the students. After which, the teacher should introduce the process in which the meaningful artifact will be produced. This process will foster higher level thinking skills including analysis, synthesis and/or evaluation. Teachers should make a variety of resources readily available to students including textbooks, hypertext links and access to experts. Teachers should guide the students by providing project templates, brainstorming sheets and teacher-student conferences. And finally, projects should end in some form of reflection to put closure on the project by an in-class discussion, journal

writing or extension activities. When introducing Project-based Learning into the curriculum, the teacher should remember that this type of lesson is a bit more time consuming then the more traditional forms of teaching. In this type of learning the teacher and student take on new roles. Another common element to Project-Based Learning activities is collaborative learning peer groups. Students must adjust to working in groups and learn how to interact, share resources and manage conflicts within the group. Teachers should also establish multiple forms of performance assessment. Some of the types of assessment are typical constructivist assessment tools, such as portfolios and rubrics. While portfolios allow students to have input and feel that they are part of the process, rubrics establish the teacher's expectation and give a more objective assessment.

People learn in many different ways. Howard Gardner, a professor and theorist from Harvard University, suggests that "there are a number of distance forms of intelligence that each individual possesses in varying degrees." Gardner states that each person is born with seven different intelligences: linguistic, musical, logical-mathematical, spatial, body-kinesthetic, intrapersonal and interpersonal. And while traditional forms of teaching focus on the mathematic and linguistic intelligences, Gardner states that "all seven intelligences are needed to productively function in society." Intelligences, such as spatial – the ability to "think in pictures" and intrapersonal – an understanding of one's own emotions are often over

looked. In Anne Guignon's article, "Multiple Intelligences: A Theory for Everyone," Guignon finds that having an awareness of multiple intelligences is beneficial to teachers in that they find additional ways of reaching more students in their class. The article lists several ways to adjust the curriculum to adapt to multiple intelligences. One way is by adjusting lesson design by asking student's opinions on the best way to teach certain topics. Schools might also choose to have interdisciplinary units and incorporate multiple subjects in to one topic. Student projects and apprenticeships allow a student to gain knowledge of specific skills. This type of teaching and learning really focuses on looking at an individual student's strengths and weaknesses. Based upon Gardner's theory, teachers need to let go of some of the more traditional forms of assessment. Student portfolios, journals and independent projects are effective forms of assessment. In Eric Digest's article on "Multiple Intelligences," Amy Brualdi states that teacher's can create "intelligence profiles" for each student. This profile, which describes how students learn, does not only help the teacher choose how they will present information, but it will also help the teacher properly assess a student's progress.

Since the introduction of microcomputers into schools in the late 1970's and the invention of the Internet in the mid 90's, Educational Technology has had an ever-growing influence on teaching and on learning. Educational Technology has a positive impact on student achievement in all major subject

areas while also having a positive effect on the student's motivation to learn. Technology allows for hands-on project-based activities in all different subject areas. In Michael M. Grant's article, "Getting a Grip on Project-Based Learning," Grant states that "learners are more autonomous as they construct personally-meaningful artifacts that are representations of their learning. Technology can be useful in creating such artifacts. And, integrating technology into the classroom makes the learning process more student-centered while increasing teacher's interaction with students. Educational technology helps prepare students by teaching them the skills they need in today's technologically-based world. Using technology across the curriculum will help encourage students to become self-sufficient and introduce them to skills that they will need throughout their development. Technology has become an ever-growing essential area of study for students of all ages. As teachers, I think we will never stop learning. It is important for teachers to stay up to date with the current technology. It is essential for teachers to stay in touch with the popular trends in technology so that they may relate to the students. Gardner states that "we should look at what (students) could do well, instead of what they could not do." We, as teachers, should focus on what the student can do well and what they are potentially capable of doing. By using multiple methods of instruction, we can reach every student in a more effective manner.

The May 2002 issue of Learning & Leading with Technology, the article "How Does Technology Influence Student Learning" emphasizes the importance of using technology in conjunction with collaborative learning. The Center for Applied Research in Educational Technology (CARET) has gathered compelling research about how technology influences student achievement and academic performance in relation to three primary curricular goals: "Achievement in content area, Higher-order thinking and problem-solving skill development, and Workforce preparation." In addition to student achievement in major subject areas, Educational Technology helps develop "high-order thinking and problem solving skills (i.e. information research, comparing and contrasting, synthesizing, analyzing and evaluating.)" The article also states that the teacher's role is "fundamental in guiding the students through the activities in which they develop these skills". A 1996 study by the Center for Applied Special Technology (CAST) researched the effects of Internet use and student performance. The research and evaluation showed that students who used the Internet showed higher scores on their project and an increased development in critical thinking skills. Preparing students for a career is another crucial area. Students get the basic tools they will need when entering the workforce by using various software applications such as word processing, spreadsheet and graphic design software.

As I see it, teaching is an opportunity for someone to become a role model. I am looking forward to sharing what I have learned with students. I hope to someday combine my educational background in Elementary Education and my professional experience as a Technology Coordinator to become a teacher and role model for my students. I would like to put the ideals I discussed earlier into practice. My view of an ideal classroom would be one in which students are using technology across the curriculum. It would be an organized setting with set rules and guidelines. I would elicit feedback from students, create concise objectives while keeping each lesson as creative as possible and motivate the students to learn.

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