

NPTT PROGRAM

EDCI 555 PORTFOLIO

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Assignment 1

Running head: INTEGRATE TECHNOLOGY

Training Teachers to Integrate Technology in the Classroom

(A Brief Review of the Literature)

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Training Teachers to Integrate Technology in the Classroom
(A Brief Review of the Literature)

In today's educational environment, technology is rapidly becoming more available for teachers to use in their classrooms. As a result, a new challenge is emerging. Teachers are faced with determining what training they need to effectively integrate technology into their classrooms. In my brief review of the literature on this subject, I discovered that many schools today are using various forms of online training to educate teachers about technical subjects.

Martin and Smith reported on the Davis School District in Utah (Martin & Smith, 2006), where they took an already robust teacher technology training program consisting of a dedicated Educational Technology Center (ETC), and transformed it using Blackboard Online technology in order to meet the new No Child Left Behind requirements. They used features such as Discussion Board, Digital Drop Box, Testing Tool and Gradebook for the newly created ETC online courses. (Martin & Smith, 2006, p. 33) The teachers loved the flexibility and the opportunities that Blackboard presented for collaboration with fellow teachers. (Martin & Smith, 2006, p. 34)

The second article I read, by Carl Vogel, described how computers, videoconferencing and databases could be combined in

various ways to provide high quality and effective professional development for the teacher. (Vogel, 2006, p. 56) For example, in Missouri's North Mercer County, they implemented Online Learning Communities (OLC), a distance learning professional development program. With OLC, various school districts are linked together via internet videoconferencing and a web-based discussion board to explore teaching strategies using technology. (Vogel, 2006, p. 56)

The Wichita Public Schools in Kansas created an online version of STEPS, which is a professional development program to help teachers learn how to integrate technology in their classrooms. The online version was much less time consuming and more flexible, which means teachers are more likely to use it. Incentives are also given to teachers for completing the courses. (Vogel, 2006, p. 57)

Lastly, in Arizona, the state university has created a web portal called ASSET. The portal contains a database of the professional development courses that teachers have taken, along with online programs and videos for use in classrooms. This approach enables a standardized approach for the development of all K-12 teachers in the state. (Vogel, 2006, p. 58)

The third publication, by Rick Martinez, described an approach used by Alamo Heights Independent School District (AHISD) in San Antonio, Texas. (Martinez, 2004) At AHISD, they

created their own online multimedia training content for teachers as well as students in PowerPoint using a software program called Breeze by Macromedia. (Martinez, 2004, p. 41)

Technology staff also offers 45 minute "Technology Happy Hours" where teachers can get face-to-face training and support. This approach has resulted in more than 85% of the staff using the training. (Martinez, 2004, p. 42)

Taking a creative approach to teaching teachers how to use technology in their classrooms can be highly effective. Each of the school districts described in the articles I read took a somewhat different approach, using a different set of resources and tools. Some of their choices were dependent on systems already in place, others on financial issues. But one common thread emerged, which was the use of online technology. Clearly, the internet and various forms of online professional training programs can be used to meet the challenge of developing teachers' technical skills in fulfilling the needs of their students.

References

- Martin, R., & Smith, D. (2006, February). Hands-on and online: Adding an online component to a teacher training program helps increase participation and engagement. *Learning & Leading with Technology, 33.5*, 32-35.
- Martinez, R. (2004, April). Internet-based training empowers Alamo Heights ISD teachers to increase technology use. (Independent School District). *Technical Horizons In Education, 31.9*, 41-42.
- Vogel, C. (2006, January). Training day: With the right technology on board, teachers can learn just about anything. (PROFESSIONAL DEVELOPMENT). *District Administration, 42.1(1)*, 55-58.

For Assignment Three, listed below are my responses to the seven questions proposed:

Question 1: How do the cognitive processes relate to instructional design?

Response 1: Understanding the asymmetric relationship between intrinsic, extraneous and germane cognitive load and how effective instructional design can reduce the extraneous load level (which in turn allows more schemas to be understood in the germane load of the long term memory) is critical to producing learning by the student. The total cognitive load of the three cannot exceed the working memory of the brain. Resources must be available if learning is to occur, so with proper instructional design the teacher is capable of controlling how much learning can occur.

Question 2: Explain the interrelationships of the three cognitive loads, intrinsic, extrinsic, and germane.

Response 2: The relationship between the three loads is asymmetric. The intrinsic load provides the base load that cannot be altered except by constructing additional schemas and automation practices. On the other hand, extrinsic and germane loads work in tandem. When teachers use effective instructional design, they can reduce extraneous cognitive load and free up capacity for more schemas to be understood under the germane cognitive load. As more schemas are learned with more effective instructional design, this cycle continues over and over—until advanced knowledge and skills can be acquired.

Question 3: Of the various instructional design models described on the various websites, which model do you prefer to use? Why do you prefer the model you selected?

Response 3: I prefer to use the Behaviorist model as a high school math teacher, because I believe that students need to have proper behavior for math learning to occur. Learning math requires a high degree of self-discipline in order to master the skills required. Many students do not possess this and use poor behavior in class to get out of learning. Thus I feel math teachers must follow the behaviorist model of instructional design, until the students gain the self-discipline and motivation to perform on their own accord, whereupon the cognitive model can be applied.

Question 4: What factors of instructional design must be taken into consideration when designing instruction to be delivered through the web?

Response 4: There are four factors that must be taken into consideration when designing web-based instruction materials. They are as follows:

1. Knowledge and application of learning theory
2. Learner to learner interactions and learner to instructor interactions
3. Instructional designer competencies and beliefs/philosophy of the teacher/learning process
4. Administration of the Web-based training/instruction

Question 5: One way to determine if online learning is successful is for the students to produce artifacts. Describe two different online learning artifacts that are representative of your specific discipline.

Response 5: Being a high school math teacher, I see many possible uses of online learning with math to help students gain the math skills required to be successful in math concepts. Having an online math course structured with modules that match up with math skills allows students to produce the following artifacts to determine if they are learning the math skills being taught.

The first artifact would be submitting homework assignments to an assignment drop box. This could be done using MS Word files that contain the problems in a worksheet format, where the students fill in the answers electronically, then submit the assignment for inspection and grade.

A second artifact would consist of an online quiz for the module, where the student would answer one multiple choice math question at a time on screen. The student would use a piece of scratch paper to work out the answer by hand, and then select the letter on screen that corresponds to the correct answer. Once the quiz is completed, software could grade the quiz and provide feedback to the student on how he or she scored.

Question 6: Differentiate between a low element level and high element level activity as related to instructional design activities.

Response 6: Low element interactivity materials can be learned on their own merits, while high element interactivity materials cannot be understood until all of the elements and their interactions are processed altogether at the same time. Thus, for instructional design activities, low elements are easy to learn and high elements are difficult to understand. Instructors must strike a balance when designing a learning module, to ensure cognitive overload does not occur for the student.

Question 7: Explain the statement, “Instructional design is intended to reduce cognitive load when element interactivity is high.”

Response 7: When difficult material is being presented to the student to learn and the cognitive load level is high, instructional design can be introduced to help reduce this load level by reducing the extraneous cognitive load caused by poor design. This reduction can free capacity for an increase in germane cognitive load, which can then be devoted to acquiring and automating schema that allows the mind to absorb more information.

For Assignment Four, I have chosen to summarize AlphaSmart.com, #7 from Dan Page's list of *25 Tools, Technologies and Best Practices* article from TheJournal.com. AlphaSmart sells three laptop alternative models, AlphaSmart 3000, Neo and Dana. A brief overview of each model follows.

The AlphaSmart 3000 is the oldest model with the lowest cost of \$139. It runs for 700 hours on 3 AA batteries and weighs 2 pounds. It is rugged and has an ergonomic design for its full-sized keyboard. The display is a four line by 40 character screen. The size of the unit is 1.9" x 12.4" x 9.3" and has a storage capacity of 100 pages of single-spaced text in 8 files. Compact applications (applets) are available for word processing, calculator functions, keyboarding instructions, classroom quizzing, outlining, and word prediction.

The Neo model is an upgrade to the 3000 with a bigger screen and more memory. The Neo Standard runs with 3 AA batteries and costs \$249, while the Neo Rechargeable version goes for \$269 and has a NiMH battery pack and AC adapter. Both versions come with the following features: Infrared (IrDA) port for printing, AlphaSmart Manager Software, AlphaWord Plus word processor, Calculator and SmartApplets for software expansion. The physical specifications have the Neo weighing 2 pounds, with a height of 1.75", width of 12.4", depth of 9.75 and a screen size of 5.75" x 1.5" and up to six lines of text display. The storage capacity is 2MB of software storage and 512Kb text data storage. A USB port and cable are included to connect to printers. The Neo also has an instant on/off switch and auto save feature for ease of use.

The Dana model is AlphaSmart's latest model with many new upgrades, and sells for \$429. Dana features a standard wireless interface (802.11b) that can connect via Wi-Fi networks at school, home or in Hotspots around the country. The Palm Operating System (version 4.1.2) runs the Dana and allows up to 20,000 Palm applications to be run. It has a rechargeable battery pack, Infrared port, two USB port slots for Multimedia card and SD cards, providing for memory expansion. A stylus pen is included to use on the larger screen size of 560 x 160 pixels which is 3.5 times wider than typical hand-held devices. The Dana weighs in at 2 pounds and has dimensions of 1.9" height, 12.4" width and 9.3" depth. The software applications include Palm's standard Personal Digital Assistant features of address book, date book, to do list and memo pad. AlphaWord word processing is also included and is compatible with MS Word file format. Documents to Go Professional software allows the user to work on MS Word, Excel and PowerPoint files and synchronize with a PC. The Palm Reader for eBooks is also included. Also, a trial version of Palm software is available on CD for trial use. I was very interested in the PowerOne Graph Software by Infinity Softworks, as this program could replace the TI graphing calculator with its many features.

I chose this site because I was intrigued by the possibilities of how the Dana could be integrated in my high school for all students to use. My vision is for the school to become a Wi-Fi site, with every classroom being a Hotspot, giving access to the school network and Internet. The Dana provides a reasonably-priced device that would enable the entire student population to have personal technology such as email, internet access, and personal digital assistant (PDA) capability. It would also give students the ability to access teacher web pages and online courses, which teachers could use to supplement their classroom instruction. I would use the PowerOne

Graph program for my Algebra and Geometry classes to take advantages of its graphing features to help students understand the mathematical concepts.

For Assignment Six, I am to provide an example from my teaching experience where the instructional needs of a student would be better served by developing instruction based on one of the seven Multiple Intelligences other than what was used. I recently had the opportunity to help an eight year old boy who is autistic. He was struggling to learn letters, words and numbers through a special education program using traditional methods of teaching. For this paper I will refer to him as Charlie (not his real name) and give an overview of my alternate learning approach based on Bodily-Kinesthetic intelligence aimed at helping him raise his grade level from kindergarten towards where it should be (second grade).

Charlie likes to clean, run a vacuum, use keys and maintain a janitor's closet at the community mental health facility where he spends eight hours a day, Monday thru Friday. I was assigned to work with him from 9 a.m. to 11 a.m. daily. My initial plan was to build on Charlie's preference for physical hands-on activities by emphasizing the alphabet and numbers as skills he needs to do his maintenance "work." There are four rooms at the facility that I was allowed to turn into Charlie's work area. First, Charlie helped move his desk, chair and belongings from his old "office" to the new location. Since his new office is next to his "janitor's closet," we made the next room up a "Training Room".

In my interactions with Charlie, I avoided using words such as "school," "teacher" and "worksheets," so as to not frighten him away from learning skills incorporated into his day to day activities. For the training room, I was able to find a large whiteboard and several large bulletin boards that I could use to give Charlie visual cues for his letters and numbers. Charlie helped me hang up the boards using power drills, screwdrivers, levels, and a tape measure

(which I used to have him count inches on). I took this opportunity to teach him how to use the tools and he responded very well and started to give me more of his attention. We designed the fourth room as the “Activity Room,” where we added a card table we could use to do fun activities such as reading books and playing with Legos.

My approach to helping Charlie started to take form and I began to realize that moments of opportunity occurred where I could instruct Charlie while having fun. There have many such moments. For example, I had Charlie put up room numbers using post-it notes so we could match the room key numbers to the doors (he loves keys and carries them around). Charlie loves to laminate paper, and this gave me the idea for him to make signs so we could practice his letters. I sensed he knew more than he had thus far demonstrated, so I have had him making signs for the AWARE workers with their names to identify their work spaces. This gives him a sense of accomplishment and purpose. This has also boosted his confidence and allowed me to work one-on-one without the assistance of a social worker. This is a definite improvement, because the previous teacher needed to have a social worker close by at all times to handle behavior issues.

One of our latest activities is to make a rhyming alphabet book. We are taking pictures of Charlie doing silly things with people he relates to and putting a rhyming sentence for a letter. Then we put the picture and sentence with the letter on a page in a 3-ring binder, which helps Charlie to relate the alphabet within his world. Also, I’ve started to create a time command center in the hallway with a whiteboard monthly calendar. I have him write the numbers of the days from 1 to 30 on it. Plus, we put up a full year of monthly calendars to give Charlie a sense of time. We cross off each day as we go through the week. In a few short weeks, Charlie has

gone from rebelling against worksheets, and not learning, to acquiring “learning” skills by using his hands and mind to do productive maintenance activities.

For Assignment Seven, I have developed a lesson plan that uses two multiple intelligences to teach a geometry math lesson concerning parallel lines intersected by a transversal and the angles that are created. I first gave this lesson a couple of weeks ago in my Integrated Math 2 class using the traditional approach. This approach relied on logical-mathematical intelligence being used by students to understand the new angle relationships that were introduced. However, with geometry proofs being learned for the first time by my high school students, they struggled with grasping the meanings of vertical angles, corresponding angles, alternate interior angles and supplementary angles. Providing the definitions with explanations using the whiteboard in class did not result in a full understanding of the concepts. So, I came up with an alternate lesson plan using Bodily-Kinesthetic and Interpersonal Intelligence to assist them in learning the new material.

My alternate lesson plan has two parts, one for each multiple intelligence mentioned above. For part A, I focused on using a software program called Geometer's Sketchpad which took advantage of Bodily-Kinesthetic intelligence to assist the students in producing the angles via constructs and measurements of the angles to confirm their definitions. Part B used small group interactions to take advantage of interpersonal intelligence in doing formal proofs for the parallel lines theorems. Listed below is my Alternate lesson plan.

Alternate Lesson Plan for angles formed from 2 parallel lines intersected by a transversal:

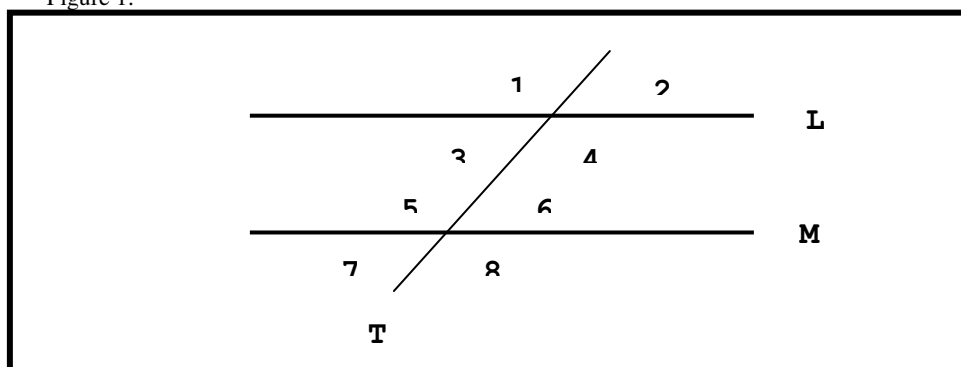
Part A: Geometer's Sketchpad Software program.

Objective: Students will use the Software program called Geometer's Sketchpad and follow the steps in lab 1-8 to construct two parallel lines intersected by a transversal and answer all questions in the lab. The student will be able to identify the following angles, corresponding, alternate interior, vertical and their meanings.

Activities: The following activities will be conducted during one period in the computer lab.

1. Put name on handout sheets for lab 1-8.
2. Turn on PC and login to the school network.
3. Open Geometer's Sketchpad (GSP) and set-up a sketchpad file to save onto the server.
4. Follow all the steps listed in lab 1-8 in creating the construct of two parallel lines intersected with a transversal.
5. Answer all questions listed in lab 1-8.
6. Label all angles as listed in figure 1.
7. Using the measure tool of GSP on every angle described in figure 1 and write them down on your sketchpad file.
8. Verify which angles are vertical, corresponding, alternate interior and supplementary.
9. Do your angle measures match the definitions of the angles in step 8?
For example, vertical and corresponding angles are both equal.
10. Each student will turn in the lab sheets with questions answered and a printout of their sketchpad file. The lab is worth 20 points.

Figure 1:



Alternate Lesson Plan for angles formed from 2 parallel lines intersected by a transversal:

Part B: Group project with Proofs for Parallel lines Theorems.

Objective: Students will work in groups of four in writing formal proofs for the parallel lines theorems. Each group will prepare a PowerPoint presentation of their proofs and present them to the class. This effort will help students overcome the fear of doing proofs for theorems.

Activities: The following activities will be conducted by the groups in preparing and giving of their presentation.

1. After five groups are assigned by the teacher, each group will review the following theorems: T7.4, T7.5, T8.1 and T8.2 and will work up a group proof for each theorem by hand.
Length of time: one period–49 minutes
2. Each group will review their proofs and put them into a PowerPoint presentation.
Length of time: one period–49 minutes
3. Each student of each group will present one of the group's proofs to the class. The group presenting will answer questions from the class as a team about their approach to the proofs.
Length of time: one block period–90 minutes
4. The presentations are worth 100 points.

For Assignment Eight, I used a study by Kurt Y. Michael¹ that showed negligible impact of multimedia presentations. The study's purpose was to compare the effect of a computer simulation activity versus a traditional hands-on activity on students' product creativity.

The researcher first reviewed existing literature about product creativity in technology education, in regards to four areas: intelligence and personality traits of the creative person, what the creative process is, evaluating the creative product via Moss and Duenk's unusualness and usefulness model, computers and the creative product with a focus on computer simulation technology.

The primary hypothesis was: "*There is no difference in product creativity between the computer simulation and traditional hands-on groups.*" The study group was composed of seventh grade students from Northern Virginia. Kits of Classic Lego Bricks were used for the hands-on group while a simulation program called Gryphon Bricks was selected for the simulation group. The Creative Product Semantic Scale (CPSS) was used as the test instrument to measure product creativity. 58 students were randomly assigned to the two groups. They were asked to act as toy designers and create a Lego creature that was original in appearance, yet useful to the toy manufacturer under 25 minutes.

The creatures the children created were evaluated using the CPSS instrument, and the results showed that there was no significant difference in product creativity, usefulness or originality scores between the two groups. Michael concluded that the findings supported his

¹ Michael, K. (2001, Fall). The effect of a computer simulation activity versus a hands-on activity on product creativity in technology education. *Journal of Technology Education*, 13.1, 31-43.

hypothesis that the use of computer simulation would not significantly enhance product creativity.

For Assignment Nine, I used a study by Doty et al² that supported the use of multimedia presentations. The study's purpose was to investigate whether younger students score higher on oral retelling and comprehension questions when reading a storybook in print or from an interactive CD-ROM.

The hypothesis proposed that there would be no significant difference between the two groups in regards to either oral retelling or comprehension of the story. The participants included 39 second-grade students from a Midwest Title I school consisting of 20 females and 19 males. They were divided into two treatment groups, with one reading from a textbook and the other using a CD-ROM version with the narration option turned off so both groups had to read the story. The book chosen was *Thomas' Snowsuit*, by Robert Munsch. All students gave an oral retelling immediately after reading the story and were scored using Morrow's 10-point scale. Then, six comprehension questions were asked. For the text group, the senior author was present to offer assistance with word pronunciation if students needed it. For the computer group, the senior author demonstrated how to use all the interactive features available on the CD-ROM.

The study findings indicated that the first part of the hypothesis was supported, with no significance difference between the groups for oral retelling. However, the second part was not supported, as the results indicated that there was indeed a significance difference with story comprehension, with the computer group scoring higher. The conclusion from the study indicates that reading comprehension can be enhanced using interactive CD-ROM storybooks that provide help when needed by students.

² Doty, D.E., Popplewell, S.R., and Byers, G.O. (2001, Summer). Interactive CD-ROM storybooks and young readers' reading comprehension. *Journal of Research on Computing in Education*, 33.4, 374-384.

For Module 6, Assignment # 1, my task was to search for web lesson plans and describe how I would integrate one of them into my existing courses that I teach. My research is listed in www.4teachers.org under Trackstar # 285754 with the title: “Geometry Lesson Plans for High School”. I chose track three, titled “What is Your Favorite Proof of the Pythagorean Theorem?” with the URL of: <http://www.gowcsd.com/master/ghs/math/furman/pythagor/pythag.htm>.

This WebQuest Lesson grabbed my attention as a project to integrate into my Integrated Math 2 classes. We are currently covering geometry theorems and proofs, which I have found that students often struggle with. This is the first time that students must use logic and reasoning to solve geometry proofs. Learning theorems and “connecting” them together in proving a new theorem is very challenging. This project will aid students with this task.

I will integrate this project next year in the following manner. First, I will place this lesson of “deciding what is your favorite Pythagorean Theorem proof” at the very beginning of the geometry section. This is a great way to transition from algebra to geometry, since students know the famous $C^2 = A^2 + B^2$ formula, which states for a right triangle, the hypotenuse squared equals side one squared plus side two squared. But they never learned how to prove that it is true! The resources listed give excellent examples of the many ways to prove the theorem. This will expose students to the concept of writing formal proofs. The tasks of this project have the students work with a partner and choose one version of the proof to give a presentation to the class. Also, students individually will research the history of Pythagoras and give answers in a written essay to two questions posed by the teacher. This project is a great way to transition

students to theorems and proofs starting with a known subject. Also, I want to integrate more projects into my lessons to help students grasp the concepts being taught.

For Module 6, Assignment # 4, my task was to search through the ERIC database on assistive technology and describe how I might use it to help one of my students. My research is listed in www.4teachers.org under Trackstar # 285827 with the title: “Assistive Technology for Mathematics Use”. I have several students in my Integrated Math 2 classes that have Individualized Education Plans (IEPs) for whom I would like to provide assistive technology. These students basically need extra time to learn and master the math content being taught. I would like to use the following Computer Assisted Instruction (CAI) technologies to help my students in keeping up with the pace of learning required for this level of math.

My first CAI would be using PowerPoint for all my math lessons. This will allow me to display the math concepts being taught in an organized fashion along with visual color graphics to help explain the concept. I teach geometry and this will help students visualize the theorems being learned. Also, I could keep a copy of all PowerPoint Lessons on my website to allow students access to them from home or anywhere they are studying or doing math problems.

My second CAI would be to find interactive CD-ROMS or web sites that provide interactive learning for the student to get a handle on the concepts being taught. Ideally, this would accompany the new math text books we will be using in two years. This would allow students to pace themselves on the modules being covered in the text.

My third CAI would be using spreadsheets and Geometer’s Sketchpad programs that demonstrate math techniques being learned. For spreadsheets, the following site contains many math lessons using electronic spreadsheets: www.ups.edu/community/tofu¹. For Sketchpad, programs are available to demonstrate various theorems that are being taught, along with labs that require students to construct geometric figures using a hands-on approach.

¹ERIC development team. (1998, August). *ED426517 1998-08-00 Integrating Assistive Technology into the Standard Curriculum. ERIC/OSEP Digest E568 (1-7)*. Retrieved April 22, 2005, from http://www.eric.ed.gov/ERICDocs/data/ericdocs2/content_storage_01/0000000b/80/2a/2c/dc.pdf

For Module 7, our assignment is to review the Montana technology content standards and perform the following three tasks:

1. Acknowledge whether or not you feel you are meeting any of the standards.
2. Identify which standards you believe you are meeting.
3. Provide a brief explanation of how you feel you are currently meeting the standards.

I did not realize there are technology standards for Montana school systems and I do not keep a copy in my classroom. With this shaky start, I evaluated whether I was meeting any of the technology standards.

Upon examining the six standards, I feel my math students are meeting two of the standards at the proficient level for the eighth grade benchmark. They were only meeting one standard at the proficient level for the high school benchmark. Since most of my students are tenth grade students, I am not required to meet the high school graduation level; however I should strive to meet the ultimate goal of advanced proficiency. This will enable students to be more successful in today’s high-tech oriented employment market.

Next, I looked closely at each standard and documented at what level my students are for the eighth and twelfth grade benchmarks, using the table below.

Std:	1				2				3				4				5				6				
Level:	A	P	np	N	A	P	np	N	A	P	np	N	A	P	np	N	A	P	np	N	A	P	np	N	
8th		y						y		y					y				y						y
12th		y						y		y					y				y						y

KEY: Std= Standard, A= Advanced, P=Proficient, np=Nearing Proficient, N=Novice, Y= Yes

My students are strongest at Standard 1: “*Students demonstrate an understanding of the basic operations of technologies.*” They are weakest at Standard 6: “*Students apply technological abilities and knowledge to construct new personal understanding.*” Having my students use graphing calculators and Geometers Sketchpad helps introduce technology in solving math problems. Also, I’ve had students in my Math Topics class perform internet research on math

life skills, such as how to buy and finance a car. However, I have much room for improvement, so in the future, I plan to focus on Standard 5: “*Students develop the skills, knowledge and abilities to apply a variety of technologies to conduct research, manage information and solve problems.*” I choose this standard because I feel math should be learned to solve real life problems.

Upon conducting this analysis and realizing how math is for used for students to achieve this standard, I will be taking the following approach to raise my students to the advanced level at the twelfth grade benchmark. I will use quarterly projects throughout the school year as a technique to propel students in using technology to solve problems. My first assignment will involve using the WebQuest project that I created, entitled “***History of Geometry and Its Application for High School Use***”. This research project will allow students to apply Internet tools in learning about the history of geometry and its use in solving problems for humankind. Organizing the information and using PowerPoint will allow students to create original work and communicate their findings using technology.

The three other projects will be focused on students solving real life problems, using algebra and geometry via technology. I will have the students work in groups and also individually to produce solutions. My idea is have students use their graphing calculators, Geometer’s sketchpad, spreadsheets, tables and internet as a resource to solve the problem identified in the project. These projects will pull together many facets of technology and math solving skills together in organizing a solution that is presented to fellow peers.

After my first year of teaching, I have sensed that students need to experience how math can be used to solve real life problems, and as a tool, to help them achieve success in life. Simply teaching the math techniques, rules and having students perform homework assignments and take tests leaves out a critical piece of what mathematics is... An essential means for solving life problems.

For Module 8, our assignment is to create two technology assessment surveys using an online survey tool software program called surveymonkey. Listed below are my URL links to these surveys:

1. Teacher:

[http://www.surveymonkey.com/Users/13364975/Surveys/540752112982/0DE76FD7-541D-4386-AF7D-E09B398B0AFD.asp?U=540752112982&DO NOT COPY THIS LINK](http://www.surveymonkey.com/Users/13364975/Surveys/540752112982/0DE76FD7-541D-4386-AF7D-E09B398B0AFD.asp?U=540752112982&DO_NOT_COPY_THIS_LINK)

2. Student:

[http://www.surveymonkey.com/Users/13364975/Surveys/342892113073/970A1E50-4460-4DD6-97E7-2F431878718E.asp?U=342892113073&DO NOT COPY THIS LINK](http://www.surveymonkey.com/Users/13364975/Surveys/342892113073/970A1E50-4460-4DD6-97E7-2F431878718E.asp?U=342892113073&DO_NOT_COPY_THIS_LINK)
