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July 5, 2001

Technology Integration Learning Plan
Q377: Foundations of Educational Technology

Overview:

During the summer prior to the 2000-01 school year, the Sullivan C-2 School District (Sullivan, Missouri) applied for and received grant funding for a new alternative middle school program. This program would deliver instruction to at-risk students via educational software on individual computer workstations. I was hired as a first-year educator to organize and teach this program. Our first year was very successful, however, because the alternative program was new and the software was unfamiliar to me in the beginning, I spent much of the school year organizing, adjusting, and adapting the direction and goals of the program. With the first year behind us, I feel that I can now use what I have learned to establish a specific plan of action to more effectively meet the students' needs in future years. Of course, as with anything in education, this plan must include flexibility for change, but it is my hope to establish a framework by which the program can be organized, thus allowing me to spend more time working with students on an individual basis.

Needless to say, this plan will be very broad in scope so that it can encompass an entire school year of curriculum. I hope that this plan will not be too broad for the parameters of this assignment, but I feel that it is important for me create something to meet a real need in my individual circumstances rather than a fabricated activity which I will likely never use in my class. I do, however, believe that the ADDIE model can be utilized to fulfill the needs of our alternative middle school program.

In addition to using the Passkey learning software which was the primary educational tool used during the first school year, I will also be incorporating the newly purchased A+nywhere Learning System (A+LS), the Academy of Reading software, the Internet, and other learning activities to produce a self-paced curriculum structure for my students.

Analysis:

The learning objectives will be based on the Show-Me Standards and the school district's curriculum for Language Arts, Mathematics, Science, and Social Studies for the sixth, seventh, and eighth grades. These objectives must be met in order for a student to be promoted to next grade level. However, each student will be entering the program with highly varied levels of prior knowledge and many may require remediation before moving on to grade appropriate material. Therefore, upon entering the alternative program, all students will participate in a personalized assessment, tutorial, and review program using the Passkey, A+LS, and Academy of Reading software. These programs will each individually administer diagnostic tests to measure a students prior knowledge and will automatically assign computer based tutorials to teach deficit skills. Time spent in remediation will vary based on individual student need, but will approximately require one six-week grading period.

Design and Development

As previously mentioned, the learning objectives will be based on the Show-Me Standards and the school district's curriculum for Language Arts, Mathematics, Science, and Social Studies for the sixth through eighth grades. The Passkey, A+LS, and Academy of Reading software packages are all based on the directed approach to learning in which information is presented in tutorials, drills, and assessments according to a specific set of objectives. These programs, in addition to web-based activities from http://www.xcursioncentral.com, will meet the state and local learning objectives. However, in addition to these objectives, I also want the students to develop skills and attitudes necessary for success upon their reentrance into the traditional school setting including critical thinking skills, problem solving strategies, positive self-esteem, and good study habits. To accomplish these goals, I will implement a more constructivist approach by working with the students individually. When a student reaches a problem or skill in the computer lesson with which he or she is having particular difficulty, I will present the problem in a much more hands-on way. For instance, to help a student who is struggling with long division problems, I will present the information in a real world context, such as figuring out how many video games one could buy if a person had x number of dollars and the games cost y number of dollars each. In this way, students can approach their most difficult problems from two different perspectives and receive the individual help they need.

Whenever possible, the lessons will be assigned to match the sequence of material being taught in their corresponding classes at the traditional middle school. Additionally, students must master prerequisite skills before progressing to more difficult tasks. I will assess student achievement by monitoring results of the built in assessment tools of each respective software product.

The software products are essential to the success of the alternative program for several reasons. First of all, I am not equipped with the knowledge or skills to deliver instruction in all of the core subjects at a middle school level, therefore the software delivers the majority of instruction in an organized manner. Secondly, the alternative program is intended to allow students to progress at their individual pace which would be impossible if I were delivering the instruction myself. Finally, the educational software allows me to be free to assist students individually by removing the burden of lesson preparation and delivery.

Implementation:

During the first school year, I learned a great deal about the snags that can occur when dealing with self-paced educational software. The biggest problems occur when the software is not clear in its instruction or contains incorrect information. To overcome this, I must be thoroughly familiar with all of the lessons' content so that I may address this confusion when it arises. An additional feature of the A+LS software allows me to alter, add to, or remove the content of the lesson to avoid future problems.

Another problem occurs when students try to beat the system, so I minimize this by closely observing student behavior and monitoring results. If I suspect a student is trying to get around unpleasant lesson content, I step in and offer individual assistance for that which is making him or her uncomfortable.

However, the greatest obstacle to implementation is the mammoth task of aligning the

content of so many instructional resources. To accomplish this, I am choosing the A+LS program as the core product for my curriculum. I will then examine each individual lessons from the other software products and will match those lessons up with the objectives and lessons in A+LS.

Evaluation:

I will measure the success of this technology integration plan based on several criteria. In the short term, I will assess mastery of objectives by using results from individual lesson assessments, periodic review tests covering a learning unit, and MAP test performance. I will also monitor progress when students leave the program to see if each student has maintained a C average and acceptable attendance. In the long term, I will track students to see if they are promoted to the next grade level at the end of the school year, if they graduate 8th grade and enter high school, and if they graduate from the high school, which is the ultimate goal of the alternative middle school program. I will use the data that I collect to make further modifications to the program's structure, goals, or curriculum as needed.