

School: Salem-Keizer Online School
Location: Salem, OR
Teacher: Burt Kanner
Technology: ClassPad 300 & ClassPad Manager Software

Summary: After numerous challenges trying to implement traditional graphing calculators into an online mathematics curriculum, Casio ClassPad technology is integrated into the program and enhances the learning experience.

Who Am I

My name is Burt Kanner. I am the chairman of the mathematics department and the main developer of the math program at the Salem-Keizer online (SK Online) school. I've been at SK Online for the past 6 years. Prior to this assignment, I spent 40 years in the mathematics classroom and as a department chair at a high school in southern California.

My Calculator Experience

I have been using graphing calculators, in one form or another, since the late 1980's. I was the first teacher at my school in California to use the Casio fx-7700 graphing calculator and I taught the other teachers in the department how they could use the technology in their classrooms. Since that time, I have had experience with a variety of graphing calculators from both Casio and Texas Instruments. In fact, when I came to SK Online, I tried to implement the TI-83 Plus into our online math courses, as that was the model being used in the traditional classrooms. After much trial and error, I found that, in an online setting, the calculator was difficult to administer and the students balked at purchasing their own units. Unfortunately, I often had to waive the calculator requirement that was embedded in our second year Algebra courses. As the main developer of the SK online math program, I had significant concerns about how the students would learn the skills necessary to implement a graphing calculator in their work in a way that enhanced their learning.

Because of my strong belief that graphing calculator technology has had a positive influence on education and has changed the mathematics classroom for the better, I was not discouraged by this experience. In fact, I had even more motivation for the inclusion of graphing technology into our online curriculum and started investigating how this could best be accomplished. Enter Casio.

Why Casio

While I was continuing to work on trying to integrate the TI-83 Plus graphing calculator into our online mathematics courses, one of our administrators saw a demonstration of the Casio ClassPad 300 graphing calculator at a local technology conference. Not only was he impressed by the ClassPad 300 calculator, he was also impressed by the emulator software that accompanied the unit – the ClassPad Manager Software. After talking with the Casio representatives and telling them about the SK Online School, he was provided with a sample disk of the ClassPad Manager software that he later gave to me.

Since that time, it has been a whirlwind of experimentation and learning – all with exciting results and unlimited potential. As I first studied the calculator, I found that although it was easy-to-use I had many questions. I kept a list of my questions and contacted Casio for answers. Not only did they answer my questions over the phone, but they also came to our school in order to better understand our local situation and provide answers in the context of what we were trying to accomplish with our online courses. To say that I was surprised by the response would be an understatement. I was very pleased and the more that I saw, the more that I liked.

What We Have Found

Now that we had found the graphing calculator to implement into our online mathematics curriculum, we needed to determine the best way to get all of the students acclimated to the technology. We again looked to Casio and they, along with the SK Online web developer and myself, co-developed a course called ClassPad 101. This course can be found on the SK Online website, the Salem-Keizer school district gives a semester's credit for successful completion of the course, and any high school student in any location can enroll in the course.

Last Spring, the Casio ClassPad 101 course was offered for the first time as a pilot. The students enrolled in the course ranged in grade level from 6 to 12 and all did an exceptional job in completing all the lessons and submitting final presentations that matched their level of advancement in mathematics. In all cases, the final presentations demonstrated an enhanced view of real-world problem solving that was made possible by using some of the advanced features of the ClassPad 300 hardware and the ClassPad Manager software: the drag-and-drop capabilities that allow for the easy manipulation of equations and graphs, the large screen that enables visualization of concepts (especially in Geometry) in a way that is easier to read than on other graphing calculators, and the eActivity program whereby students can create mini lesson plans or applications that demonstrate how to solve a specific problem. The level of engagement by the students was amazing to observe.

Casio's ClassPad Manager software has truly been the solution to our challenge of providing access to advanced graphing calculator technology to all of our students.

Where Do We Go From Here

After such a successful pilot of the ClassPad 101 course, we are offering the course again as part of the standard SK Online mathematics curriculum and will be integrating the Casio ClassPad Manager technology into the following courses: General Math, Pre-Algebra, Algebra, Advanced Algebra, Geometry, Pre-Calculus, and Calculus.

In addition to this, I am currently developing a new class for the most talented math students in elementary school. Salem-Keizer has a TAG program for the "talented and gifted" students. Since online learning can meet the needs of students who do not fit the general mode, our online courses have become the TAG "solution" for the extraordinary elementary student. We have used our program to advance them to Algebra or even Geometry. However, the program, as it currently stands, can be improved to meet what I see as the core needs of these students. The course in development will utilize the vast amount of exciting information available on the Internet and the ClassPad Manager software. The course for these gifted elementary students (titled: Math Scene Investigation) will utilize the ClassPad Manager in teaching the appropriate use of technology in mathematics at a basic level and will expose them to the excitement of mathematics in a way that I believe will benefit them in the future.

For More Information About:

Salem-Keizer Online School

www.skonline.org

Casio ClassPad 300 & ClassPad Manager Software

www.casioeducation.com
800-582-2763