The Robots are Coming!

Ron Kessler

In an attempt to introduce computer programming, basic electronics, and mechanics to a group of unsuspecting teenagers, SCC will be offering a new course called Introduction to Robotics at Canyon High School this spring. The course will become part of the “Jump Start Program,” which encourages high school students to begin their college careers prior to high school graduation.

The new course was the idea of SCC’s Computer Science instructor, Ron Kessler. “Teaching the students to design and program robots will help students direct their creative juices towards solving real-world problems,” Kessler said. On the surface, computer programming sounds boring, but when you let people build something that they designed and envisioned, work and effort are transformed into fun and a real sense of accomplishment.

Elementary, intermediate, and high schools across the country are using robotics to teach math, physics, engineering, and, of course, computer programming to a very willing population. We all know how powerful a lesson can be when linked to a real-life scenario. Teachers are always searching for something that strikes a chord in their students in order to excite them. Kessler hopes the energy from this new offering will help fuel a resurgence of interest and encourage people to choose careers in technology and science.

SCC’s Business Department has been offering computer programming at Canyon since last spring. Kessler said he has enjoyed considerable success with the programming courses offered so far. The Jump Start classes are open to the public, and Ron has discovered the generation gap between the older SCC students and the high school students to be beneficial to the environment of the classroom. The Jump Start Program, a bridge and partnership between the two districts, will harness the energy at both schools to expose students to careers and opportunities never imagined.

Students in this new class will learn how to construct a machine that can move around on its own and follow on-board programming from its microprocessor, visual sensors, touch sensors, and even voice commands from its owner! The class will work in teams with the new Lego Mindstorm NXT robotics kit. They will learn how to build a robot that can traverse rough terrain, follow a colored line, respond to being bumped, and be able to change direction to avoid collisions.

After the students master the Lego programming language, Kessler

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Laney Pryor is in her sixth year as a professor of mathematics at SCC. A valued and very well respected instructor, Laney represents the department on the curriculum and articulation councils. She earned her BA at Murray State University in Kentucky, Masters Degree at CSUF, and is very close to completing her PhD at Claremont Graduate University. Last semester Laney taught an on-line/hybrid course for the first time. We thought it would be interesting for her to share her experiences.

Q: Why did you choose to be a mathematics teacher?
A: I struggled with math until high school. My freshman year things started to click. My friends were struggling, so I started explaining the material and helping them study. It felt great! I knew then that I wanted to teach math.

Q: Which course did you choose to teach online? Why?
A: College Algebra. Honestly, I was asked to teach it. I believe the traditional class experience makes me a better online teacher because I’ve witnessed the students’ difficulties first hand. That allows me to prepare appropriate instruction and resources for those sections for the online students.

Q: Any new endeavor presents a challenge. Was teaching an online course for the first time more or less difficult than you had expected?
A: I had talked with a few online instructors and got some great advice. So, I was probably more prepared than some - thanks to the support of my colleagues! However, I was not expecting quite the onslaught of technical issues that my students encountered. I answered one math question for every five computer questions. Luckily, this was at its worst the first two weeks.

Q: What was your primary mode of communication with your students? How did this compare to your experiences in the traditional classroom?
A: Our primary mode of communication was email and discussion board. I did try to give frequent messages of encouragement (and reminders) through "audio postcards" sent via email. Audio postcards are basically links to recorded messages.

Laney Pryor hopes to introduce them to Microsoft’s Robotics Studio. With these new development tools, the class will learn to program the machines on the PC and transfer their software to the robot via radio waves using Bluetooth technology. So the next time you are walking around campus, beware of small moving critters that might cross your path or try to race you to the parking lot!

Did you know?

Don Busche

The fall semester has been in session for nearly two months now, yet a visitor to the SCC Website sees messages like, “Spring 2007 Office Hours,” “Have a restful summer,” and “page last updated 12/2005.” Such information is great during specific periods of time, but their termination date is just as important as the expiration date on a carton of milk.

Why is it so important to change those messages? It is smart to keep your website up to date in general. Imagine how disappointed you would be if each time you "tuned in" to your favorite news program the same stories were reported. You
SCC Students Headed for Class

would quickly lose interest and the show would lose its audience, just as a website with outdated information would. When nothing changes on your website from visit to visit, viewers may get the impression that “nobody is home.”

Websites, like the SCC Website, are ranked by search engines that visit the website on a frequent basis. If your website has not changed between search engine visits, the site will not be visited regularly. This will subsequently drop your rankings, which may result in your pages not appearing in a “Google” or “Yahoo” search result.

Here are a few things you can do to indicate that “you are here” and your site is current, active, and evolving:

- Keep your contact information (e-mail, phone, office hours, schedule, etc.) up to date. Let your viewers know you’re there, interested, and ready to answer questions.
- Proofread your web pages to eliminate any typos and/or awkward grammar.
- “Refresh” all photos and other graphical elements to enhance your content.
- Provide feature articles, news updates, curriculum, success stories, or any other appropriate content on your program pages.
- Provide links to any event flyers and announcements that viewers can download. Students and staff will come to rely on your website as an additional source for obtaining this information.

Notice that none of the above suggestions include adding either animated graphics or blinking text. While all these bells and whistles have their place, they should be implemented appropriately to enhance content.

Web 2.0 - Part 3 Collaboration: Wiki's Got You Covered
Scott James

I believe that taking advantage of your student’s diverse backgrounds and unique perspectives can be one of the most valuable aspects of a traditional classroom experience; but what about teaching online? Can we still collaborate as effectively in the distance education environment? As you can guess by the title, the Wiki can help you maintain your classroom’s collaboration without regard to proximity.

What is a Wiki and how does it work? Well, according to Wikipedia, Ward Cunningham first developed the Wiki calling it the Wikiwikiweb, “the simplest online database that could possibly work.” Ward’s term Wiki Wiki came from the Hawaiian term for fast, a term to describe the quick nature of his database system.

Wiki technology did not become popular right away, however. Arguably, Wikipedia, an online free encyclopedia written collaboratively, is the webpage responsible for making Wiki technology popular. According to Wikipedia, they were attempting to create a free online encyclopedia when they discovered that writing the content was taking too much time. The founders discussed their options and decided to experiment with collaborative writing using Wiki technology. They decided to open up their webpage so that anyone can edit or add data on Wikipedia, contributing to the encyclopedia.

What?! Did you just say anyone can edit and post anything on the webpage? You might muse . . . Yes, Wikipedia has created a community that has more than 75,000 active contributors. Fortunately, Wikis come built with some editing super friends: the history log (so you cannot lose any previously submitted data), moderator controls (in case you need to approve posted content), and, in some cases, user access right restrictions (to keep your Wiki private).

So how can a Wiki work for me? Wikis allow your students to group up and contribute information to an interactive, collaboratively written, document. Students can post papers for peer review (and add comments to other students’ papers), build collaborative projects, organize resources, share or collaboratively create notes, and, most importantly, Wikis enable the students in your class to sprinkle a dash of unique perspectives and a pinch of knowledge to the electronic dish we call distance education.

Do you want to experiment with a Wiki? Try Wikispaces, which is free, at www.wikispaces.com. If you would like to contribute to a Wiki, just for fun and experiment, check out my Wiki at www.scottjames.us and click on Wiki.
Online Classes . . .
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Did a larger percentage of students seek help? If so, is this a result of reduced apprehension?

A: It actually seemed about the same, but it did seem as though students were not afraid to admit when they were lost or confused. On the discussion board I saw more support between students than I typically see in a traditional class. There were often responses like, “I had trouble with that section, too. Try this . . . it worked for me.” I am looking forward to see if that trend continues.

Q: Were your students as successful as those in a traditional class environment?

A: No. I believe many of them thought it would be easier because it was online. They didn’t realize the commitment and self-discipline it takes to learn the material via CDs and documents. Also, I don’t believe I was as good as I am in a traditional class. I continue to work to make it better, but nothing beats face-to-face when you’re teaching a subject that most students fear. HOWEVER, there is a population of students that can only further their education through online courses . . . so, for them I will do my best to keep improving the course.

Q: What was your biggest surprise?

A: The amount of time I spent answering emails and discussion board posts.

Q: What was your greatest challenge?

A: I had to let go of the instruction portion of the class. I still provide documents that explain/illustrate certain mathematical algorithms and concepts, and I answer questions, but the CD lectures are from someone else. I supplement the best I can, but I’m still not satisfied. I hope to create my own videos in the near future.

Q: Has your experience caused you to alter any educational philosophies?

A: Not really. I still believe that a traditional (face-to-face) math class is the best way for most students to learn this particular subject . . . as of now. However, online classes do serve a need for many students and should be supported.

Q: Do you believe that the online class requires a special type of student, or can any student be successful if properly motivated?

A: The key words are “properly motivated.” It takes a dedicated and very self-disciplined student who is computer savvy to succeed.

Q: What advice can you offer someone that will be teaching an online course for the first time?

A: Talk to other teachers who have taught a similar course online. Also, contact people who have used the same format. I have been very pleased with the help and advice I’ve gotten from other online teachers here at SCC.

Laney is teaching a hybrid College Algebra course again this fall.