My main goal with technology is to improve student engagement. I feel that there are two general strategies in using technology to improve engagement; capture the students attention with new technology, or improve the ability of widespread technology to engage the student. Because I believe that the latter strategy will achieve more of a widespread effect on campus, I am trying to take the currently used teaching tools of PowerPoint and webcams and find ways to improve their ability to engage students. A further goal is to teach courses in KCELT that will spread these techniques to my colleagues across the college.

Goal 1: Improved Interactivity with PowerPoint

Goal 1.1: Flash-Like Animation with PowerPoint

Goal 1.2: Improved Pedagogical Use of Interwrite PRS Clickers

Goal 1.3: Wii Smoothboard

Goal 2: Improved Course Delivery with Podcasting

Goal 2.1: Podcasting with Power Point

Goal 2.2: Podcasting with WebCams

Goal 2.3: Podcasting with Screencasts
One of the weaknesses of Power Point is that it is very static and very linear. A goal of mine has been to improve the animation and improve the interactivity. One technique would be to learn Adobe Flash so that I could create interactive animations and insert them into my Power Points. Toward that end, I took Alan Peterka’s two courses on Flash. However, I came away thinking that while I could probably learn Flash, it would have a steep learning curve and it is very labor intensive; thus it would be difficult to use often. I then came across a website called PowerPoint Heaven where contributors post their efforts to maximize the ability of PowerPoint to create animations, games, and art. Seeing this website inspired me to see what animations I could create in PowerPoint. This would allow me to create more animated content because I have extensive experience with PowerPoint, and it would also make the use of these interactive techniques more widespread amongst my colleagues.

In short, the process involves using triggers, hyperlinks and action inks to allow the user to choose multiple actions in the Power Point; from jumping to index slides, to performing an analog of computerized testing to having labels pop up upon rollover. At this point, I have only used this technique in two Power Points; one to insert a quizzing function (below) and another is to allow the student to point at the bones of the hand and have their name pop up. A goal moving forward is to introduce more and more animations. I envision having regular animation and side quizzes in the electronic copies of Power Points that I provide to my students.

I will also be developing teaching handouts for my colleagues to follow so that they may use these techniques as well. I will also begin teaching a course entitled “I Didn’t Know You Could Do That With PowerPoint” in KCELT starting in May.
Goal 1.2: Improved Pedagogical Use of Interwrite PRS Clickers

I have taken over teaching the Clickers courses in KCELT from Cate Shellar. In attempt to build on the foundation that she created, I have expanded the course to address the pedagogical advantages of Clickers. In short I have monitored the current research on personal response systems and have adapted my use to not only improve my pedagogical goals but also to pass these advantages on to my colleagues who take the KCELT course. I have included some of the major slides below but essentially Clickers...

- Allow probing for baseline understanding as well as identifies students who would benefit from differentiated instruction.
- Formatively assess that students understand the content.
- Allows social interaction has students are asked to confer when a consensus does not arise in the answers.
- Allow me to sequence through case studies.
- Allow me to lead students down a complex path to a deeper understanding.
Goal 1.3: Wii Smoothboard

I have purchased the equipment below to replicate an innovation by Johnny Chung Lee where he uses the Wii Remote to create an inexpensive Interactive Whiteboard (http://www.youtube.com/watch?v=5s5EvHHy7eQ). Such a whiteboard would allow more dynamic presentations as the instructor could stand at the screen and select various content to display. This would be especially useful if combined with my attempts to increase the interactivity in PowerPoint. I can envision students running through presentations collaboratively while standing at the screen, rather than hovering around a computer. Also, I can envision that this will improve presentation as I will be standing near the information I am presenting. I could also add interactivity with the Power Point by highlighting materials, circling important concepts, or simply writing on the screen. At this point, I need to continue testing how to maximize the Wii Remote's ability to track the pen. I need to research better methods of placement. I am also trying a different IR pen that may make it easier to write legibly on the screen. Multiple pens can also be used with the system to write multiple colors or highlighters.

At this point I am not convinced that this will be very valuable technology but I will research the pedagogical advantages of white board and then pursue this further if there are worthwhile advantages.
Goal 2.1: Podcasting with Power Point

I purchased an X-box 360 wireless USB microphone to record my lectures using the record function in PowerPoint. I can either record the content in advance of a lecture or while I lecture. An advantage of recording through PowerPoint is that rather than simply recording a lecture in an audio file, PowerPoint will embed the audio in a slide by slide fashion. Thus, if a student only needs to listen to a few slides, they can simply look at those slides and the accompanying audio will be played. Another advantage is that the student can view the slide as the audio is being played.

I also purchased software called Moyea PowerPoint to Video which will convert the PowerPoint to a variety of video formats, including MP4, which can then be played as a video podcast on an IPod.
Goal 2.2: Podcasting with WebCams

I am currently taking Alan Peterka’s KCELT course on podcasting. While Alan is clearly the person to teach the technology, I also feel that it is my job as faculty to explore the pedagogical benefits of the technology. I have been delightfully impressed by the feedback I am getting on my WebCam podcasts. In two weeks, the video has been viewed over 300 times and across the world (who knew Glomerular Filtration Rate was popular in Mongolia). I am very much on the first steps in using this technology but I immediately see the benefits to my students, to students across the state and country, as well as in promotion of Kirkwood. My first podcast was hand-drawn simply to avoid copyright infringement. But, as it turns out, many students have reported that while low-tech, this is a very good way to learn because they can draw along with me. In light of this surprise finding, a major goal of mine is to research the different types of podcasts and their pedagogical benefits, from using Power Point, to webcams of drawings, to streaming my lectures.
I have purchased a program at an educator discount from Adobe entitled Captivate. It appears that it is quite a powerful program in that it is a Adobe Flash based screen recorder. At this point, I have used it as a screen capturing tool to record a narration to review diagrams I create for Anatomy and Physiology. Captivate does much more than simply screen cast, it will create quizzes and interactivity as well. I would like to explore these additional functions in Captivate and perhaps teach a KCELT course on the software.