

## **Technophobes Teaching with Technology**

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Technology has been used in classroom situations for years now. Traditionally, technology has been used by faculty that were early adopters or who liked the technology. These faculty members would handle the implementation of technology and bring it into the classroom by themselves, with only a small amount of outside support. This evolved into faculty members who were comfortable with technology (but not early adopters) using more and more technology in the classroom with increasing outside support from IT staff and other faculty. What is happening now is that faculty members who are not comfortable with technology, or who are even technophobes, are using technology in increasing ways in the classroom.

Traditional technology users were somewhat easy to support. They would often bring their own equipment and software in, and support themselves. On the rare occasion they would need help, the solution usually came quickly. When the next wave of technology users came along, they were a little harder to support. This group would know what technology they wanted to use, but would not always have the right answers or know the correct ways of using the software. The group of users that are not familiar with technology are usually the hardest to support. Using any type of technology may come as a challenge to the people in this group, and therefore, they don't go out of their way to use technology, or will even avoid it (sometimes at all costs!). This group of users can therefore present many unique challenges.

When a faculty member decides to teach using technology, it can be a challenge for them, even if they are a seasoned technology user. Technology does not always work the way it should, due to various technical and end user problems. These problems are annoying enough when there is only one user involved. When these problems occur during a classroom setting, the problems are compounded. How then, does a faculty member who is NOT comfortable with technology, teach using technology?

There are several key ideas that need to be addressed when dealing with techno phobic faculty. Even if the faculty members aren't truly scared of the technology or averse to it, these guidelines should still be followed. The first key idea is to keep the technology as simple as possible. This seems very obvious at first glance, but it should not be overlooked. The second key idea is to provide ample training and practice using the technology. The last key idea is to be sure to provide adequate and timely support, especially at the beginning of this process.

For this paper and presentation, the focus will be on a particular faculty member, Dr. Svetlana Rakic. Svetlana is an Art Professor, who has written several books over various art topics. Svetlana was comfortable with basic email and Internet usage, but did not have a lot of experience with other software and hardware tools. In this case, she realized that slide images were the way

of the past, and wanted to branch out into digital images for her class presentations. She was unhappy with the poor quality of the slide images, and didn't like carrying around huge slide trays for each class. This situation opened the doors to new opportunities for using technology, but also had some problems associated with it.

There were several main problems that had to be overcome: technology, training, support, and content. In this case, technology was at first thought to be one of the bigger problems. Some of the needed technology was already in place, but other issues would need to be addressed. As it turned out, technology was one of the smallest issues.

In the fall of 2001, Franklin College finished construction on the first new academic building on campus since 1927. The building was designed to house the Fine Arts and English departments. Each classroom was outfitted with projection equipment that could be used to show videos, DVDs, computers, and other video sources. Each classroom has one projector, with the exception of the art classroom, which has two LCD projectors mounted in the room. When the digital image project first started, it was before the Fine Arts building was finished. The idea at the time was to go with software that would show two images on the same screen. Satisfactory software could not be found, and the single projector output wasn't big enough to view the art images in detail. Once the art classroom was finished, this particular problem was solved.

With the completion of the art classroom, there were still problems as to what technology would be used. Once again, software for projecting images was evaluated, without finding a good solution. As a last resort, the images were inserted into PowerPoint. Happily enough, this gave a much higher resolution and better picture quality than other programs.

With the software problem fixed, other problems came into focus. Svetlana has a laptop that could be used for one projector, but how do you display images on the second? This problem was further compounded by the fact that there was only one VGA input from the podium. The second input was in the equipment booth at the back of the classroom. Eventually, an older computer was put in the booth, which had PowerPoint installed on it. With the connection of a wireless mouse, Svetlana was now able to project on both LCD projectors, and was able to advance both slide shows from the podium at the front of the classroom. This solution was fairly simple, yet elegant. Svetlana would be able to project side by side comparisons of images for class, which could then be used to show the images in greater detail.

Training was the next issue to be addressed. Svetlana wasn't a true technophobe, since she wasn't truly scared of the technology. However, she didn't feel comfortable using technology, especially when she first taught with it. This was addressed through practice and training before classes started. Svetlana very quickly caught on to the basics. Once the PowerPoint files were opened, moving through them was very similar to using slide projectors, which was familiar to Svetlana. Turning the equipment on in the room and getting the correct output to the correct screen was a small problem at first, but soon became a familiar process for Svetlana.

Support became one of the bigger issues that needed to be addressed. At the beginning of the first semester using the technology, several issues arose. Svetlana would sometimes forget how to turn on the equipment, or would not remember the process to use the technology. She would

often require quick assistance. Luckily, there is a full time technology support person in the building, so support was close at hand. The support given was done in a manner that coincided with traditionally good customer service practices. There is never a “stupid question”, and questions can never be asked too often. Good, friendly, quick, accurate, and timely support was, and is, important.

Other technical issues would occur from time to time, including unreliable VGA connections, and one of the LCD bulbs burning out prematurely. The VGA connection issue was finally resolved by replacing the VGA connection in the floor box with a better connector. Also, both bulbs were replaced simultaneously in the two LCD projectors, to give an even image quality between the two projectors. By correcting these two technical issues, the use of the technology went much more smoothly.

The biggest issue, which is still ongoing, is content. The digital images for these classes came from various sources. At this time, Svetlana has just one of her courses set up to use only digital images. The rest of her classes are in the process of converting over to digital slides. At first, slides were scanned and adjusted through Photoshop to work on the screen. This process is lengthy, and does not always give good quality results, as some of the slides are faded. The files are sometimes supplemented with images found from online sources, but this is an unreliable source, especially since the image quality varies, and the copyright information is often unclear. Acquiring digital images will hopefully be resolved with the usage of ArtSTOR’s online database, which Franklin College is in the process of licensing. With this database, Svetlana and the rest of FC would have access to a digital library of over 300,000 images, which can then be used in classes.

When working with faculty who want to teach with technology, there are several key factors that must be addressed. These factors are important for all people using technology, but are especially important for techno phobic faculty. First, the solution should be simple, familiar if possible, and easy to use. In this case, the controls for the equipment are in one place, on the touch screen installed in the podium. This makes it easier to start the equipment and get set up for class. Moving through the digital slides is essentially the same process that was used for analog slides, so it was familiar territory for Svetlana.

The next key factor is training and practice. In this case study, there were multiple training and practice sessions prior to the first class. This helped Svetlana get more familiar with the equipment, without the added stress of an audience that the class provides. She was able to run through a typical class session, and get adjusted to the new controls.

The third key factors are adequate and timely support. When Svetlana first started using the technology, there were constant problems. These ranged from basic user errors (“I don’t remember how to start the program”, “I can’t find the files”, etc.) to more severe technical difficulties. The VGA connection that was in the floor box was hard to get to and hard to secure. It was poorly designed, and would not allow a solid connection. Often, the connection would not send a signal, so Svetlana would be unable to project half of the slides, until the cable could be re-seated and a good connection made. This problem was fixed by replacing the VGA connection with a better designed input. The other technical issue was that one of the LCD projector bulbs

burned out. This meant that after the bulb was replaced, the output from one projector was much brighter than the second. Manually adjusting the brightness of the bulbs did not fix the issue, so eventually the bulbs were both replaced. Replacing the bulbs were not cheap at \$500 a piece, but now the VGA connection and LCD bulbs both work the way they should. Support was important at first, because Svetlana would become nervous if she wasn't able to get everything working immediately. For the first semester, there was a support person that would schedule time to be available during Svetlana's class times, so if any problem arose, it could be dealt with quickly. For the first semester that Svetlana used the technology, she asked for help almost daily, before each class. As the second semester of using the technology started, she was less reliant on support every day, and would only need help on average of once a week. (The bulb and VGA issues were resolved before the second semester of use.) In the third semester of use by Svetlana, she has rarely asked for assistance. When she does ask for support, it is usually for something outside of the bounds of normal issues, not the regular digital slide projection questions.

At first glance, the reasons for using technology in this situation may not be clear. However, there are usually benefits to using technology in the classroom. In Svetlana's case, she was able to stop carrying around physical slides, and no longer had to worry about selecting slides for each class and putting them into the slide trays. Now, she is able to open up the specific PowerPoint file for each class, and then be up and running. The biggest benefit to using digital slides for Svetlana is the quality of the images. To start off, the digital images are much larger, because an LCD projector projects a much larger image than a slide projector. With the LCD projectors, the images are not only larger, they are brighter, clearer, and you can see each image in more detail. Slides will fade over time, as the materials in the slide start to break down from normal use and storage. With the digital images, the quality never degrades. After a class is over, Svetlana can post the slides on Blackboard so that students can look over them for review. As a result, Svetlana is very happy with using technology, even after running into the problems mentioned before. She has become very proficient with the technology, even after some initial apprehension. Svetlana has grown in her comfort level with technology to the point that when issues arise, she prefers to be the person doing the steps to correct the problem, so she is able to learn and fix the problem the next time it arises. She has gone from a person who would balk about touching anything to do with technology, to a technology user that is proficient with the tools she needs, and it actively looking to improve how she uses the tools.

Svetlana's use of technology has been a great success, and has helped her colleagues recognize that technology can be a helpful tool in the classroom, not a "waste of time" or a "toy" that grabs a student's attention. This in turn has helped other faculty start to branch out into technology use. Many times, a simple solution like a wireless remote mouse for PowerPoint, or a small one-on-one session over using Blackboard helps an individual faculty member realize that they too can use technology. By following the key ideas mentioned earlier, the IT department was able to provide a great way to use technology to enable faculty to better teach by using technology.