A Picture is Worth a Thousand Words

By Joel Andres
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Information Page

Today’s world is surrounded by technology. It aids us in everyday tasks at home and in the workplace. So why not also use it in our classrooms? My name is Joel Andres and as an art teacher, I would like to integrate technology into my classroom of thirty students to further aid their learning experiences. Through the use of technology, I would aid my students’ learning through the use of an interactive whiteboard and a document camera; instantly engage, assess, and evaluate students with an audience response system; and utilize a work center to incorporate real-life tasks that modern art-related careers may offer.
**Narrative Page**

*Aiding in Students’ Learning*

There is a phrase saying that a picture is worth a thousand words. This is especially true in art. Many of the things that are learned are through the use of our eyes. In classrooms with limited space and a large number of students, it may be hard to demonstrate a drawing technique to every single person at the same time. In my art classroom, I would utilize an interactive whiteboard and a document camera to aid in my students learning.

Interactive whiteboards can cost upwards to $5000 but through the use of a projector, computer, and a Wii remote controller, a cheap and effective interactive whiteboard can be achieved. Slideshows through the interactive whiteboard can be used to help aid in delivering information. By providing visuals of actual works of art along with a lecture, students will be able to connect information with a visual. In addition to that, a website can be projected onto the whiteboard. Many people have presented a variety of ways to deliver information in a fun and engaging way. Many of these ways are posted up on the internet. These resources can be utilized and incorporated into a lesson plan.

Another useful tool in the classroom would be the document camera. Classrooms all over the world have started using document cameras such as the Elmo. These pieces of equipment are basically cameras that cost $400. Instead, I intend on using a $100 high quality camera connected to a computer to project video to the class. This would be used not only as a video camera for recording, but as a multifunctional document camera. Using this camera, I would be able to project a live, close-up video feed of a
demonstration. This would be very helpful in teaching students an art technique, especially when there are thirty students trying to see what is happening in the small space in front of a teacher. With a document camera, I would enlarge and project what I am doing onto a screen. It would be adjustable and be able to capture video from any angle. This allows me, for example, to zoom in and emphasize the texture of a sculpture or the fine details in a drawing.

**Instantly Assessing and Evaluating Students**

In any classroom, the best way of gaining knowledge is by being engaged in your learning. Participating in one’s own learning is one way of doing this. With the interactive whiteboard, students would take part in games in between slideshows. A simple matching game would be made for the students to match works of art with their respective artists or an art principle that exhibit. Not only help the whole class learn from these games, but it will also help me assess and determine if the students are actually learning anything.

Although being able to interact with a highly technological tool may engage some students, others may still shy away and not want to participate. The solution for this is the use of an audience response system. Much like voting or taking a poll, the audience response system gives an instantaneous result of what students are thinking. A simple multiple choice question can be incorporated into a presentation and the students can submit their answers anonymously. Only the teacher will know who answered what and this eliminates the embarrassment factor that many students feel when answering in front of their peers. After answers are submitted, the correct answer will be given along with
how much students answered each question. From the students’ point of view, they would be able to correct themselves if they answered incorrectly. From a teacher’s point of view though, it helps point out which students need assistance. By knowing that, they can be discreetly approached and can be given some pointers to assist them. In addition to that, teachers can evaluate themselves. If there is a large discrepancy where a majority of the students answered the question incorrectly, the teacher can infer that something might have gone wrong with the lesson. Overall, the audience response system is a valuable tool to any teacher and would impact my classroom in many positive ways.

**Incorporating Modern Art Career Tasks**

With the development of technology and computers, many things have gone digital. Art is no exception to this. Several art careers now utilize technology as its main tool. Art careers such as graphic designers, photographers, or website designers use a few of these careers. To teach my students how to use a computer in an art setting, I would incorporate a five computer workstation in my class.

After learning several art design principles and techniques off of the computer, they will use them on the computer. Graphic designers in general often use programs such as Adobe Photoshop or Illustrator. These programs are often expensive but free alternatives do the job just as well. By using a free program called GIMP, students can manipulate photos and create images of their own. Throughout the year, they will be asked to design posters that will help promote school events. Not only will this help the students become involved with the community, but it will also give them a feel of what a graphic designer may go through when designing for an advertisement.
In addition to creating posters, students will also design a website. A good website is aesthetically pleasing and students will learn this as they apply color schemes, organize space, and deliver content to a target audience. To accomplish this, students will use the computer to create their web pages through a free program called Nvu (pronounced n-view). Despite being free, the program is powerful enough for an advanced user to hand-code a website yet simple enough that immerging web designers (such as my students) can easily create their own site.

As students work through these programs, I will be able to guide them in the classroom. A small center of five computers will be set up to incorporate this. Students will interchangeably work on their digital artworks as I help each of them. Since these programs are free, students that are familiar with how to do it already will be able to work at home at their own pace. In addition to that, students that want to venture out on their own in the digital art world can do so with these programs.
**Technology Acquisition**

### Hardware

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**Total Cost = $4934.14**

**Hardware Description**

IBM ThinkCentre / Widescreen LCD Monitor /--------------------------------------- $1350

Using these items, there will be a five-computer workstation at the back of the classroom. Through this workstation, students will apply what they learned to design posters, create websites, and manipulate photos.
Audience Response System --------------------------------------------------------------- $1995

See “Narrative Page - Instantly Assessing and Evaluating Students”

Digital Camcorder ------------------------------------------------------------------------ $97.66

This digital camcorder will be used as a cheaper document camera to zoom-in and show the students high detailed demonstrations at a larger viewing size. It will provide a 360-degree view of any object that may need to be displayed to help illustrate any concepts that I will be going over.

InFocus Projector / HP Laptop / Wii Remote Controller / Infrared Pen ----------------------------- $1389.04

These are the items required for the interactive whiteboard. All of these items are portable and easy carry, making it perfect for moving around. Because of this, the interactive whiteboard can be brought to other classrooms if needed. The items are multifunctional, meaning that they can be used for other things other than being a part of the interactive whiteboard.

NOTE: Although there are cheaper laptops out in the market, this laptop ($939.06) was chosen for its hardware specifications. While
using the interactive whiteboard, multiple applications will be running. Graphics programs (which I will be using to demonstrate to the class) put the computer through hard work. This laptop will be sufficient to run those programs. In addition to that, it will be able to run the video from the high-resolution document camera (which is a camcorder) and save it for further reference.

**Linksys Wireless Router**

![Linksys Wireless Router](image)

This router will be used to network the five computers used in the workstation so that they can interact with each other and with the internet. Students will often access the internet to gather information and utilize several resources. In addition to that, I will be able to access the internet on the laptop being used for the interactive whiteboard. This allows me to display websites that have valuable information for the students.

**Software Description**

**Annotate Pro**

![Annotate Pro](image)

With the use of the interactive whiteboard, Annotate Pro allows the user to highlight and create marks straight onto the screen of the computer. As a teacher, this allows me to emphasize certain points on a piece of text (such as an article, a website, or a text
document) or write notes. It also allows for the annotations to be saved. The saved annotations can be used by not only me but also students who were absent that day.

ArtRage2................................................................................................................. $19.95

ArtRage2 is a drawing/painting program that simulates the feel of real painting and drawing. Coupled with the interactive whiteboard, students can experience this using their hands in a natural movement rather than with a mouse. In addition to that, it provides a variety of tools at their fingertips (paint, pencil, brushes, etc.) without all of the preparation, mess, and cleanup of traditional methods.

GIMP ..........................................................................................................................$0.00

GIMP is a free photo-manipulation program along the lines of the commercially known Adobe Photoshop (which runs upwards to $300 at the cheapest). Although it isn’t as powerful as its pricey counterpart, GIMP is packed with many similar features. Nowadays, art extends to the digital world and GIMP allows the students to be a part of that. Students will use GIMP to edit pictures, design posters, and create images for a website.

Nvu.............................................................................................................................$0.00

Nvu is a free HTML editor used to create websites. In addition to using GIMP, students will use Nvu to design a website. They will apply art principles (such as symmetry, color schemes, etc.) while they create it.
Smoothboard----------------------------------------------------------$0.00

Smoothboard is a key program for getting the Wii remote controller and the screen projector to work as an interactive whiteboard. It also allows the user to use an infrared pen as a mouse. With this, students can actively engage in learning through games, interactive presentations, etc.

Web Browser (Firefox, Opera, Internet Explorer)------------------------$0.00

When creating web pages, the designer must be aware of cross-browser capability. The web page should be able to consistently look the same no matter which web browser his/her audience is using. Students will be aware of this and will use these browsers to ensure that their content is consistent. In addition to that, a web browser will be used when accessing websites to display to the students on the projector.
The classroom layout that I chose helps utilize the technology that I plan on using along with creating a positive learning environment. Students will be placed in groups to aid in sharing supplies and materials. In addition to that, group work is easily assigned since the groups are already set up. For individual assignments, the grouping allows students to learn from each other. As I said earlier, art is usually learned visually. Students can ask their neighbors for help and can easily demonstrate it for them.

The classroom also makes effective use of the technology. The Wiimote controller and projector will be mounted on the ceiling to ensure that it does not block
anyone’s view. The five computers will be a part of the workstation in the back of the room with the front of the monitors facing the front of the room. This allows me to see what they are doing and also removes distractions from their point-of-view. The laptop and the audience response system will be stored by the teacher’s desk for quick access when it is needed.

While drawing, I will be using a drawing/artist’s bench (see picture below). Without a document camera, all of the students would be standing behind me trying to see exactly what I am drawing. My back would be facing them as I try to demonstrate to them. This makes it less personal (since there is little/no eye contact and I would be talking to the drawing instead of to the students) and harder to keep an eye on the class. The document camera eliminates this though. By propping it up over or to the side of me, I could give the students an enlarged view of my actions. With the bench at a sideways position, I will be able to glance at my students with a quick turn to the side (as opposed to turning the whole body).
Evaluation

By including these tools into the classroom, I can assure that they will make a difference in my students’ academics and behavior. To help validate the use of this technology, I will conduct course surveys. Not only will I gain valuable insight about the courses that I teach, but also how they feel about the technology being used in the classroom. These surveys will serve as testimonials straight from the source. Utilizing these cheap alternatives to expensive tools will make each of them worth every cent. Not only are they useful, but also multifunctional. Because of this, there is so much to gain and so little to lose.