Justification Paper for Images

EdTech 506: Final Project

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Project Website

User Assumptions

This unit was designed as a professional development module for teachers who need an introduction/review to using a SMART Board in their classroom. Learners should have a basic understanding of computers including: how to operate a mouse, navigating the internet, and how to open and operate basic computer programs. In order to complete all of the activities in the unit, it will be helpful if the learners are very comfortable with navigating the Internet and "toggling" between different programs. There are no prerequisites skills regarding the Smart Board since this is designed to be an introduction to using the Smart Board in the classroom.

Design Process

 "Design is inherently a messy process. It's ironic that the end result is about creating order. – Tom Mecklen" ((Lohr, p.271). This quote describes the design process of this project. The design process was indeed a bit messy, but in the end, it allowed for the creation of a webpage which included the necessary content put together in a consistent and clear manner. The process that was used to design this project was the ACE Model. This model includes three components: analyze, create, and evaluate (Lohr, 2008, p.73). During the "analyze" phase, instructional goals were identified for the unit and content was gathered, written and organized. Another important component of the "analyze" phase was spending time identifying the learners and determining the learners' needs. According to Smith &Ragan (2005),   it is critical to identify the target audience for a unit of instruction (p. 58). An overall unit plan was put together through the analyze phase to begin to put together a structure for the project. The "create" phase included sketching out the visual idea for the overall project, researching different templates that worked for the webpage, as well as creating images that would be included in the project. Lastly, the "evaluation" phase included evaluating the website and making changes based on the feedback that was received on the draft website.

According to Frazier & Bailey (2004), one of the most important tasks for a technology coordinator is creation of professional development (p.44). Looking at the needs of the teachers in the district, it was determined that designing a helpful resource for teachers would be a very meaningful and applicable project.   This unit was designed to assist teachers with mastering skills and concepts about using the SMART Board in their classroom. The design of an easy to

use/understand webpage was a primary goal. The original idea was to make a website that could be used as a self-paced tutorial for using the SMART Board in the classroom. The unit into four lessons; "Basics", "Smart Notebook Intro", "Smart Notebook…more!", and "Classroom Applications". Each lesson covered major objectives that are clearly listed on the website. Each lesson is laid out in a similar fashion: general information, objectives, Tutorials/Readings/Hands-On Time, and an evaluation section. The evaluation of each lesson was in the form of a self-assessment. The assessments are formative and help to indentify that "goals are being accomplished and students are engaged in their learning" (Brooks-Young, 2007, p. 64).

 Having the same layout of each page will hopefully be helpful to the learners as they worked through the page. According to Williams and Tolllet (2006), "each page of a website should look like it belongs to the same website"(p. 122). The use of the same icons for "Watch, Read, and Hand-On" were used to keep uniformity for the learners so they could quickly indentify if they were being asked to watch, read or complete the activities.

A Weebly template that included a clear navigation system was chosen for this project. According to Williams and Tolllet (2006), a good navigation system allows the users to easily get from page to page (p.145).

The idea of "chunking" was used throughout the website to provide a structure for the webpage. White space was one way that "chunks of data" were formed. According to Lohr (2008), "White space can direct the eye to what is important" (p. 111). The use of titles as well as the three activity icons on each page was used to chunk the information for the learner.

The project was designed so that a teacher could complete the activities individually, with a partner, or as a group and learn the basics of using the SMART Board. In addition, the unit was designed so teachers would be able to gather and share ideas for how they can use the SMART Board in their classrooms.

Justification of the Graphics

A total of 13 graphics were designed to be incorporated into the unit. Each graphic was designed with specific purposes and incorporated many different design concepts. Each graphic was designed in Fireworks and each was saved as a .jpg file. According to Castro (2007), JPEG and GIF are the most common and widely used formats.

Welcome Image (Home Page)

The "Welcome" image was designed to invite the learners into the website. The color orange was chosen because it is often associated with "friendliness" (Lohr,2008, p.270). In order for the image to stand out, the positing of the text was adjusted so that it was vertical instead of a horizontal. In addition, the use of a rectangle shape was used to focus the attention of the learner on the image (Lohr, 2008, p.250).

Chalkboard Replacement Image (all pages)

This image was designed to provide the teachers with a visual of the idea that the SMART Board is a replacement for the old chalkboards. Everything a teacher can do on the chalkboard, can be done (and so much more!) with the SMART Board. Because this concept was central to the whole project, the decision was made to place this image as the header on each page. When designing this image, specific images of a chalkboard and a SMART Board were examined. It was difficult to find images that were in the public domain but clipart images were found on http://www.clker.com/. The use of an arrow was included to show direction. (Lohr, 2008, p.250).

Three Activity Icons- Watch, Read and Write (3 separate images found on all but Home Page)

These three images were designed to help the learner identify what activity they were being asked to complete. Using these in each of the lessons helped the unit have a consistent layout and feel.   These images were designed with CARP in mind. According to Lohr, the principles of CARP (contrast, alignment, repetition, and proximity) play a critical role in instructional images (Lohr, p.194). In each of the images, color was used to create contrast. Alignment of the text was kept consistent by placing by centering the text in the image. Repetition was created between images by utilizing the same shape, text, and similar images. In terms of proximity, each icon was designed so that it would be associated with the text directly beside it. In the "watch" icon, the image of the video camera is facing towards the text in order to direct the learners eye towards the text (Lohr, 2008, p.148).

Components of the Classroom Image (Basics Page)

This image describes a basic concept of the three parts that are needed to have a SMART Board ready to use in the classroom. The three needed components: computer, projector, and SMART Board are all necessary components of a SMART Board system. The combination of simple shapes and simple text helped create an image that provides the overall concept of the visual. Rectangles were used in this image to focus the attention of the user to the information provided inside the rectangle (Lohr, p. 250). A triangle was used in order to "organize and unify" the concepts that I was including in the image (Lohr, p.250). The colors of a chalkboard were purposefully chosen to tie in the idea that the Smart Board is a replacement of an old chalkboard. The three points of the triangle stood for each of the essential parts-without all three components, the interactive whiteboard set-up does not work in a classroom.

A sans seriff font, "Chalkboard" was used for the text in this image. According to Lohr (2008), a sans seriff text is "more legible for computer instruction"(p.221). A bold font was used to provide additional contrast to the background. Kerning was also used in this image "to improve the appearance of a heading" (Lohr, p. 237).

<u>"Your Finger is the Mouse" Image(Basics Page)</u>

This image displays the most important and crucial concept that the learners needs to master about the SMART Board. This image was created so that even teachers who didn't know what a SMART Board was able to understand that the SMART Board is really just a touch sensitive monitor. For the text in this image, a red for the equal sign because warm colors tend to make elements in an image noticeable (Lohr, 2008, p. 267). The use of red put emphasis on the equality being depicted in the image. Green was chosen as the text color under the pictures to contrast with red equal sign. According to Williams &Tollett (2006), the use of color is important when working with contrast (p. 168). In addition, green and red are complementary colors. The image includes a black and white depiction of a finger and a color photo of mice to represent a "computer mouse". A combination of the black and white depiction of the finger and a picture of the mouse was used to create interest in the image. According to Lohr (2008), it is not always necessary to use color but learners prefer color (p.266). Drop shadowing to both the titles and the pictures as attempt to add depth. According to Lohr (2008), shadowing helps information stand out (p.270). In addition, the border around the whole image is textured. Texture "adds depth and makes an image stand out (p. 272).

A good amount of white space to create a simple image where the learner was concentrated on the pictures and text. According to Lohr (2008), many learners prefer lots of whitespace because it makes them feel "less overwhelmed" with the information presented (p.274). The concept of symmetry was used with the pictures and the text to show that "all the elements were equal in the equation (Lohr, 2008, p. 275). An asymmetrical element was added to "create more visual interest" (Lohr, 2008, p. 275) by placing the title more left of center.

<u>SMART Notebook Overview Image(Smart Notebook Basics Page)</u>

This image was designed to identify the main parts of the SMART Notebook Software main screen. One function of using color is to "label information" ((Lohr, 2008, p.265). In this image different colored rectangles were used to label each of the parts of the SMART Notebook Page. Different colors were used to show the learner that they each label was pointing to something different. The repetitious use of the rectangle shape was to add consistency to the image. The use of white text on the colored background provided contrast in the image. The image was designed with the three c's in mind: concentrated, concise, and concrete (Lohr, 2008, p.104)..The image emphasizes the parts of SMART Notebook, focuses only on the labels of each part, and concrete by including the screen shot of the program.

<u>SMART Notebook Tool Bars Image(Smart Notebook Basics Page)</u>

This image was designed to give the learner an overview of the important tool bars in SMART Notebook. The CARP Principles of contrast, alignment and proximity were used to design this image. According to Lohr (2008), contrast establishes differences in an image. For this image, contrast was created by using colored rectangles with white text to label each icon. In addition, a

thinner kind of text as the title and a "blockier" text was used in the labels. In addition, the color red was chosen as the line color to provide additional contrast in the image. After some feedback, color was added the rectangles. In the initial design, they were all black. Adding color to the rectangles helped group the different tools so that the learner was not overwhelmed by all 12 different icons at one time. Instead with the addition of color, the learner could group them four a time. In terms of alignment, Lohr (2008) suggests aligning all of the text left. In this image, the text and image looked better when everything was centered. According to Williams &Tollett (2006), it is satisfactory to use other alignments but it is best to use the same alignment throughout a whole webpage. Repetition "creates a sense of unity" and "implies relationships"(Lohr, 2008, p. 203). In this image, repetition was designed by alternating between placing the label above the icon and then below the icon. Alternating each time provided repetition in the image and also allowed for enough room for all the information. The last principle of CARP, proximity, was very important in this image because the user needs to associate the label with the correct icon. According to Lohr (2008), elements in an image need to be close together if they are related. There was attempt to keep everything lined up in the image and, at the same time, keeping the label close to the icon it was describing.

Objects in SMART Notebook Image(Smart Notebooks…More! Page)

This image was designed to show the learner that anything (a shape, line, picture, word, etc.) is considered an "object in SMART Notebook. Examples of different kinds of objects were included in the image. A consistent use of the color blue for the text was used so that the learner would understand the concept that they were all similar. The use of the screenshot of SMART Notebook for the background was used to make a connection for the learners that objects are within a SMART Notebook page.

Capture Everything with the Camera Image (Smart Notebooks…More! Page)

This image was designed to teach the learners about the function of the camera tool. The use of stars and arrows were purposely chosen. Arrows and stars can be used in order to "provide direction, imply motion, and unify" (Lohr, p.250). The use of the color orange for the text was done because the color orange is often associated with "friendliness", (Lohr, p.270) encouraging the learners to give the camera tool a try. In addition, the color orange is complementary to the color blue which was used for the outline color of the stars. According to Lohr (2008), you should use complementary colors when you would like to create contrast within in image.

Sample Classroom Layout Image(Classroom Application Page)

This graphic is a sample classroom layout for a classroom that includes a SMART Board. Using simple shapes, the image portrays a very common layout for teachers. The Gestalt principle was used to design this image by creating the visual of an entire classroom by depicting different parts that could make up a classroom. Using the five Gestalt principles (closure, contiguity, similarity, proximity, and previous experience), this image was designed to give the learner a

complete picture of just one example of what a classroom with a SMART Board may look like. Using the generative strategy, the image challenges learners to think about their own classrooms and adjust the image in their own mind to apply the concept of the placement of the SMART Board in their own classroom.

As Lohr (2008) said, "The mind will seek a direction to follow…."(p.162). By placing the blue arrows towards the SMART Board/front of the room the plan was that the users eyes would follow the lines created by the arrows. Adding the arrows in the front of the desks was an adjustment to the orginal image and worked well to provide the imagery needed. According to Williams &Tollett (2006), when designing there "must be a focal point". The focal point in this image is the Smart Board and using contiguity helps point out that focal point. The arrows were used to help establish a "sense of order and hierarchy" (p. 162). In addition, the use of lines that connect the SMART Board, projector and computer were added to show the connection between the three components of the system.

Based on the principle of similarity, users tend to "group items based on likeness" (Lohr, 2008,p. 162). In this image, the green, textured rectangles were used for each component that was technology-related. By making each of those images similar, the hope it that the user can clearly see that the items are all related. According to users will group parts of an image based on how close they are to each other (Lohr, 2008, p. 167). In this image, proximity is used to group the student desks to signify students being placed in groups in the classroom.

Because of the users of this image are all teachers, using previous experience was an important part to designing this image. Lohr (2008) says "the context of the image will be influenced by what the users already knows". Teachers all have a general idea of a set-up of a classroom and most likely they would be thinking about their image of their own classroom. The student desks remained unlabeled knowing that the teachers would already know what the small rectangles stood for in the image.

"Wordle" Image (Classroom Applications Page)

This image was designed using Wordle (www.wordle.net) to create a colorful word cloud. It was added it to the webpage as a sample of a word cloud. Using Wordle, a user is able to choose a font, background and colors as well as choose a randomly choose layout. The randomized feature was used and the image found on the webpage was chosen because the dark background and light, bright colors created great contrast.

References

Brooks-Young, S. (2007). *Digital age literacy for teacher.* Eugene Oregon: ISTE Publications.

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Smith, P. L., & Ragan, T. J. (2005). Instructional Design (3rd ed.), Hoboken, NJ: John Wiley & Sons, Inc.

Williams, R., &.Tollett, J. (2006). *The non-designer's web book* (3rd ed.). Berkeley, California: Peachpit Press.

Sources for Images

Chalkboard Image

http://www.clker.com/clipart-blackboard-2.html

Smart Board Image

http://www.clker.com/clipart-smartboard.html

Finger Image

http://3.bp.blogspot.com/_iJP_...nicule.png

Mouse Image

http://upload.wikimedia.org/wi...Wmice1.jpg