Final Project Justification

Introduction

For my final project, I put together a website to be used with a novel study unit for Art Spiegleman's *Maus*. This book tells the story of how the author's parents survived the Holocaust as Polish Jews. However, it is unique among Holocaust survival books because it is told entirely as an allegory in a graphic novel format. My website is therefore meant to take students through four important lessons that help students create historical background, learn about and analyze literary conflict, symbolism, and visual metaphors, and write an essay applying much of this knowledge. The purpose of this paper is to describe some of the many visual elements of this website and explain the design process that went into building it.

User Description and Assumptions

The users for this unit of instruction and website are the middle school students enrolled in the Middle School Program at Happy Kids in Taipei, Taiwan. The students' grade levels range from 7th to 9th. Their reading levels vary, but average around that of a 7th grader in the US. All students enrolled in the Middle School Program have been students at Happy Kids for at least six years. While they are all native Taiwanese whose first language is Mandarin Chinese, because of their time at the school studying English in an all-English environment, they are comfortable and accustomed to using English in a variety of settings including rigorous academic ones. This unit assumes all students have the necessary language skills to read and understand the text on the website. Furthermore, the unit assumes students are familiar with using Google Apps for Education and the processes of managing and sharing files because of their work previously in the school year using Google Apps. Finally, while this unit does not assume the students know all about WWII and the Holocaust, it does assume some basic knowledge of both events albeit in Chinese.

Description of Key Visuals

Website header. I created this image to serve as a custom header/logo for this instructional website. According to Lohr in *Creating Graphics for Learning and Performance: Lessons in Visual Literacy* color, depth, and space are used to help with several aspects of design, namely focusing attention, providing direction, and helping the learner see the big picture (2008). When designing this image, I wanted to make sure that I incorporated all three of these tools. White space is

especially important because it can divide text and graphics, help create symmetry, and focus the eye on essential elements (Lohr, 2008). I paid especially close attention to the type of white space and trapped space I was putting in and why. This header incorporates both texture, by using rough edges and, dimension, by using shadows and layering to heighten the viewer's interest. My attention to the use of space in this image was paramount. I intentionally created trapped space on the left to work as a visual metaphor. I also tried for a slightly off-balanced look with competing symmetrical and non-symmetrical elements in the image. Overall, I feel the harmony between the elements of this image creates a sense of ominous calm that is visually appealing and does well bringing the whole site together.

Unit of instruction outline. This image was designed to be the home page of my unit of instruction website. It maps all of the content on the website. A user has only to click on the box representing the content she wishes to learn and be taken directly to that page. There are many elements at work in this image that make it effective. It has a "grungy" look, both in text and color, that makes it visually appealing by adding texture (Lohr, 2008). It relies heavily on hierarchal and shape cues to get the reader to maneuver easily through the information. The rectangle serves to unify the entire image while the smaller shapes are organized in order clockwise to make the progression through the unit easy to follow. The use of color is also important to this image. Macabre colors abound this website in general because of the dark theme of the content. It was only fitting that they were readily displayed here on the home page.

Tables and charts. This website includes two tables and two charts that present data on the number of deaths suffered by select countries during WWII and the Holocaust. The purpose of these images is to help students quickly grasp the disparity in losses between countries and which parts of the world suffered most during the war. Tables and charts are perfect for making comparisons that are hierarchal in nature (Lohr, 2008). To ensure that the tables were easy for my students to read and interpret, I made sure I adhered to Lohr's design suggestions for tables. First, I wanted to follow's Lohr's principle of making the focus be on the data not the container. I made both of my tables simple-looking, only using shading to highlight rows to make the comparisons easier. Lohr also suggests that words be listed before numbers on a table and using proximity to make the data easier to understand. The two charts were created with Lohr's design principles in mind. I made sure I had no "chart junk", or extraneous information or elements on the chart. I used only bar charts, as Lohr mentions that these are best for comparing across categories. I incorporated exact numbers by making the chart interactive through a Google Drive script. Hovering over the

bars produces the exact number for each. I also added subtle, but visible gridlines to help with the exactness of the data. The focus of my charts is clearly on the data and not the container, as Lohr advocates (2008).

***Maus* map.** This image was designed to be merely supplemental information for students reading *Maus*. Only a question or two from the unit of instruction actually utilizes this image. However, it is important to the overall website because it aids the main objective of Lesson 1, which is to build background and historical context for students reading the novel. This map was created with a focus on color. Color plays an important role as labels on maps. I used mostly "cool" colors so they didn't advance too much and dominate the map. I wanted to reserve the "warm" colors for important labels like the death camps and in the legend because those colors, according to Lohr, advance in an image (2008). Finally, contrast was important to make sure the map and its pieces were legible. I use white text on darker colors and darker text on light backgrounds throughout the map so they can be read easily. I also adhere to classic color associations so as not to confuse my viewers: blue for water, grey for neutral countries, and red for danger or death.

Four types of literary conflict image. This image was designed to help teach students about the four main types of conflict often found in literature. These four are "Man vs. Man", "Man vs. Nature", "Man vs. Society", and "Man vs. Himself". During my unit, students are required to learn these four types of conflict, find examples of each in the book *Maus.* I arrived at this design by thinking about how I could make an image that taught the four types of conflict in a simple, one-look way and could work well on either a handout, a presentation, or the Web. I also paid close attention to the design actions of contrast, alignment, repetition, and proximity. Contrast is created with the black and white colors and size differences between the texts. Alignment and proximity help to separate the many elements into five chunks of information, decreasing the cognitive load for the learner and making it easier to take in and remember (Paas et al., 2003). Repetition should be used to help bring a sense of unity or harmony to the design (Lohr, 2008). I feel I achieved this well by using elements of similar design and color throughout the image.

Visual metaphors in Maus. This image is meant to help students see and understand some of the many visual metaphors found in *Maus*. In *Maus*, Spielgelman uses the heads of different animals to represent different groups of people during WWII (cats=Germans, mice=Jews, pigs=Poles, dogs=Americans, etc.) This representation is meant to be a play on the stereotypes of the time for those groups. During my unit, students will be required to analyze these metaphors, connect them to their historical significance, and then create their

own visual metaphors for the Pacific Theater of WWII. Lohr writes that instructional images should be concentrated, concise, and concrete (2008). I wanted to adhere to this principle as much as possible with this image. To do this made sure to limit the amount of text used, reduce the image to its most basic by removing extraneous elements, and using elements directly from the text to help students better visualize the metaphors they encounter in the book.

Pictowords. Pictowords are a visual representation of the meaning of a word. They are a type of representative visual that, in my experience, are excellent tools for helping students to learn new vocabulary words. During my unit of instruction, students will have a list of vocabulary words to learn. They will be assigned to turn four into pictowords. These two found on the website are meant to be examples to show students what effective pictowords look like. The "power" pictoword uses black letter typeface for this image, I communicate a sense of importance and authority in the words. Lohr writes that black letter typefaces "are effective in creating […] a timeless look or formality" (2008). The large capital "P" in this image is the primary focus of the word. It is set in a gothic black letter typeface to look large and powerful, as if its authority cannot be questioned. The remaining four letters are laid out in an arch around this huge letter almost as if they are orbiting around it awaiting orders. The "survivor" image uses what are known as "grunge" typefaces to illustrate the violent end met by many. Lohr writes that decorative grunge typefaces, "can be used quite effectively in small amounts to create a mood or act in part as a metaphor for a topic" (2008). These ragged and damaged typefaces were perfect for building the metaphor of a Holocaust survivor. The letters are also arranged in a special way to show a single letter standing upright among a waste of toppled, damaged letters. This is consistent with Lohr's comments on organization, "organizational cues show relationships or provide direction" (2008).

Essay map. I designed this image to help remind students of the main parts of a standard five paragraph essay. The image is intended to help students begin the planning stages of writing their final essay and serve as a guide throughout the essay writing process. The focus of this image is on the use of shape. This image uses two main shapes to communicate the structure of information and flow of ideas when writing an essay. Lohr writes that simple shapes like rectangles work well to contain information and focus attention (2008). Triangles and arrows are used to imply motion and direction. Overall, the image's main goal to help students quickly identify the locations of the different parts of an essay and see clearly how their ideas move from the beginning of the essay to the end. Text and another image accompany this on the website to help explain the different terms and provide examples of each.

Design Process

At Happy Kids we run Google Apps for Education, and I have built and operate several websites, including our school's main website, using Google Sites. Having our websites hosted on Google Sites has many advantages. It allows for manageable collaboration and it works seamlessly with other Google Apps like Drive. For these reasons, and my familiarity with the Google Sites platform, I choose to use it to build my final project. Because of this choice, my design was somewhat limited by the tools available to me through Sites. Nonetheless, I feel I was able to create a visually appealing website that is easy to navigate and successfully delivers my unit of instruction.

I gave serious consideration to the colors and visual effect of my website. In the end I decided to use colors with strong psychological associations. Certain colors can evoke emotional responses (Horton, 1994). I wanted users of my website to know immediately the nature and theme of the content of the website. While *Maus* has a happy ending, it is a tragic tale. I strongly felt the colors should help set this mood. Therefore, I used predominantly darker colors throughout the design. The overall effect, in my opinion, is a haunting one accented by the header image.

I took into account other effects to make sure the site was visually appealing and effective. Proximity and contrast were two design actions that I tried hard to incorporate throughout the website. Students learn better when words and the pictures that go with them are close to each rather (Chandler & Sweller, 1991). As I designed each page, I wanted to make sure that the images I used were put either next to or under the corresponding text to make sure the associations were clear to the viewers. Research shows that headings are effective in creating hierarchy in content which helps students learn better (Mautone & Mayer, 2001). Mindful of this, I was careful to use section headings throughout my design to ensure that chunks of information was easily selected and retained.

I took navigation very seriously when designing my site. I wanted to make sure that any user could tell where and when they should navigate to which page no matter where they were in the unit or whether they had received other instructions or not. Navigation is incredibly important to any website design. Williams and Tollett write that repetition and consistency of the navigation elements from page to page are important because a visitor can quickly learn the navigation system and feel lost the deeper they go into the site (2006). To achieve this effect, I used a horizontal navigation bar in two places: one just under the header at the top. I put another in the footer. These bars contain links to the main lesson pages while the top navigation bar also has dropdown menus that can take users to each page of the site. The organization and hierarchy can clearly be seen in the navigation bar's layout. All pages are linked to in the order they are to be viewed from left to right and top to bottom.

I put a large amount of time and thought in to the design of the actual lesson content. I will be teaching this unit next fall so I had a drive to make sure it was an effective unit of instruction. I also wanted this resource to be as versatile as possible. I wanted the website to stand alone as a learning resource. I wanted it to be self-contained, so the four lessons featured could be learned and completed without ever setting foot in our school. However, knowing that I will have class time with students to use this website, I wanted it to also work well to supplement any instruction in the classroom. The unit website hosts four lessons: A lesson creating historical background for the novel, a lesson on literary conflict, a lesson on visual metaphors and symbolism, and a lesson on essay writing. When building these lessons for the web, I had to decide whether to design more supplantive or generative instruction. Using the advice from Smith and Ragan, I opted for more generative strategies. Since the instruction occurs online with a wide range of learners in a context that has no universal goals for students, generative lessons seemed ideal, therefore most of the assignments have generative learning strategies in mind (2005). The presence of a variety of learning tasks, a wealth of information, and a well-designed, easy to navigate website seems to show this will be an effective unit of instruction.

References

Chandler, P., & Sweller, J. (1991). Cognitive load theory and the format of instruction. *Cognition and Instruction, 8,* 293-392.

Horton, W. (1991). Overcoming chromophobia: A guide to the confident and appropriate use of color. *IEEE Transactions on Professional Communications, 34(3),* 160-171.

Lohr, L. L. (2008). *Creating Graphics for Learning and Performance: Lessons in Visual Literacy.* Upple Saddle River: Pearson Education.

Mautone, P. D., & Mayer, R. E. (2001). Signaling as a cognitive guide in multimedia leanring. *Journal of Educational Psychology, 93(2),* 377-389.

Paas, F., Renkl, A., & Sweller, J. (2003). Cognitive load theory and instructional design: Recent developments. *Educational Psychologist*, 38(1), 1-4.

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: an easy guide to creating, designing, and posting your own website, 3rd Ed..* Berkley, CA: Peach Pit Press.