**Bringing Digital Literacy into the Classroom: New Ways of Teaching with Images**

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<th>The Digital World of Art History 2013: From Theory to Practice June 26, 2013</th>
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**Bringing Digital Literacy into the Classroom: New Ways of Teaching with Images**

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<th>The Center for Educational Resources (CER) is a teaching and learning center serving the schools of Arts and Sciences and Engineering at Johns Hopkins University.</th>
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<td>As this Wordle indicates, our staff help faculty and graduate students improve their teaching. We offer one-on-one pedagogical and technology consulting as well as workshops for faculty and graduate students, training and support for Blackboard - our learning management system, training for teaching assistants, grant writing collaboration, and course resource development through CER managed grants. These grant-funded course development opportunities have produced some exciting collaborations with faculty as well as stimulating resources for facilitating student learning.</td>
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<td>Hopkins has traditionally has been renowned for excellence in what we call STEM disciplines (that is, science,</td>
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technology, engineering, and mathematics) and our staff work on many grant-funded projects to improve STEM teaching. But the CER has sought also to fund projects that advance pedagogy in the humanities.

Humanities disciplines have long been recognized for their role in providing a foundation for understanding global culture, exploring human experience past and present, investigating ethical questions, and thinking critically and creatively. These studies require writing and discussion skills that foster students’ abilities to pose questions, research effectively, synthesize information, and defend their statements.

This expertise is critical for success in the 21st century professions, which also call for the practical application of digital literacy skills – commonly defined as having the ability to locate, organize, understand, evaluate, and analyze information using digital technology.

With these considerations in mind, the CER has worked with faculty from the humanities on curriculum development projects that broaden student access to 21st century careers specifically to facilitate the acquisition and practical application of digital literacy skills within their course work.
Three Case Studies
Using the Map Tool for studying museums and society
Using Omeka for creating student exhibitions
Using the Map Tool to examine the culture of breast cancer

I am going to present three case studies representing projects where we have worked with humanities faculty to embed in their course curricula digital literacy skills, and especially, visual literacy skills, meaning the ability to interpret, negotiate, and make meaning from information presented in the form of images. As you will see, teaching with images isn’t just for art historians any more.

Two of the projects made use of a CER developed multi-media authoring application we call the Interactive Map Tool; the third used Omeka, web-publishing platform created at George Mason University.

While I’d like to show you these applications “live,” time and the high potential for technical difficulties caused me to opt for screen shots instead.

The CER initially developed this web-based multimedia authoring tool to support “digital field assignments” in undergraduate courses, first in biology, and then in the social sciences. It allows the creation of a hierarchical structure of web pages. These pages can include images, video and audio files, and text.
The Interactive Map Tool is loosely based on a map metaphor, but isn’t bound to the use of actual maps. Instead, image mapping uses a hierarchical structure of informational pages to organize data. In the illustration here, each square represents a web page in the hierarchical structure.

For example, let’s say I want to create a site to explore historic houses in my Baltimore neighborhood, Charles Village. I can create what we call a hot spot at any point on any web page. Hot spots provide visual and physical links to other pages.

On this webpage I’ll create a hot spot, on the image of the house.

I can then link that hot spot...
...to another page, with a floor plan of the house.

I can make hot spots on the new image and provide links to additional images, with more detailed information about the object or objects displayed such as details, related materials, or geographic data.

A hot spot can provide a link to audio, video or image files.

Historic Houses of Charles Village

The sites created in the Interactive Map Tool allow students to understand the connections between concepts and spatial context in a unique and effective way.

Beyond the ability to create the hierarchical linking shown here, the Map Tool allows for easy uploading of multi-media materials by the instructor or the students. Explanatory text can be added to a page or to multimedia files. An instructor can create an interactive map site for students to explore, or assign students projects where they create their own sites. Assessment functionality allows an instructor to evaluate student analysis of content within the site whether faculty or student generated. Students can work individually or collaboratively in groups within the application, and also view and compare the content their peers have created.
Elizabeth Rodini is a teaching professor in the Department of the History of Art and director of Museums and Society, an interdisciplinary program that introduces undergraduates to the institutions that preserve, interpret, and present our material heritage. Her challenge was to figure out how to better teach an introductory-level course that provides an overview of 500 years of museum history with political, social, and cultural implications.

The placement of objects in a museum suggests meaning that can be difficult to convey. A painting in all of its complexity can be shown in a slide with its meaning relatively uninhibited, but how do you convey the reasons for its installation in a particular museum, its relationship to the other items with which it shares exhibit space, or the changing nature of its importance over time?

The solution was to use the Interactive Map Tool to create a site Rodini calls Mapping Museums. She developed an initial ten case studies to illustrate specific issues associated with the historical development of selected museums. Through a series of pages that include images, floor plans, and objects, each museum’s map illustrates the spatial layout of objects, how they are presented in relationship to one another, and the impact of their arrangement on viewers. Exploring the spatial dimensions of a museum facilitates understanding the relationship of the space and how objects are presented as well as the societal interests of the time.

To demonstrate let’s visit the American Museum of Natural History in New York and see how one exhibit area has changed over the years.
Here you can see the hot spots on the side of the image of the front of the museum corresponding to the floors. The list you see on the left side provides a text version of the hierarchical structure of the site and acts an additional means of navigation as you can jump directly to specific pages. There is also explanatory text and a link to a bibliography.

If we select the hotspot for the first floor...

... we are taken to a floor plan. A slider allows us to zoom in.

Again we see the text box with added information. There is also a button that allows us to see labels on the hotspots. I want to go into the Hall of the Northwest Coast Indians.
This area showcases the research conducted during the Museum’s first major field mission, the Jesup North Pacific Expedition of 1897-1902. Organized by Museum President Morris K. Jesup and led by Franz Boas, a curator in the Department of Ethnology, it is considered to be one of the most important anthropological field studies ever undertaken. The expedition yielded an unparalleled record of the life and culture of the peoples of the North Pacific.

The hall has been redesigned and the exhibits reinstalled a number of times; the timeline here highlights the years in which major changes to the exhibits were made and provides the clickable hotspots for us to explore. In particular, we will be examining the way in which a Haida canoe was exhibited over time.

This canoe was built in 1878 from a single piece of wood and is twenty-one meters long, making it the largest Northwest Coast canoe in any museum. It was acquired in the early 1880s.
Let’s start in 1883.

This photograph shows the Haida canoe suspended above the gallery where it was installed shortly after arriving at the Museum in 1883. It hangs in the same space as the bones of a whale. Bird specimens can be seen in the cases below on the left.

Here is another view from the upper gallery looking directly at the canoe. Materials from a number of cultures were displayed in the cases on the gallery level. The canoe is seen as just one of a number of ethnographic and biological curiosities on display without any specific context.
Moving to 1902...

Before the Jesup North Pacific Expedition, the ethnological collection of Northwest Coast Indians was housed with Eskimo, Mexican, and Pacific collections. In 1899, these other materials were moved out of the space and the area was renamed *Hall of Northwest Coast Indians*. The 1902 installation was based on the educational mission of the museum; Boas designed the displays to educate the casual visitor as well as the serious scholar. He created so-called life groups [image at upper left] to give an anthropological overview of the Northwest Coast peoples.

As you can see, the canoe is still suspended from the ceiling but now is placed in context with culturally related artifacts.
Another redesign occurred in 1910.

In this view of the Hall, the Haida canoe is now on the floor of the hall. Installed in the canoe is one of Boas’ life groups. There is a strong contrast between this 1910 installation of the canoe and its original installation in 1883. The first installation exhibited the canoe high above the heads of Museum visitors, but now the canoe is at eye level, filled with manikins, to show visitors the way the canoe may have been used by Northwest Coast peoples.

A major change came in 1943.
In the 1920s and early 30s, it was rare for visitors to the American Museum to view the Northwest Coast collections as “art” with an aesthetic value. By the late 1930s and early 40s, visitors to the Museum as well as the general public began to appreciate Native American cultural objects as high art rather than merely craft.

A turning point was the 1941 exhibition of Native American art at MOMA. Eleanor Roosevelt wrote the foreword to the catalogue of that exhibit, indicating the political ramifications of this shift in the art world.

This signaled a change in attitude to the collections of the American Museum, away from ethnographic wonderment and toward aesthetic appreciation. Not surprisingly the exhibition hall was redesigned in a way that reflected this new appreciation of these cultural artifacts as works of art, with the canoe as a center piece.

And finally moving to the present.
You will notice on the museum floor plan that today the Haida canoe occupies its own gallery, at the entrance to the *Hall of the Northwest Coast Indians*.

In a way, it’s come full circle, hanging from the ceiling once again, but this time it is solitary, an iconic piece for the museum, rather than being one of a number of items jumbled together.

This is just one example of how Professor Rodini has been able to use Mapping Museums to allow students to discover how social, cultural and political factors have influenced the changes in museum exhibition philosophy and practice over time.

When students use this “virtual pop-up book,” as Professor Rodini likes to describe Mapping Museums, they can see how people would have entered a museum and what they would have encountered in a given time period. When curators moved those objects in subsequent years, their relocation had significant implications. Students can begin to think about why objects are moved from one period to another and how their relocation reflects the ideas and attitudes of the times.
In addition to the opportunities that the site provided for in class presentation of these case studies, having the Map Tool as a resource that students can access outside of class was helpful for their preparations for tests and class discussions. Students can also explore the museums in more depth on their own, allowing them to think critically and analytically about the meaning of the spaces and objects they are viewing.

Students in the class are given an option to write a final paper or to develop a museum site of their own within the Map Tool. A number of students have selected the latter option each time the course has been offered, and they have consistently given the experience high marks. Students say the museum creation exercise made them think in new ways; they appreciated the variety it offered for class work. Professor Rodini was especially pleased with how they conceived new questions on the museum sites they developed. I’d like to point out that she has incorporated her students’ final projects into the site.

There is a separate student project area. Close to 40 projects have been completed to date. Half of these student final projects have been further developed and incorporated into the course site.
Working with CER staff, Professor Bob Kargon in the History of Science and Technology department developed a course entitled *Modernity on Display: Technology and Ideology in the Era of World War II*. Looking at the post World War I world’s fairs and expositions as cultural indicators, he wanted his students to explore themes and ideas around the concept of modernity. He also recognized the value of extending student digital literacy and saw that one way to accomplish his goal would be to have students identify, collect and catalog images, maps, texts, and multi-media materials to create a virtual exhibit that would serve as a term project.

The project assignment included writing a narrative exhibit catalog as well as organizing and cataloguing the media materials. Therefore the course included sessions on cataloguing, metadata and data standards, as well as intellectual property rights issues. An in-class oral presentation of each exhibit facilitated the development of students’ digital presentation skills.

After looking at a number of options, we suggested that Professor Kargon use Omeka as the publishing platform for the student projects.
What is Omeka?

http://omeka.org/

Developed at George Mason University’s Roy Rosenzweig Center for History and New Media, Omeka is “a free, flexible, and open source web-publishing platform for showcasing library, museum, archival, and scholarly collections.”

The word Omeka comes from Swahili and means “to display or lay out wares.” Its “five-minute setup” makes launching an online exhibition remarkably easy.

Omeka has a community of users including scholars, museum professionals, librarians, archivists and educators. Uses include sharing collections and primary sources, creating blogs and podcasts for collection outreach, collaborating with others in the creation of digital scholarship, and producing inquiry-based tasks for students.

[Information from Omeka.org]

The Sheridan Libraries and Museums at Johns Hopkins have adopted Omeka as the platform for virtual exhibitions and it is being made available for course projects as well. Omeka provides a number of built-in templates, making it easy for students to get down to the business of collecting materials and creating exhibits.
The final results of the student projects in Dr. Kargon’s class were impressive. I was able to attend the sessions where students gave their oral presentations, which covered topics such as *Financing the World Fairs*, *Politics through Architecture: The Shift in Interwar Nazi Agendas seen through German Pavilions*, *Bodies on Display: Medicine at the World’s Fairs of the 1930s*, and *Racial Hygiene and Public Health at the 1930's World's Fairs*.

Perhaps it shouldn’t have surprised us, but in the class of 18 students, half were from the School of Engineering. These students brought an interesting perspective to the course, and provided an interdisciplinary view in class discussions. In the assessment survey and focus group conducted at the end of the course, the engineering students noted that working with images and learning the complexity of image interpretation, cataloguing, and use in narrative had been an eye-opening experience.

I will show you pages from several of the projects so you can get an idea of what Omeka exhibits can look like. In each case I am showing only a single page from the exhibition – essentially one page from the catalog of the virtual exhibit.
In the exhibit, *Speculation on Progress*, one of the engineering students looked at the predictions for the future found in various exhibits at the 1939 World’s Fair in New York. He asked the question - Why don’t our cities/highways/space explorations look like these 1939 speculations of the future? - and examined the technology that determined different paths forward from those predicted.

In *Air and Space: The Goals of American Aviation through the Eyes of the World's Fairs*, the student followed the growth of aviation through the decades by looking at its presence and role in American world's fairs, and the profound changes in the goals of the presentations that occurred before and after WWII. The agendas, roles, public reaction, and overall messages of various displays were examined to explore the shifting nature of aviation exhibits over time.

World’s fairs were a breeding ground of technological innovation and progress. But what of the inventions that were supposed to change the world never quite caught on? The exhibit *Invention versus Innovation* examined failed inventions of pre-World War II world’s fairs. The student analyzed the reasons why an innovation had not been successful. Sometimes the inventor’s hubris or naïveté could doom an invention. In other cases it was a failure of society to make a radical change. In the example shown the student concluded that the failure of the concept of the futuristic home was sociological rather than technological.
Labor and Leisure: Art from the 1930s World’s Fairs focused on how art displayed at the fairs in this time period conveyed the need for a balance of labor and leisure as a result of the depression.

The Age of Advertising looked at the role of advertising in the New York World’s Fairs of 1939 and 1964, and how it evolved over the time period. The student concluded that the emergence of major corporations shaping “The American Dream” is evident. In contrast to the 1939 fair, in 1964 it was businessmen who funded the fairgrounds, and corporations that designed the exhibits. The student made use of videos as well as images.

I want to stress that the students, besides learning about the concept of modernity, were also introduced to digital and visual literacy skills. Here is the page showing the metadata the student entered for the image of the red mustang on a beach from The Age of Advertising exhibit. The students were taught about Dublin Core and other metadata standards, came to understand why cataloguing images can be complex and complicated, and learned about relevant copyright and fair use practices. Library, Visual Resources Collection, and CER staff were involved in teaching these sessions.
Breast-Cancer: A Cultural-Theoretical Approach to an Illness and Its Meaning

Using the Map Tool to enrich student experience

The undergraduate class *Breast-Cancer: A Cultural-Theoretical Approach to an Illness and Its Meaning* (Women and Gender Studies) explores the history of the breast as a symbol of sex and life, along with the cancer that affects it, not merely as a medical condition, but as a powerful symbol in culture, art, and literature.

Professor of German and Romance Languages and Literatures, Bernadette Wegenstein, felt that students lack a sense of the landscape of breast cancer from the point of view of cultural and media history and from the experience of a breast cancer patient. Her solution was to work with the CER to create a visual database using the Map Tool to bring this media history to life and give students an interactive approach to the medical world of cancer diagnosis and therapy. The pedagogical aim was to create a course that does not just provide information about a subject, but recreates to some extent the experiences of those both suffering from and fighting against this disease.

Rather than merely read about the history of breast cancer, students in this course are brought face to face with how the breast has been perceived in different cultures and different times, and how medicine has investigated and tried to deal with this disease.
Here you see the starting point for this rich research environment, which gives students pathways for exploration of visual depictions of the female breast, the medical environment, the role of the rise of feminism, and the globalization of the culture of breast cancer.

Students can see depictions and learn the history of women for whom the loss of a breast or breasts took on iconic meaning, such as St. Agatha, the Amazons, and Phryne – whose stories and images will be familiar to art historians.

The section entitled The Male Medical Gaze showcases the progression of breast cancer in medical imagery: from the paralyzing and disfiguring removal of the breast in the "radical mastectomy" (invented at Johns Hopkins by William Halsted in the 1890s)...

...to today's muscle and nipple-sparing mastectomies that are often performed in conjunction with bonus cosmetic surgeries such as breast-augmentation, or a "mommy-tuck."

Students can examine the advantages and disadvantages of media coverage, including how the “pinking” of breast cancer has affected women not only in the US...

...but other countries as well.

The History and Culture of Breast Cancer provides a basis for student research assignments that go beyond papers to include role playing and creation of multi-media projects.
Lessons Learned

What does this have to do with digital art history?

I would characterize Mapping Museums as an application that allows students to take a virtual tour through museums past and present, and Modernity on Display as giving students an opportunity to be a curator of their own virtual collection. The Breast Cancer image database uses visual materials to provide an immersive experience for students wherein they can analyze and react to the medical world of cancer diagnosis and therapy. In all three cases visual literacy skills were an integral part of the curriculum.

As I said in the beginning, images aren’t just for art historians anymore. Our colleagues in other humanities disciplines are poaching on our turf, so to speak, and doing some very interesting things in the process.

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