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Humanities-based Curriculum Online: A Role for the Arts in Designing Web-Based Interdisciplinary Inquiry

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Abstract

The ability of ArtsOnline, a web site designed by professionals at the Los Angeles Educational Partnership (LAEP), to support interdisciplinary inquiry for an arts-centered, humanities-based, program at the Los Angeles Unified School District (LAUSD), was evaluated from June to August in 1999. As research findings reported herein show, design barriers and challenges can lessen the benefits from application of IT for interdisciplinary inquiry. Some of the design barriers and challenges mentioned included inadequate web site design, insufficient editing and information presentation, along with low access to IT by teachers and students, lack of funding, low administrative support and lack of teacher training. Findings detailed in this paper are from transcripts developed from five focus groups (N=30) convened at UCLA to evaluate ArtsOnline. The UCLA Armand Hammer Museum and Grunwald Center for the Graphics Arts and LAEP funded the evaluation.

Introduction

Application of web-based information technology (IT) can provide access to a wide variety of information resources from a number of disciplines and subject access areas of interest to interdisciplinary information users. In 1999, in an effort to tap into the Web's possibilities for enriched educational practices, ArtsOnline, an arts-centered web site, for interdisciplinary teaching and learning in a humanities-based program (The Humanitas Program) at the Los Angeles Unified School District (LAUSD), became a reality. The web site created by professionals at the Los Angeles Educational Partnership (LAEP) came to life based on preliminary input from a small group of administrators and teachers from LAUSD.

The web site's overall ability to support interdisciplinary inquiry (teaching and learning practices) online still needed evaluation, however, by teachers and students and also by other interested groups with expertise relevant to the web site's design and arts-centered, humanities-based, interdisciplinary inquiry. In particular, evaluation input was needed and it was sought from teachers, students and academic support professionals (such as librarians, museum educators and web site designers) who were directly and indirectly involved in the existing humanities-based (Humanitas) program the web site's content was intended to support. As the literature review revealed, emphasis on research for use of IT web-based applications for learning or instruction is relatively new whether the focus is on museums or on other educational settings such as libraries and schools.

Most previous museum studies represent efforts to assess the in-museum behavior, or exit knowledge, of visitors and devote no time examining use of web-based information access from a user-oriented perspective. In general, during the past

seventy years, much has been said about who visitors to museums are and what they do in museums (Bitgood, 1986; Hood, 1983; Robinson, 1931; Screven, 1990) in terms of their interaction with works of art. Some exceptions to the past seventy years of research in museums, include recent articles and studies that discuss issues of information presentation, information literacy and the intentions, preferences and concerns of information users about new media and technologies such as the WWW (Sledge, 1995; Zorich, 1991; Zorich, 1997a; Zorich, 1997b).

Zorich (1997) offers a significant perspective on the progress museums have made in carving a place for themselves on the Internet and the future roles they can play in terms of providing better, instead of just more access to cultural heritage information on the Internet. According to Zorich (1997) museums must re-evaluate the institution specific information they offer their users or visitors online by using new information technologies and by increasing efforts to offer integrated information to respond to different user needs and practices online. In addition, museums need to have more information than the user demographics most [Internet] surveys reveal (Zorich, 1997). Museums must learn more about how context impacts user access to museum resources (Zorich, 1997a) and about the questions people ask of museums, how they search for information and how they wish to see information presented (Zorich, 1997a, 187).

The need to improve interactivity, usability, and the overall educational value of instructional web sites is not unique to museums and to the services that museum professionals provide. In addition, and while technology is at the center of discourse about investments in museums, libraries and in schools, the conclusion is, once again, that little is really known about the role that web-based IT plays in user activities that focus on education (Burbules and Callister, Jr., 2000). It is safe to say that each user visits a web site for different reasons and responds to the web site's content differently based on needs and infrastructure levels of access. Users get frustrated if a web site contains too many graphics, which slow down loading time, especially if the users' equipment and network levels of access do not support heavy downloads at all times (Zeldman, 1999). Some users visit web sites to get specific information and these people will not be there for a total web experience or to be entertained or for the thrill of visiting a killer web site. Technical aspects and available technologies such as plain html vs. java scripts for web site design should never be ignored, however (Homer, 1997).

Web site developers must push the content and the limits of technology for better design and user access while embracing new ideas and innovative user learning frameworks (Carey, 2001; Rosch, 1995; Schroeder, 2000). In other words, the "push" for using the most up-to-date educational technologies in the classroom or elsewhere, must be tempered by a "pull" that any design and use of educational technologies must always serve the interests of the user as a learner (Burbules and Callister, Jr., 2000). A similar point about the role that educational technologies must play in how and what users learn was emphasized in 1997 by the President's Committee of Advisors on Science and Technology when they argued that focus should be on learning *with* technology, not about technology (http://www.ostp.gov/PCAST/k-12ed.html). "While computer-related skills will unquestionably be quite important in the twenty-first century, and while such skills are clearly best taught through the use of computers, it is important that technology, be integrated throughout the K-12

curriculum, and not simply used to impart technology-related knowledge and skills" (http://www.ostp.gov/PCAST/k12ed.html). Other researchers, concerned with design and uses of technology to develop critical literacy skills and to promote educational reforms, suggest that educators concentrate on personally meaningful, authentic and challenging tasks that can be accomplished through the use of educational technologies (Lankshear and Knobel, 1998, Means, et. al., 1993). Authentic challenging tasks are thought of as "tasks that are personally meaningful and challenging to students…and also promote collaboration, interactive modes of learning and a multidisciplinary curriculum" (Means, et. al., 3-5, 1993).

Successful web sites for children understand very well this push / pull framework and ifs focus on resolving design challenges, promoting interactive learning and ensuring user access to needed information. Disney online, or http://disney.go.com/park/homepage/today/flash/index.html, guides users to available content as quickly as possible, even makes it possible for user to by-pass navigation or other design elements (Roberts, 2000). For example, personal use of Disney online shows that a search engine is available on the web site. The web site also offers a user the option to click on an image of a Disney character and information about that character appears without any additional searching and navigation needed on the part of the user. In addition, Disney online offers what's called Disney Lite!, a version of the web site that offers fewer graphics and a non-Flash version of the web site.

Therefore, a focus on users and what they may need in an interactive information technology system, according to Kristoff and Satran (1995) enables developers of web sites to address most thorny design challenges. But, shortcomings in interactive design usually allow for user doubts about a web site's credibility to surface (Kristoff and Satran, 1995). Examples include poor interface and navigation in a web site, links that do not work, or a search engine that is difficult to use. Some of the shortcomings or barriers in a web site are easy to fix by carefully re-evaluating user needs against web site design. Others, however, require long-term attention to infrastructure barriers, such as lack of necessary equipment and network connections that prevent users from incorporating web-based technologies in how they learn on a daily basis.

The research focused on, and now this article reports findings from, the evaluation of ArtsOnline, highlighting unique design challenges encountered in teaching arts and humanities. ArtsOnline was of interest to professionals at the UCLA Armand Hammer Museum and Grunwald Center for the Graphic Arts (one of the institutions funding the evaluation) because LAUSD teachers, participating in various Museum programs, had reported using the web site. The latter interest, however, surfaced because professionals at the Museum had made the decision to re-asses existing technical and operational assumptions, in existence since the 1970's and 1980's, to embrace new models for services, including use of web-based information technologies. Interest in the web site evaluation at the Hammer Museum was a clear indication of the commitment to explore and learn in active ways what Museum users had to say about web-based information design.

Information in this article is presented in the following four sections. First, the article provides additional background information about design activities relevant to the ArtsOnline web site and the LAUSD Humanitas Program. Second, the focus groups

methodology is discussed. Third, important findings from the evaluation of the ArtsOnline web site are presented by analyzing transcripts from the focus groups. Due to interaction in the focus groups, analysis of the transcripts provides a better understanding of user-oriented information design and its role in the development of an arts-centered, educational web site. Also, analysis of transcripts from the five focus groups improves practical understanding in Information Science in terms of information design challenges relevant to interdisciplinary inquiry in educational practices by focusing on the needs of different groups of users. Finally, the article concludes with a short summary.

Additional Background Information about the ArtsOnline Web site http://www.laep.org/artsonline/ and the "Humanitas Program" at LAUSD.

The current version of the ArtsOnline web site is located at http://www.laep.org/artsonline/. Although changes have been made to the web site, anyone visiting the web site today will still see the home page with the ArtsOnline logo and the four following four entry points (or links to the site's other pages):

Explore art@thecenter	Art-centered learning experiences
Units for Interdisciplinary Study	Collaboration between LAEP, LAUSD and the Getty Education Institute for the Arts
Art Resources	Annotated links to sites on the World Wide Web

About ARTS Online

The above four entry points were the same as seen by the participants in the focus groups during the hour each participant spent examining the web site prior to participation in focus groups. Additional detail about the make-up of focus groups is provided in the Methodology section. The home page and subsequent screens made possible through the above four links are important to keep in mind because collectively they received a great deal of discussion during the focus groups in discussions about development of different interfaces for the web site. The ArtsOnline web site was created to facilitate learning and teaching for a Humanitas (or a humanities-based) program at LAUSD that employed arts as part of instruction to facilitate interdisciplinary and thematic learning for its students. Prior to the introduction of the web site, teachers relied on traditional arts materials in libraries and field trips to museums to make humanities instruction arts-centered. The use of the web site was a new experience for many teachers and students in the learning process.

Methodology: The use of focus groups

During 1999, thirty participants in five focus groups, convened and led during discussion by the author of this article at UCLA, were called upon to articulate their experiences and to discuss ideas that come to mind that relate to web-based, humanities-based, arts-centered interdisciplinary inquiry in educational practices. The thirty participants in the five focus groups were students, teachers, museum professionals, librarians and technology experts from eleven high schools, seven museums, one library program, one public library and one university respectively in Los Angeles County.

The Five Focus Groups (N=30):

- Humanitas Teachers -these were humanities teachers in a Humanitas (arts-centered and humanities-centered) team at their respective high schools at LAUSD (N = 4)

- Mixed-Group of Teachers (a mix of Humanitas and non-Humanitas teachers group). This group included teachers who had been members of a Humanitas team in the past or, have never been a member of a Humanitas team, but did want some information in how to create an arts-centered, Humanitas team (N = 5).

- Students - Students at a Humanitas high school volunteered their time to participate in the focus group (N = 8).

- Museum Educators - educators at major Los Angeles Museums (N = 5).

- Technologists - participants in this group represented a variety of sites including major LA museums, academic libraries and library programs. The difference between this group and the Museum Educators was the requirement that participants in this group be intimately involved with designing information technology services at their respective sites (N = 8).

Before each focus group was convened, and for over an hour, participants in each focus group were asked to use the preliminary version of ArtsOnline. Each participant was given access to a computer with an ArtsOnline CD-ROM installed on it at the UCLA Armand Hammer Museum and Cultural Center for the Graphic Arts. Thus the same conditions for access and use existed on each computer while each user experimented with ArtsOnline.

During the moderator's opening remarks for each focus group, the main question was presented as follows: what comes to your mind when someone asks, how would you go about creating an educational program (web-based or otherwise) to support arts-centered, humanities-based educational practices? The main question was phrased in a variety of ways during all five focus groups to make sure different online and offline aspects of the ArtsOnline web site were explored. The findings, reported below, are organized under the following three headings. First, interdisciplinary inquiry for offline (real world) vs. online (web site) educational practices; second, interface and information presentation, and third, infrastructure. The fourth and final section provides a summary.

Findings

The Web site's Jurisdictional Claim for Inter-disciplinary Teaching and Learning

Participants in the mixed focus group, including both Humanitas and non-Humanitas teachers, were doubtful of benefits from arts-centered instruction and even what the latter really meant. For example, participant #3 said, "I teach an English class, and there is a lot of literature with art references in it...but, I don't know what you mean about art-centered, since my whole thing is literature centered." Humanitas participant #4, echoing the remarks from participant #3, stated "I don't do much about

art, so it's really hard for me to incorporate something...but since I have no art background at all, I am starting from step one: what is it? how is it relevant?"

According to participants in the Humanitas Teachers focus group, however, thematic orientation in arts-centered programs empowers students to relate what they learn in class to specific cultural and political events. Humanitas participant #1 said that "thematically, I think it helps because it reaches across the curriculum...therefore for the students it becomes a much easier learning process...suddenly the world has connections." Participant #3 in the Humanitas focus group added that arts-centered "it's a visual way to learn, it's a visual way to understand...gives students confidence." Humanitas Participant #2 added that "we spend as much time, you know, looking at slides...and actually turning up more like an academic course, with a language to be, you know, learned, just like science or history and vocabulary, and um...they're reflecting."

In general, Humanitas Teachers described an arts-centered humanities curriculum as a critical way to hold the attention of students and to promote an alternative way for inquiry and intellectual scaffolding. Through the arts-centered approach students work in smaller groups and are given more project-oriented assignments. Even though art is at the center of the learning process, the goal is not to turn students into artists or to only produce objects of art. The intention is to offer students an alternative method to reflect and inquire about common themes that students learn about in their core classes. According to the discussion among Humanitas Teachers thematic instruction enables teachers to stress and stretch the same topic across the curriculum with the help of the arts. In other words, students get to hear the same theme addressed from a different point of view in world history, literature, art, biology and other classes that may be part of a Humanities-based curriculum. In the opinion of these teachers what makes a dramatic difference is the use of art (a visual way of presenting the world) to facilitate learning and transfer of meaning where language, words and other text-based ways of carrying meaning from person to person may fail. As Humanitas participant #1 stated "students are becoming more...they're entering the dialogue. And they are becoming more engaged."

An arts-centered approach to educational practices was substantiated by Humanitas Teachers as useful and effective in a variety of examples the teachers offered during their focus group proceedings. For example, discourse on slavery and comparisons of how people dressed in different periods are made easier to undertake by using art form different periods. In the colonial period children were dressed like little adults; what does the latter suggest about the period itself in terms of worldviews and human relations? In addition, period art may be used in an effort to critically interpret what was going on in the mind of the artist during a specific period. So, an arts-centered approach is broader than specific art objects and offers an opportunity to explore meanings about time periods and context for artists. A widely known theme, a search for democratic ideals, was another example mentioned during the discussion in the Humanitas Teacher focus group. The latter theme has found many representations in painting and other artistic expressions. Easily, many period pieces may be used to explore this theme. Yet, the fact remains, as many teachers said, a widespread lack of local information resources and access to undertake inquiries about the above and also other themes. School libraries do not own large art books in adequate supply or even color copiers to make sufficient copies for student study.

Humanitas Teachers stated that students in various lessons were guided to enter a dialogue with each other and with their teachers and to engage content in active, critical and using a variety of social research methods. Although some computer use by students tends to be high, teachers reported that good use of content, expression of language and structure of sentences and paragraphs remain the guidelines (or rubric) for grades on student assignments.

Table 1: Comments by Humanitas Teachers on the usefulness and shortcomings of the ArtsOnline web site

• Fills a great void in making more resources available
• Should have more units - more experiences with sufficient depth and quality
• Some teachers liked the inclusion of student work, others not so much
• Like to see a better connection of how state standards relate in clear and step by step manner of how standards relate to each unit online.
• More detail in each unit in term of assignments -- a little more structure in how assignments are presented online
• A bit more research background for each teacher to read in preparation for each unit
• Online units and assignments should not simply be suggestions for one or two assignments, but an entire timeline of teaching for the entire quarter or year, if possible.

To the question of what comes to mind when someone asks you what is arts-centered educational practices? Museum Educators said that learning starts with an object and evolves into different types of inquiry related to writing or connected to finding information and learning something about art history. In addition, museum educators suggested finding out what teachers are teaching and then developing strategies to present objects that relate to classroom themes.

A great deal of the discussion in the Technologists focus group was conceptual in nature. The participants exchanged ideas on a number of issues ranging from techniques for evaluating online information, to design principles for an interactive, virtual reality site, to the importance of the web offering a genuinely different experience for learning. For technologists, arts-centered educational processes and practices are not limited to a particular experience, period of art, or to a certain kind of art only. They expressed support in arts-centered education that provides intellectual access to the full range of the arts. They wanted to see web sites that linked different aspects of art together and in a way to question understandings of reality.

For participants in the Technologists focus group, the most important thing for any art program, including a web site is to teach art with real art content, like composition, balance and contrast. The technique of doing and learning about art then is

paramount. There was a consensus that first, a person must have a technical understanding of what they are supposed to do and then they can just throw the rules out of the window so to speak. As technologist/artist participant #8 put it, "in my generation that was studying studio arts we did not talk about content or subject matter. We only talked about composition."

Table 8: Responses from Technologists to the question: how do you put together a successful arts-centered program?

- Content or information for the web site is very important. Content does not exclude issues of technique, composition and balance
- Need an editor to check content, go back and look through and establish consistency within the site
- Need a template to present ideas, information, assignments
- Need a navigation map or a site map to describe the layout of the site so people can easier find things

There was a brief conversation on authority and information credibility among technologists of different web sites before discussion turned to educational activities and arts-based experiences online. In terms of authority there was an exchange of ideas to the effect that a small web site could have just as much authority as a large institutional web site so long as information was checked for accuracy. It all depends on the information each site contains, the presentation format, and how it resonates with the user.

The Web site's Design: A focus on the Interface and Information Presentation

While the preliminary version of the web site offered access to different areas in the web site (see section about Background, early in this paper), it offered one common interface to all users. Humanitas Teachers suggested that the interface should be re-designed to allow for the different needs of teachers and students. In terms of a split of a Teachers vs. Students Interface as an alternative design, teachers said that there should be a division (à students enter here à teachers enter here) that was viewed as different from the initial “one for all” interface approach taken by the developers of the web site. They did suggest, however, that only parts of the web site use the interface division approach.

Table 9: Responses from Technologists to the question: what suggestions do you have for improving the web site's interface?

- Keep materials for teachers separate from those for students
- Personalize each section based on user group most likely to use each section
- Conceptualize what people (students and teachers) require access to and then design the interface to take them there

Table 10: Responses form Museum Educators to the question: what suggestions do you have for improving the web site's interface?

- Editor /framing device --read content editorially from an educational and pedagogical point of view
- Appoint a technical editor/designer --should help take these levels (editorial issues for pedagogy and education) and those audiences they represent and make them visible

Even though museum educators voiced their critical concern with the web site they did like the interdisciplinary approach and the concern for an integrated curriculum so evident, according to them, in the web site. Having commented on the web site's positive instructional aspects, however, Museum Educators noted that some items on the site were mislabeled in that what was labeled as aesthetics or art history turned out to be lessons when clicked on.

Table 11: Responses from Technologists to the question: what suggestions do you have for improving the web site's interface

- Offer multiple points of view of the various topics form artists of the time
- Present information in a non-judgmental or adversarial fashion as objectively as possible
- Find ways to get ongoing design feedback from people and not just ask for email messages about something that does not work from a navigational point of view.
- Offer ways in the web site for people to ask questions such as "ask a librarian" or "ask a curator."
- Offer ways to students to learn in the best way possible and focus on providing some deliverables such as bibliographies, images, and resources for use.

And yet, participant #8 in the Technologists focus group argued, studies have found that "teachers really want a sense of place." Others, in the group of technologists, commented a sense of place is one of the reasons why teachers photocopy images and distribute them for students to see. In addition, this latter action of copying provides immediate access and somehow makes the process more real. The issue of equity of access came up and a discussion ensued in terms of how do we design web sites for people who have low levels of access. Some suggested that perhaps designers should design "down" or provide low graphics with text. Others strongly countered the latter position with the idea that designs should proceed with conceptualization in mind for a full interactive, visual experience to materialize on the web. On one hand, the web is a democratic place because everybody can have it, but the truth of the matter remains that not everyone has access to it equally. Although the latter is a legitimate concern, Technologists suggested hat plans must go forward to fully exploit the web and also push for more access by all. The focus should be on how to best design a site that balances text with images the best way possible and offers an educational

experience that engages kids and keeps them coming back for more. One tech suggested that the purpose of the experimental web site should be to offer teachers tools to get the kids involved. On the whole, the Technologists group felt that there is something for both teachers and kids in the ArtsOnline web site.

Table 14: Summary of Infrastructure Issues at Schools (from all focus groups)

- Insufficient Internet access at many public schools
- No computer access in the classrooms where it is needed for instruction
- Difficulty in scheduling time in computer labs
- Lack of sufficient computers for all students
- No teacher training for software such as PowerPoint, Hyperstudio, HTML and use of browsers.
- Some teachers are not comfortable with the new technologies
- Some schools have more resources than others
- Some districts are richer than other
- Disparity in family incomes of students attending various schools

Table 15: Institutional infrastructure issues at Schools (from Humanitas and Non-Humanitas Teachers): what does it take to start an arts-centered program (web-based or otherwise)?

- **Resources** -- It takes access to resources of which many schools do not have.
- **Flexible workloads** -- Many teachers teach up to 5 classes.
- **Time** -- "Dedicated teachers make the time" according to some teacher, but even the latter recognize that it is very time consuming to find, copy and prepare materials for instruction. Also time is necessary to learn new concepts and to keep up with new software.
- **Internet and Museums** -- One option is to print reproductions on transparencies of the Internet and to visit museums when possible.
- **Administrative and Budgetary support** particularly for team building-- Teachers do not always receive administrative or budgetary support to start new programs.
- **Local Resources** / Permanent Collections -- Some have found resources at local

museums. One teacher mentioned borrowing slides from LACMA and then returning them after class instruction is over.

- **Web**-based resources are very useful especially one like the ArtsOnline web site with ready made units of instruction and assignments that can be used in the classroom

- **Technology access at school** -- even if you have technology at home, technology may not be available at school

- **In**-service training for software and technologies in needed

Summary

Concerns about the ability in ArtsOnline to adequately support automated humanities-based, arts-centered educational practices (teaching and learning) were evident in all focus groups. Participants in focus groups, not only suggested improvements they felt were necessary in the web site's design, but also doubted the importance of art as opposed to literature to support humanities-based interdisciplinary inquiry. For those who accepted an arts-centered, humanities-based program, however, it was clear that students are able to examine themes across the curriculum using art objects in ways that support different learning modalities and make instruction fun for all students. There was no doubt that a web site, when fully completed and equipped with all necessary tools, could help teachers prepare for classes, but the current lesson plan content on the web site was inadequate for day-to-day classroom needs for all age and grade levels.

Yet, the web site was a great step in the right direction in making more arts-related resources, particularly for places where art resources were lacking, more accessible to students at all times, assuming ofcourse that the students had access to computers. Based on their understanding of the role that "arts-centered" played in the educational practices of humanities-based teachers, participants interpreted and evaluated the web site somewhat differently. It was clear, however, from discussion in all focus groups that humanities-based educational practices, art or otherwise, do facilitate interdisciplinary inquiry.

Information presentation and interface design received a great deal of attention in all focus groups. The view was shared by all participants that the techniques needed for information presentation online differed dramatically from the offline world in terms of amount of information, aesthetic balance between text and images and ability to link and to promote interdisciplinary inquiry. Yet, in a basic way, good grammar and a well-thought out layout for text was essential for learning both the offline and the online world of educational practice in a humanities-based curriculum.

Albeit the planned focus for the research was on inter-disciplinary content and information presentation, including interface design, for the web site, a great deal of information about infrastructure barriers surfaced during focus groups discussion. Infrastructure interpreted by the participants in the focus groups to include home and school computer access to satisfy content for state-related educational standards was and continues to be a hot topic at LAUSD were not all schools are connected to the

Internet and do not all have adequate computer facilities. Sate standards in various disciplinary areas were discussed and many strong opinions exchanged among teachers about the in-effectiveness of the standards to guide education in a multicultural information society. Teachers said that standards are important in that they shape levels and density of knowledge ties teachers should make for the grades they teach. Teachers and students felt that the state's standards were out of touch with student needs and that current educational practices were surpassing such standards.

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