Evaluation for Effective Web Communication: An Australian Example

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ABSTRACT The communications platform of the Internet and the World Wide Web has provided a new medium for disseminating the work of museums and cultural institutions. In this article, we argue that while we remain influenced by the technology and systems-thinking which built the platform, we have not re-thought its creative possibilities for education, communication and expression of cultural values.

INTRODUCTION

In 1993, the prime minister of Australia, Paul Keating, convened an expert group to consider the future of new broadband technologies. One of the highlights was its definition of broadband as a communication platform “underpinning our society, supporting a diverse and interwoven range of social, business and community activity” (Broadband Services Expert Group 1995:3). Museums now use this platform to interpret collections for physical visitors, as well as virtual visitors. How effective are museums in using and evaluating this new medium? Here we present a detailed case study of these issues.

EVALUATION OF WEB SITES

The early stages of Web site development focussed on the technical possibilities, in a marketing environment which promised that we (as both public and producers) would be “transported” into a virtual space separate from the everyday. The testing of Web

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sites, which was helpful at this early stage, used individuals to identify aspects of the structure and content that did not work. However, the model of useability testing which is still being used is out of step with visitor research in museums, where the focus is on the visitor experience. Much of this visitor research seeks to understand how visitors, as communities of interest, interpret the museum context and create meaning for themselves. It would seem absurd to research museum visitors by assigning them defined tasks and scenarios, but this is what happens in useability laboratories when testing Web sites.

Instead, the everyday context of users and their own interests should be the central focus. Evaluation of museum Web sites, like other visitor research, should concern the use and understanding of the museum’s online resources. It should reveal whether the museum’s mission is being fulfilled in this new medium and what users could achieve further. The mission of many museums has expanded to include enhancing visitor understanding. We should expect the same from museum Web sites, and ask how they are engaging with users, especially when the time comes to create a new exhibition or redesign a site.

Some Australian governments have made this evaluation step necessary for the cultural institutions they directly support. The Commonwealth Government’s Online Strategy requires all government agencies to deliver appropriate government services online, and to do this in ways that satisfy customers. Web site audience evaluation has been conducted before launch for some cultural institutions, for example the National Library of Australia’s www.pictureaustralia.org. Evaluations after a year or two are usual for significant government Web sites.

EVALUATION BRIEF FOR DOCUMENTING A DEMOCRACY—www.foundingdocs.gov.au

One such example is Documenting a Democracy, a Web feature developed as part of the Centenary of Federation in Australia in 2001. The site is a joint venture of Australia’s eight government archives, managed by the National Archives of Australia (NAA), and funded by the Centenary of Federation Council. It presents the significant documents in Australia’s constitutional history. It is one the earliest Web sites in the world to use the Internet medium to assemble, display and interpret the major documents that define a democratic nation and its continuing formation. Australia’s centenary celebrations in 2001 were considered a fitting time to launch such a Web site.

The expert panel of constitutional lawyers and historians who guided the process of identifying and interpreting the key constitutional documents, especially lead content developer Lenore Coltheart, sought to represent the history in ways that articulated indigenous perspectives about this history. Australians did not previously have easy public access to the Royal Commission of Assent (or to any other founding documents), which created a single nation of Australia.

The Documenting a Democracy Web site (DDW) was launched in Australian capital cities on 19 and 20 June 2000, and in London on 6 July. During the first thirteen
months, the Web site received over 90,000 separate visits. It was also installed in the National Archives of Australia Federation Gallery, launched on 24 January 2001 in Canberra. The Web site attracted the attention of UNESCO, and of countries wishing to make their constitutional documents accessible online.

The purpose of the evaluation was to systematically examine the contents of the Web site, and the ways it was being used. The objectives were listed as follows to:

1. assess whether the Web site is reaching its intended target audiences;
2. assess whether the Web site is accessible to the target audiences in terms of technical access, intelligibility, ability/disability access;
3. assess whether site content is achieving its intended aims;
4. assess whether the site’s marketing is appropriate and effective; and
5. develop suggestions for improving the Web site as a result of the evaluation.

Target audiences were seen to be Australian and overseas researchers, university teachers and students in Australian studies, history, political science, law, and other disciplines; Australian upper-secondary teachers and their students; governments and government agencies; journalists/mass media (especially during Centenary of Federation celebrations); and Australian citizens.

Evaluation of the content in relation to specific objectives was an important part of the brief, including the questions: Is the site authoritative? Do users trust the accuracy of the information? Why?
THE EVALUATION PROCESS

The design of the original project included six stages, so that a range of information could be obtained, and the Web site could be considered from a number of perspectives. Somewhat like the Web itself, the design of the evaluation was not linear, with each different stage building on the structure and findings of the one before. Instead, each worked with its own logic, language and methods and contributed information that was combined with other findings to make suggestions for further development to clients. In qualitative research traditions the use of multiple methods and perspectives has been called triangulation. The evaluation included:

- analysis of Web statistics
- Insite Mapping
- useability testing (in the user’s context)
- quester testing
- cultural analysis
- an online survey of Web site users.

The analysis of Web site statistics highlighted the pages that were most requested, the average time spent on site and (especially) with popular pages, as well as the main sequence of pages used. The patterns of use indicated the parts of the site that were most used and those seldom selected. Useability testing was an adaptation of the usual approach that asks individuals to complete a series of tasks using the site, and notes their responses. Our testing was conducted in the user’s usual context and the tasks were derived from their own interests. Quester testing used ten user scenarios to systematically explore the site and to diagnose what worked and what was unsatisfactory for users with a range of interests and skills. The online survey was available for all visitors to the site over a period of three weeks. Requests were also sent by e-mail to historians and others with a known interest in the site to invite their participation. Respondents gave detailed comments but small numbers limited the usefulness of the overall results.

Two of the stages, Insite Mapping™ and cultural analysis are discussed at greater length here, because they were used in complementary ways to answer questions about the meanings of the site and the understanding of audiences. Drawing on cultural and communications work, they also illustrate approaches that could be applied more widely to reveal user interpretation of museum Web sites.

Perspectives from cultural studies and communications ethnography—The purposes of DDW were complex. It used text, images, maps, historic photos and moving photomontage techniques to present selected documents and interpret their significance. The site told the story of Australian constitutional history, beginning in 1901 but it also
questioned that “official” account by including information about indigenous history. As with all institution-sponsored Web sites, Documenting a Democracy communicated the work of the archive institutions that contributed to it, especially the National Archives of Australia that was the most visible.

To answer the brief, we needed to analyse the ways contents communicated to different users, especially those for whom it was designed. We also needed to find out how users interpreted the contents, and adapted them for their own purposes. While it is accepted in all evaluations that users react differently to Web sites, this brief required us to consider the meaning-making process itself: the various narratives built into the site and how they were “read” by a range of users. A more conventional Web site evaluation, which analysed usage statistics and tested the functioning of the site would not have addressed the issues of history, authority and interpretation raised in the brief.

Cultural analysis—Cultural analysis, derived from a combination of textual theory and
cultural studies, begins with the material that constitutes the site itself—the verbal text, images, and sometimes sound and movement through which the site communicates with users.

For www.foundingdoes.gov.au, the analysis used knowledge of cultural literacies to map the meanings and narratives the Web site offered to its users as a meaning-making resource. The Web site, like all institutional sites, attempts to position users to see the institution as authoritative, and to accept its construction of particular ideas and issues as valid. The analysis does not assume that all users passively accepted these constructions but it does assume that the Web site itself operated to convince users of the institution’s authority and value. The analysis identified text-user relationships established at the site and ways in which the site was not achieving the aims it set out to fulfill.

In the case of each of these specific literacies—verbal, visual, spatial, kinesic, aural, etc.—the analysis traces the possible meanings generated by the text and the ways in which this positions the user. For example, a particular image used on a site might be examined for the meanings it has for users with mainstream visual literacy—those who are familiar with the cultural traditions and educational institutions of the dominant social group. It will also have specific meanings for particular groups—defined by shared social and cultural attributes or allegiances, such as sexual orientation, age, ability, ethnicity, and religion. This requires the researcher to place a specific image within a tradition of images characteristic of the mainstream social grouping.

However, she/he must also be aware of other possible responses to that image: e.g., of indigenous Australian responses to a particular image, or Asian-Australian responses, or gay responses. The ability to map the mainstream meanings and narratives offered at the site is a powerful way of identifying how users are positioned to interact with the site itself and also with the institution that produced it.

Communications ethnography—An important part of this evaluation was finding out what users actually took from their experience of the site. One approach to answering this question was a user survey. However, surveys only reproduce ideas already in the mind of the researcher. The question of how users interpret Web site content needs to be answered from a user perspective. It needs to capture the variety and significance of the experience, according to a variety of user groups.

Web site evaluations still use the language of “target audiences” to refer to user groups, even though the concept is inadequate for describing self-directed, interactive reading, browsing, and searching behaviour. The notion of target audience comes from early radio and television audience research where demographic categories of audiences, such as age and sex, described viewers for blocks of time or for whole programs. Descriptions of Web users need to be more sophisticated in linking their dynamic choice behavior with the contents and interpretations available to them online.

Recent communications work provides audience concepts that are useful for the Web medium because they shift the focus from broad target audiences of people who attend and listen, to the relationships that are formed between users and contents. As
Nightingale (1994:40) expresses it, "an audience is not a person (or a group of people) but a relation." Applied to the Web, this definition of audience focuses on the choices and interpretations that are constructed during sessions on the Web.

The trouble with this notion of audience is that it has been hard to pin down, and to build into research procedures. A concept that defines a relationship or interpretive activity rather than a feature of objects (demographic categories such as age and sex) or products (programs) seems impossibly complex. It is also dependent on the particular context of use for its definition. Conventional and common sense categories seem more useful, even if they are inadequate to describe what users do online.

User Insite has developed a new technique, Insite Mapping, to define patterns of relationships between users and Web site contents and put these to work in practical ways. The technique is derived from the inductive approaches of ethnography, where immersion in social situations, using participant observation and in-depth interviews, gradually builds a picture of what is going on from a user perspective (Howard 1998; Moores 1993). Web site evaluations do not usually provide the time or money for such fieldwork, so Insite Mapping uses the everyday knowledge of staff and others engaging with visitors and users, to build a picture of how users might interpret Web site contents. In a three-hour session, a structured process systematically maps the knowledge of participants and leads to a definition of major user groups and the contents they use. This process is akin to storytelling techniques used in large organizations to share knowledge internally (Denning 2001).

The following two sections are examples from the cultural analysis and Insite Mapping stages of the DDW Web site evaluation.

Narratives within the site—The cultural analysis of Documenting a Democracy addressed a number of pages on the Web site. The example given here is the splash screen that the users encountered upon first logging onto the site. The meanings are mapped, as is the way in which the screen positions users. Through the use of meaning-making resources including images, colour, and layout the splash screens raise a number of questions about the nature of Australian history for the user to negotiate.

The images refer the user to the colonial history of white Australia, which is the era of Australian history interpreted by the Web site (1788 to the present day). The superposition of graphic material (copperplate handwriting) on the images, likewise, constructs a particular meaning for the user, which is that the document precedes the event. That is, at its most literal, the imposition of handwriting over the top of a visual representation of an historical event suggests that the written version of the event is the guarantor of the event's authenticity, its place in history. The colonial history recorded at the site did not happen and then get documented; rather the documentation enabled or caused the events we see. This is a very powerful statement about the role of the written word.

The site can be seen as constructing a particular view of history. It suggests a view that is centred on official documentation and action, rather than everyday events (which might include responses and resistances to those official acts). It therefore ren-
ders other responses—resistant events and actions—invisible. The site may address this question of history in other ways, or it may be that such questions are seen as outside the purview of the site. However the site needs to consider what view of history is promoted by the site itself because the way documentary records are curated at the site also displays to the user the historical consciousness of the National Archives of Australia as an institution. This happens even though the Web site primarily exists to make visible the written records of a colonialist—and subsequently post-colonial—white government.

The rollover images on the splash screen include: a) Four images of indigenous and non-indigenous people; and b) three images of non-indigenous people in period dress. The images of mixed groups of indigenous and non-indigenous Australians include:

1. Two images in which indigenous people welcome non-indigenous people with a handshake
2. One of two separate groups of indigenous and non-indigenous people, not communicating
3. An iconic image of former prime minister Gough Whitlam returning indigenous land to indigenous campaigner Vincent Lingiari

Put together as a narrative of the site, what the user sees is a group of white men sailing to the country, being greeted amicably by indigenous peoples, establishing their colonial society, and then ceding some power/control back to indigenous people. This seems a rather optimistic view of white-indigenous relations. The only image that challenges this narrative is the ambiguous composite of colonial whites and Aboriginal peoples (#2 above). Their division is indicated by the contrasting colouring of the screen (the white people in a green-toned image; the Aboriginal people in brown tones) but also the fact that the Aboriginal people have their backs turned on the whites.

When these images are placed within a general knowledge of Australian colonial history, the narrative can be read as ironic. Thus, the images of white men being warmly greeted by indigenous people may be ironic, in that they do not foreshadow the genocidal attacks on those indigenous people that accompanied white settlement. And when they are put together in the narrative constructed by the splash screens they can only hint at the ferocity of the attacks on indigenous cultures that is so calmly spelled out in the documentary evidence. The question here is whether the subtlety of this ironic narrative is sufficient as an introduction to Australian history.

It is clear from this introduction to the site that we are dealing with an imperialist history of one country (Britain) and the colonial history of another (white Australia). It is also clear that we are not addressing the other non-documented history—that of indigenous Australians, except insofar as it becomes a part of this colonial history. That construction of the history of Australian democracy is no doubt an accurate one, and the site contains reference to many of the documents used to subject indigenous peo-
SUGGESTIONS FROM THE CULTURAL ANALYSIS

One set of implications related to the version of history presented at the site. It was noted, for example, that the page's use of graphic material (such as copperplate handwriting) superimposed on images emphasized the role of this site in (re)presenting official documentation for the user; the "documentary" nature of the site is overdetermined or made very obvious. However, it might also be read as constructing history as a series of documents that records (and indeed precedes) official action—a version of history that conceals the role in history of everyday life and of local resistances to official institutions and their actions.

This does not mean that the site should be fundamentally altered, but rather gives the producer the option to complicate the historical understanding at the site in various ways. In fact, the choice of images used on the splash screens was seen as offering this kind of challenge. The images were seen as constructing ambiguous views of Australia's early history. For the historically- and culturally-informed users, the splash screens can be seen as mobilizing the users' knowledge of real-life events (such as the attacks on indigenous communities) to challenge the "official history" reproduced in the documents shown at the site. This dialogue generates history as an ongoing debate in which all users can be involved, rather than as a static body of facts.

On the negative side, the page could be seen as simply concealing the nature of white/indigenous relations in Australian history—though only for the very naive user. If the major users for this site are understood to be professional and amateur historians
and teachers, then perhaps the numbers of naïve users are likely to be very low. However, if the audiences are extended to school students and others (such as some international users) whose experience of Australian history and society is low, this will be an issue.

Related to this is the recognition that the site offers a white version of Australian history, constructed via the documentation of a white settler society and its imperial source. This is a colonial history of Australia and an imperial history of Britain; but nowhere is it a history of indigenous Australians. It does document some of the history of indigenous communities under colonial rule, but it does so only from a (documented) white perspective. The question is whether the site’s acknowledgment of its own basis/bias is too subtle—and this is clearly an issue that the producers of the site need to address.

This relates directly to the question of authoritativeness referred to in the brief. If the site is to be seen as authoritative by professional historians and teachers, by indigenous communities, and by private citizens who know the difficult and complex history of indigenous/settler relations in Australia, then the site must acknowledge that complexity and conflict. If it does not, it risks being constructed as simplistic—and therefore as non-authoritative.

At a more pragmatic level the analysis of the splash screen layout suggested a major problem of navigation. The splash screen was the page the user first encountered and it was so complex and engaging that the user could fail to notice the very small worded direction to the Home Page at the bottom of the screen. This could lead to a great deal of frustration for users who were not able to find the way from the splash screen images into the site itself. A more obvious link was seen as preferable to avoid this problem. More importantly, the bottom of the splash screen page featured a warning to indigenous Australians that some images on the site could cause cultural offense. This warning was not only printed in a very small font but, on some computers, fell below the scroll line. This could be seen as culturally insensitive or careless, though it was primarily a technical problem. With some attention to layout this problem, too, could be avoided.

This analysis of the front page is an example of the cultural analysis conducted at
many pages on the site, each producing its own recommendations in relation to the historical narratives constructed on the page, and the effectiveness of the page for users.

USES OF THE WEB SITE

Insite Mapping uses a structured process to make visible what is already known about the different user groups visiting the Web site. The discussion draws on the everyday knowledge and experience of staff and others involved with user groups. In many cases user interests are broadly defined so that mapping is not limited to online users. Knowledge of the ways that visitors interact with exhibition contents will often be useful in mapping the likely user/content relationships online.

The Insite Mapping workshop was conducted in May 2001 with stakeholders and other staff involved with the Web site foundingdocs.gov.au or with visitors to the Federation Gallery at the NAA site in Canberra. Seven of the documents were displayed in the Federation Gallery and computer access to the Web site was provided within the exhibition. The workshop included those who had contact with the public through talks about the founding documents, those who were present at the public launch of the Web site and those who spoke to visitors in the Federation Gallery. The workshop drew together the knowledge of participants about uses of contents related to the Web site. Their examples were discussed to gain detailed information about the circumstances of use and the possible reasons for user interest.

The workshop gained descriptions of Web site uses, which included the following:

- A journalist at the launch of the Web site becomes engrossed in the images of how and when the different colonies evolved, and discusses with an NAA staff member how the modern map of Australia came about in stages.
- A person with an interest in handwriting makes a close study of the “Secret Instructions” to Lieutenant Cook.
- A postgraduate student at a Canadian university receives an e-mail from an Australian university student conducting research for the Web site. The Canadian student looks at DDW and is moved to tears to see pictures of Great Seals on the Web site, which he has studied for years but never seen. He e-mails the Australian student to thank her.
• At the Web site launch, an elderly woman shows interest in the aboriginal map of the different language groups. She comments on how different this perspective is from the European image.

• An individual uses the general map on the home page and tries to locate documents relating to their state.

• A representative of another national government, a member of the Commonwealth, studies the documents on site to construct a colonial history of their country from an Australian angle. They don’t have such resources on the public record in their own country.

• A person from the Public Record Office in London, in the Sigillography Conservation Department, e-mails NAA about the Great Seals. They comment that it is “really cool” that there is so much information at their fingertips.

• Staff from the Lord Chancellor’s Office conducting research on the Letters Patent of 1900 react to the Web site with interest and amazement.

• A Web site user clicks on an image on the splash page and is confused to end up with a list of documents. Each time they try they get something different. They are lost.

• A journalist uses information on the site about the women’s vote or about Land Rights to write articles to explain this aspect of Australian history.

• Pictures of the Letters Patent are used on the front page of an Australian newspaper to celebrate the Centenary of Federation.

• A grade school student asks her father to help her find images of explorers for a school project on the Centenary of Federation. She finds an image of the Commonwealth of Australia Constitution Act, with its red ribbons, and prints it off. She is thrilled to be holding a paper document in her hand, and comments on the beautiful ribbons.

• Two children run straight to the computer in the Federation Gallery, which gives access to the Web site. They play with it for a minute and then run off.

These examples suggest a number of distinctive ways that users were likely to engage with the contents of the Web site, including the documents, maps and historical images. The site attracted users with specialist as well as general interests. One of its main features was close engagement with the images of documents, and with historical information. The detail of the documents and their appearance were appreciated and described as “cool.” Historical images provoked personal interest and comparisons with current circumstances. Individuals tried to find their own location on maps that looked very different to conventional maps of Australia. There was international interest in what had been achieved by the Web site. As a research resource, it reached well
beyond Australia. The Web site also gave some views from an indigenous perspective. The map of Australia showing aboriginal boundaries rather than conventional state boundaries was a major feature that served to question the conventional view and possibly signal to users some of the questions posed by the Web site.

It was clear that particular contents were also being used as source material for research, teaching, school projects, journalistic writing, and other projects. Specialists in the field were personally moved by the collection of material, its visual presentation and the novelty of seeing documents of this kind presented and interpreted. Some of the examples revealed the thrilling impact for users of being able to hold in their own hands and closely examine a paper reproduction of an original (paper) document. The Internet medium created an experience that could literally be felt.

SUGGESTIONS FROM THE INSITE MAPPING

The examples revealed that users extended into much younger age groups than the site's design accommodated well. The difficulties were not surprising, since the site had not been designed for them, but for adults. Grade school children who managed to find the material needed help with the contents and with the printing of documents. If the NAA wanted to broaden the user base, changes needed to be made to the structure and navigation terms to make them more descriptive. The thrill of reproducing a document also meant it was vital to resolve copyright issues and to communicate them effectively. The site had been ambiguous about conditions for printing documents.

During the workshop a specific request was made that the site be promoted through the Departments of Education to increase awareness of the Web site in schools, including grade schools. This would provide valuable resources to support the study of citizenship, which is often taught in the final year of grade school or the first year of secondary school. Further recommendations were made in the report for changes to the Web site navigation terms and structure to cater for the extended user groups discussed in the workshop.

CONCLUSION

The focus of this article is on new approaches applied to the evaluation of museum Web sites, to improve their communication with users. The two methodologies described briefly above interlock via their conception of the user. In both analyses the user is conceptualised as complex and active. Both methodologies work with the understanding that users come from a variety of different cultural backgrounds—from different educational backgrounds, ethnicities, classes, ages, sexes, genders. Accordingly, although users are idiosyncratic in their particular uses of the Web site, they also share elements of their use with others. Those shared meanings and narratives are the basis of both the cultural analysis and the Insite Mapping.
The cultural analysis starts with the material at the site and explores the kinds of communication that content makes possible for users. It explores the way that content identifies the institution mounting the site (e.g., as authoritative or not) as well as the meanings and narratives created by that content for a variety of users with shared cultural or professional interests. The purpose of this analysis is to identify how, where and why particular meanings are constituted (verbally, visually, by layout, etc.) at the site so that the producers of the site can change or adjust them if desired.

Inside Mapping™ works from a complementary perspective. It assumes the content at the site, and explores the ways in which users interact with that material—the meanings they make, the interests they explore. Again the purpose of this analysis is to provide the producers of the site with insights they may use to adjust or change the materials at the site to make the site more accessible and useful to a range of users.

Both analyses were important in suggesting ways the Web site could communicate to wider audiences. For example, the Web site was already being accessed by grade school and lower secondary school users because of the images of documents and the relevance of historical content to curriculum themes. It was clear that the site would need additional navigation and comment, in simpler and more direct terms, to maintain for a younger audience the multiple readings of history that had been carefully constructed within the Web site for the original target audiences.

Museums are still grappling with the new technologies that have become important in communicating to visitors. As Dierking and Falk have discussed, new media are perhaps more potent than conventional exhibitions in “interpreting certain specific ideas, helping to make them more accessible to visitors” (Dierking and Falk 1998:60). Moving image, sound and text in combination can potentially convey ideas and contexts with greater clarity and impact than the displays of objects themselves. Certainly, they are a welcome addition as museums work to increase understanding and engagement with their visitors.

In this essay we present some examples of new approaches that focus on the relationships created with users by one Web site, Documenting a Democracy. We see these approaches as moving closer to the heart of museum work in their concern with interpretation and meaning making activity. The results of this research should be more directly helpful to the creative work of Web curators and producers. Looking ahead, this kind of intelligence about users could also shape the communications strategy of museums as they fulfill their mission with visitors, users and stakeholders.

REFERENCES


**NOTE**

1. The words used to describe people who access museums through the Web reveal the different traditions of research in which they are made visible and discussed. We have chosen to make a distinction in this paper between “visitors” to museums and “users” for museum Web sites. “User” is the more common word for individuals who access the Web. Although the word has connotations of simple, pragmatic actions rather than cultural activity and meaning creation, it also signals greater interactivity and purpose than the word “audience.” Current theoretical discussion employs “audience” and this will be used when drawing from existing sources.