Teaching the Levees: Creating an Online Resource to Facilitate Democratic Discourse and Civic Engagement

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Abstract

In Fall 2006, the EdLab at Teachers College (TC), Columbia University received a grant from the Rockefeller Foundation to create an online educational resource to accompany the HBO Documentary Film, “When the Levees Broke: A Requiem in Four Acts.” This study focuses on the development of the Teaching the Levees (TTL) website (http://www.teachingthelevees.org/) into a dynamic, interactive community-oriented resource. Specifically, the researchers examine website activity at different stages of the TTL project to assess how effectively the various components of the online resource (e.g., Discussion Board, Curriculum Materials, Multimedia) functioned to support the objectives of the TTL project. By examining user activity on the website (e.g., curriculum requests, page visits, multimedia views, Discussion Board/Lesson Plan postings, blog comments), the researchers draw attention to features of online learning environments that promote democratic discourse and civic engagement.
Purpose

In August 2006, the HBO Documentary Film, “When the Levees Broke: A Requiem in Four Acts” premiered on television for the first time. Directed and produced by filmmaker Spike Lee, the film takes a critical look at the (in)actions of local, state, and federal agencies following Hurricane Katrina. Soon after the film was aired, Teachers College (TC), Columbia University was awarded a grant from the Rockefeller Foundation to create educational resources to accompany the documentary. After considerable discussion about what form the materials might take, the TC group decided to create two main resources for the Teaching the Levees (TTL) project: a) a curriculum book and b) an online resource. The goals of the project were as follows:

- Students will understand the many dimensions of government, communal, and personal responsibility implicated in situations of disaster.
- Students will develop a sense of empathy with victims of Hurricane Katrina, recognizing that all Americans are vulnerable to disasters of one form or another.
- Students will develop skills related to the process of democratic dialogue about controversial issues and the ability to articulate judgments about where they stand based on evidence.
- Students will use their new knowledge and skills to get involved in their communities to improve the common good.

This paper focuses on the design and development of the TTL website, an online learning environment intended to support the objectives of the TTL project. It also examines website activity at different stages of development in the TTL project to assess how various components of the online resource (e.g., Discussion Board, Curriculum Materials, Multimedia) functioned to support democratic discourse and civic engagement. By clarifying those features on the TTL website that appeared to facilitate dialogue and involvement, teachers, researchers, and instructional designers will be better able to collaborate in creating online environments that support the teaching and learning of controversial topics. This is particularly relevant in the Social Studies context as themes such as social justice, democracy, oppression, and human rights cut across multiple content areas (e.g., the Civil War, Japanese Internment, Capital Punishment).

Theoretical Perspective(s)

As computing and Internet technologies have become more ubiquitous in our society (Weiser, 1991), online tools and applications have taken on added significance in educational systems worldwide. Concurrently, many educators are unsure about the value of these digital resources (e.g., websites, streaming video) in online and face-to-face classrooms. However, contemporary students, particularly Net Generation learners, encounter these resources almost daily and look to them to enhance their educational experiences. Consequently, it is important to define and/or identify characteristics of effective online learning environments that help learners to develop specific skills or achieve a particular outcome (Burton, 1988).

The two perspectives that inform our thinking are media richness theory (MRT) (Trevino, Lengel, & Daft, 1987) and multimedia learning theory (MLT) (Mayer, 2001). According to MRT, “communication efficiency between people is affected by the fitness of the media and the characteristics of the communication task” (Sun & Cheng, 2007). Multimedia (e.g., websites,
videos, emails) that is able to effectively facilitate understanding of a topic is referred to as “media rich.” Conversely, media that fail to clarify ambiguities in a timely manner are considered to be low in media richness. The emphasis in MRT research is choosing or developing appropriate media formats that facilitate the flow of information in order to enhance understanding of a topic.

Multimedia learning theory (MLT), which “builds upon cognitive learning theory by assuming active construction of knowledge modified by prior knowledge, implies a cognitive system with limited capacity” (Grimely, 2007, p. 467). Given these cognitive limitations, Mayer (2001) suggests five stages for multimedia development: “(a) selecting relevant words for processing in verbal working memory, (b) selecting relevant images for processing in visual working memory, (c) organization selected words into a verbal mental model, (d) organizing selected images into a visual mental model, and (e) integrating verbal and visual representations as well as prior knowledge” (p. 54). The implication is that there is a set of best practices for presenting information in multimedia formats. Consequently, the MLT literature focuses on evaluating multimedia content through the lens of information processing.

In order to assess how effectively an online resource supports an activity like democratic dialogue or civic engagement, researchers must consider both media richness and cognitive fit. A website that is not “media rich” poses a major barrier to meaningful participation. Similarly, a resource that ignores principles of effective multimedia development may cause individuals to reject serious engagement.

Methods and Modes of Inquiry

In order to assess the overall effectiveness of the TTL website in facilitating democratic discourse and civic engagement, it was necessary to identify key metrics that would form the basis of our analysis. In the context of this study, the following data points were used:

- Total requests for a free copy of the curriculum book, sorted by date and location
- Total downloads of curricular materials
- Total visits to curriculum material page
- Total hits on specific pages of the TTL website (i.e., Civic Organizations, Key People and Organizations)
- Total views of specific multimedia content
- Total signups for periodic updates
- Total RSVPs to the Curriculum Launch Event
- Total postings and responses to the TTL discussion board
- Total postings and responses to the TTL lesson plan share
- Total comments on the TTL blog

By analyzing this data, we draw attention to specific features of the online learning environments that seemed to support the project objectives.

Data mining from the TTL website was the primary mode of data collection in this study. This technique is a “process for examining databases to discover and display previously unknown interrelationships, clusters, and data patterns with the goal of supporting improved decision-making (Benoit, 2002)” (Dringus & Ellis, 2005, p. 143). In the context of this study, data mining enabled the researchers to code and analyze all user activity on the site, thereby
allowing us to make some preliminary judgments about the efficacy of the TTL learning environment.

Measuring concepts like democratic discourse and civic engagement on an online environment is no easy task. Moreover, our reliance on quantitative data to evaluate these notions may not sit well with some researchers. However, we assert that data mining techniques are just as valid as qualitative methods such as participant interviews or focus groups. Various studies support data mining as a useful strategy for elucidating theoretical concepts such as learner behavior, learner style, and learner performance (Pahl, 2004). An additional “advantage to data mining is that it is not intrusive; the system observes learning interaction implicitly, analyses for possible patterns and subsequently (if necessary), formulate association rules highlighting the correspondence between one factor (such as mastery level) and another (learning style)” (Lee, 2005, p. 5).

Data Sources

There are two main sources of data for this study. The first is the backend systems of the Teaching the Levees website. Specifically, the web server log files provide a “thick description” (Geertz, 1973) of ongoing anonymous user activity on the website (e.g., page hits, media views). The second data source is composed of overt user activity on the website (e.g., blog comments). By analyzing data points such as requests for a free curriculum guide and postings on the discussion board, the researchers have an additional means for assessing the level of democratic discourse and civic engagement on the TTL website.

A third source of data, which we do not discuss in the context of this paper, emerged in January of 2008. This data was composed of email exchanges and informal interviews with nine high school teachers (San Diego, Long Island, NYC, Connecticut, Pennsylvania), two college professors, and two school administrators. These anecdotes are not meant to represent all educators and their utilization of the TTL website. In fact, with the exception of the school administrators, these individuals all have some type of connection to the TTL curriculum development team (i.e., TC alumni, current doctoral student). Nevertheless, these stories highlight some potential ways that teachers are using the TTL website and its related resources.

Preliminary Results

<table>
<thead>
<tr>
<th>Usage metric</th>
<th>Number of occurrences</th>
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<tbody>
<tr>
<td>Total visitors to homepage*</td>
<td>137,696</td>
</tr>
<tr>
<td>Total requests for a free copy of the curriculum book, sorted by date and location*</td>
<td>16,000</td>
</tr>
<tr>
<td>Downloads of the Curriculum in PDF format*</td>
<td>2,379</td>
</tr>
<tr>
<td>Requests for Periodic Updates*</td>
<td>2,980</td>
</tr>
<tr>
<td>Multimedia Content Views **</td>
<td>1,672</td>
</tr>
<tr>
<td>RSVPs to Curriculum Launch Event**</td>
<td>844</td>
</tr>
<tr>
<td>Total postings to discussion board / Total responses on discussion board**</td>
<td>21 / 20</td>
</tr>
<tr>
<td>Total lesson plan postings / Total responses to shared lesson plans**</td>
<td>7 / 6</td>
</tr>
<tr>
<td>Total comments on the blog***</td>
<td>43</td>
</tr>
</tbody>
</table>

Table 1: Metrics for evaluating online interactions
From December 2006 to August 2007, there were 22,506 visitors to the TTL website. From August 2007 to March 2008, traffic has increased over 600 percent to 137,696. In that time period 3,274 additional requests for the curriculum packet were made. This figure probably would have been higher had free copies of the curriculum not run out; there were only 16,000 hard copies of the curriculum available for distribution. These requests were made from all 50 U.S. states and the District of Columbia (see Figure 1).

Of particular note, is the 2,379 downloads of the digital version of the TTL curriculum from the website. Additionally, other supplementary digital materials were downloaded from the website, albeit much less frequently:

<table>
<thead>
<tr>
<th>Supplementary Digital Resources</th>
<th>Times Downloaded</th>
</tr>
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<tbody>
<tr>
<td>Katrina and Environmental Justice Lesson Plan</td>
<td>424</td>
</tr>
<tr>
<td>Where is My Government?” Lesson Plan</td>
<td>408</td>
</tr>
<tr>
<td>Guidelines for Democratic Dialogue</td>
<td>235</td>
</tr>
<tr>
<td>Talking About Race and Racism in the Classroom</td>
<td>227</td>
</tr>
<tr>
<td>The “Mardi Gras Indians”</td>
<td>191</td>
</tr>
</tbody>
</table>

Table 2: Downloads of Supplementary Digital Resources

Another mode by which individuals interacted with the website was requesting a periodic update. From December 2006 to August 2007, there were a total of 2,089 requests for periodic
updates from the TTL project. From August 2007 to March 2008, there were an additional 891 requests, for a total of 2,980. These updates provided subscribers with information on what new additions were made to the website.

Another relatively popular section of the TTL website was Multimedia. The excerpt below describes the purpose of these materials:

This section highlights several videos as examples of how ideas about democracy are made more salient through interactions with media – culminating in “The Democracy Kit” episode. By no means an exhaustive list, we hope the critical questions (below) fuel discussions about the potential of media as an integral part of teaching and learning around the issues encountered in the Teaching the Levees curriculum.

From July 2007 to August 2007, there were 734 views of the content on this page. This number increased by 938 to 1,672 between August 2007 and March 2008.

The last sections of the TTL website that we analyzed were the Forum and Blog. Table 3 shows how the change in activity between July/August 2007 and August 2007/March 2008.

<table>
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<tbody>
<tr>
<td>Total postings to discussion board / Total responses on discussion board</td>
<td>8/5</td>
<td>21 / 20</td>
</tr>
<tr>
<td>Total lesson plan postings / Total responses to shared lesson plans</td>
<td>4/1</td>
<td>7 / 6</td>
</tr>
<tr>
<td>Total comments on the blog</td>
<td>3/0</td>
<td>43</td>
</tr>
</tbody>
</table>

Table 3: Comparison of Forum and Blog Activity

These figures do not include the number of times these pages/posts were visited; they only capture the number of times an individual posted a resource or comment. There are several possible explanations for the relative lack of activity on these sections. First, users were required to create a log in order to post materials or make comments. Second, these resources were not a central part of the TTL website and very little was done to actively promote these spaces as virtual communities. Finally, the small number of resources in these sections may have discouraged people from participating.

Our preliminary results suggests that the website was able to successfully engage individuals on some level in the TTL project. What is not possible to know from our analysis of backend and overt user data is exactly how the TTL website and its related resources were utilized. For example, we do not know if a visit to the homepage translated into a dialogue with another individual or if a downloaded lesson plan became the foundation for a school-sponsored community project. However, anecdotal evidence that we began documenting in January 2008 clearly shows that educators are using the materials on the TTL website to support classroom dialogues and school civic engagement projects. For instance, one teacher is using the website to organize service learning trips for her high school students. Another teacher is using the website as a foundation for conducting an investigation of what has happened in New Orleans in the years Hurricane Katrina. Although these specific activities cannot be generalized to all visitors of the TTL website, we know they are occurring. We hope that the launch of two additional
website resources—Professional Development and Volunteer Opportunities—in April 2008 provides educators with additional opportunities for engagement.

Educational Significance

Online learning environments can facilitate democratic discourse, civic engagement, and other activities related to social change and justice. Moreover, they have the capacity to be a resource for constructivist learning. However, there are also pitfalls to be avoided when designing, implementing, and managing these digital resources. This study adds a unique perspective to the literature on online learning environments by analyzing and evaluating the case of a topical, dynamic, interactive, content-rich, and community-oriented website. Furthermore, since the development of the TTL website was segmented into several stages, the study affords a temporal and progressive evaluation of various features on the website. As such, we are able to evaluate its components and their relative value for fostering site participation. Educators who identify a similar overarching goal for a website may benefit from our study to purposively develop the functionality of that website to operate optimally as a learning tool.

Select References


