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Evaluation Summary:

The Media Machine: A Cultural Studies Environment

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Full Report: http://ccnmtl.columbia.edu/projects/evaluations/mediamachine.pdf
Summary: http://ccnmtl.columbia.edu/projects/evaluations/mediamachine_summary.pdf (this document)

Project Description: Background & Purpose

Most evaluation designs employ pre- and posttests to ascertain the impact that a given, but isolated intervention has had on its test subjects. However, in this case, the intervention, namely, the Media Machine, could not be isolated from other potential interventions. Therefore, in this evaluation project we elected to use a different approach. Rather than a pre-and posttest design, we compared the actual uses students made of the technology, the uses early designers made of it, and the uses the professor intended. This approach yielded evaluative and research insights for both technology and pedagogy.

According to CCNMTL, the goal of the Media Machine database is to "create a flexible teaching and learning environment…with video segments situated in a specific context [and] supported by student- and teacher-generated leading questions, movie descriptions, and commentary, while continuing to populate the database with purposeful content." In this report, we will discuss the use of the Media Machine database as it relates to this goal.

Project: The Media Machine

The Media Machine was developed by the CCNMTL in collaboration with Professor John Broughton. Broughton's Aesthetics of Technology class relies heavily on video and film materials. Through their engagement with this material, students develop media literacy. For Broughton, media literacy is the ability to read and understand media forms as text – that is, to grasp the underlying meanings in media messages. By allowing students to view assigned clips before and after class, the Media Machine intends to provoke thought and insight on the part of students. Students have time to comprehend the clips, drawing connections between them, assigned readings, and class lectures and discussions.

Students can access video clips in two ways. First, the online version of the course syllabus contains links to the video clips assigned for each week. Clicking on the links opens the particular clips to be viewed. Students can also access the database directly and search for clips either by name, title/scene, author (director), keyword, and theme.

The Media Machine enables the professor to assign video clips for review prior to class discussion. In the past, students read assigned chapters and articles before class and viewed video clips in class. With the introduction of the Media Machine, students view clips in advance of each class, thus becoming familiar with them ahead of time. Broughton maintains that seeing the clips before and then during class helps students view them more analytically.

Overview of the Evaluation Process

We utilized several standard evaluation methods; namely, focus groups, surveys, observations, and interviews.

Focus groups

Focus groups were used to gather large amounts of impressionistic data from subjects who had had some experience using the technology.

Early in October, we met with the students in the Aesthetics of Technology class to discuss their initial impressions of the Media Machine. The purpose of this meeting was: 1) to gather evaluation data, and 2) to identify key subject areas on which to focus subsequent EVALUATIVE efforts. The content of the focus groups was recorded by hand and later transcribed.

Survey

We developed a questionnaire to administer in the classroom. The questionnaire was comprised primarily of open-ended questions about the students' use of the Media Machine. The instrument was administered in November -- mid-way through the semester, when students had had ample opportunity to interact with the technology and to develop routines around its use.

Observation

Observation was done both in the classroom and online. Classroom observation entailed attending classes and noting students' comments about the Media Machine, AND PARTICULARLY, any concerns that could be addressed by the technology. Additionally, we observed the database firsthand, as users. Early in the evaluation process, we were assigned usernames and passwords that enabled us access to the database. We used the database on several occasions, each time noting our observations with respect to its accessibility, interface design (especially navigability), and content.

Interviews

We used an "active interview" (Holstein & Gubrium 1995, 90) style. Rather than a simple question and answer format, the active interview resembles a conversation. It involves first constructing a loose set of questions covering the basic knowledge one is attempting to uncover. This loose interview format is then used to co-construct a narrative with each respondent.

Findings

Access

A majority of students reported accessing the Media Machine at least once a week (58%). The remainder reported using the Media Machine only once a month. Sessions generally lasted an hour or less. The latter is reasonable, given the short running time of most clips. Students appreciated being able to download and view clips before class. As one student noted, "The movie viewings are most helpful. It is an easy way to watch these without having to go rent them." Another student cited "convenience…and accessibility" as the most beneficial aspects of the technology.

However, as one student noted, "when technology fails, i.e., the clip won't present itself on the computer because of a slow connection — it seems to create a great personal frustration."

In the classroom, access to the database was impeded by poor coordination and unstable network connectivity. Originally, Professor Broughton thought that the classroom he had been assigned was not wired for network access. When he discovered that it was, he ordered the computer equipment he needed to access the database, only to find that the network connection was spotty at best. Such access problems are beyond the ken of CCNMTL. They speak instead to a lack of integration among departments at the University.

Design
Many interface design flaws are the result of assumptions made on the part of designers about how the technology will be used, who will use it, and what skills (technical and cognitive) users will possess.

While no students cited it as a problem, we found the "help" section inadequate. One is left to conjecture that students either did not use the help feature or did not find it useful enough to comment on.

Although the interface appears straightforward, some students did not find it so. Moreover, while the search features are functionally powerful, they are not simple to understand for those unacquainted with databases.

Content
Students found the material in the database intriguing, but often insufficient. Some said the clips were too short to understand what idea they were supposed to be conveying. This, however, is a design feature that was specified by the professor. Broughton explains that he wanted the clips to be only several seconds long so as to prevent individual concepts becoming conflated with other ideas.

Some students reported wanting to see clips that were not included in the database and being disappointed at having no way to add them. As one student said, "It is very frustrating to use because I may have an idea about a film that I want to discuss — but the clip I want isn't the one that is posted. I have to derive my ideas from the clip rather than seeking a clip that illustrates an idea." Another potential weakness is that the keywords and themes are not specific to any course. Since Professor Broughton uses the database in several classes, the keywords and themes are not always appropriate to the particular topics covered therein. Still, students appreciated having keywords and themes to search by. One student found it useful that the database "is broken up into subject matter. It helps me think of films in different ways."

Students also complained about the quality of the clips. Because they are in Real Player format, the viewing area is quite small (approximately 3x4 inches). The compression of the video also reduces its quality, often significantly. As one student commented, "the speed of the clips is sometimes off, making viewing the movies fairly annoying." Another student said, "[the database] can be slow. The picture quality and size [are] not as good as a TV." Such quality issues must, of course, be balanced against the very real bandwidth and data storage constraints typical of most Internet hardware.

Recommendations

Here, we will outline several recommendations that may help the Center to realize its aims, at least in regard to this particular technology project.

Students who access the Media Machine from the computer lab are often unable to hear the audio component of the clips. To remedy this, students must be able to access the database from home or labs must be equipped with headphones.

Students must receive better instruction from faculty or CCNMTL staff in using the database. A training session or even a printed instruction sheet would provide students with the information they need to begin using the technology effectively. Students are currently left to figure out the technology on their own. For some, the learning curve is quite steep. While the online syllabus contains directions, we found that many students were either unable or unwilling to follow them properly. A training session that explains how the database works would therefore be most beneficial.

While searching the database is straightforward for many students, the very power of the interface can itself be a weakness. The search features allow students to locate clips quickly and accurately. However, such efficiency impedes what Professor Broughton calls "incidental learning" – gaining knowledge and/or understanding by stumbling across items. Unstructured exploration and thus, innovative thought, could be facilitated by the addition

of dynamic and possibly randomizing search features. Finally, it may be fruitful to investigate developing a future version of the Media Machine that allows students to add their own video selections to the database.

Holstein, J., Gubrium, J., (1995), The Active Interview, Sage Publications, 90.