

MSTU 4022

Telecommunications, Distance Learning and Collaborative Interchange

(Fall 2005)

Assignment 2 - Media Evaluation

This article discusses the strengths and weaknesses of three different media with regard to their application to communication and learning.

Introduction

As they emerge, various media/technologies (radio, television, video, the internet/WWW etc.) have been welcomed by educators as agents that are capable of assisting in many aspects of the learning process. It is often believed that when used appropriately (i.e. interactively and with guidance), these technologies could enhance some social aspects of the learning process such as student-centered learning, cooperative and collaborative learning, as well as components of motivation such as attention, relevance, satisfaction, feedback etc. Whilst not denying the fact that these technologies do make a positive impact on the educational landscape, majority of educational technology researchers often come to the realization that as each technology matures with time, it does not completely live up to its promises. For instance, with its onset in the early 1900s, film was heralded as a technology that would alter education as no other technology had done before. In 1913 Edison predicted that "Books will soon be obsolete in schools . . . scholars will soon be instructed through the eye. It is possible to touch every branch of human knowledge with the motion picture" (As cited in Cuban 1986, 11). A few years on, all motion picture could do was to supplement a few traditional courses, leaving anxious educators with very little options. The same can be said about television, video and even the computer, and as Ramsden (1992) observed, no medium, however useful, can solve fundamental educational problems.

This difficulty in successfully applying emergent technologies to education can be attributed to the inability of educators to correctly identify the educational problems that have proven difficult to solve by the traditional approaches, and also to correctly identify a specific attribute of a particular medium that is capable of addressing that problem (Taylor 1994). There is thus a need for thorough analysis of the various media technologies with the view to addressing the broader problem of successfully integrating such technologies into education.

This article gives a brief account of one such analysis. A study was conducted on some aspects of three media - radio, television and the World Wide Web - with the aim of identifying their strengths and weaknesses in relation to their application to communication and learning problems. This paper will present the segments of the media that were studied, indicate the primary educational purpose of each media and identify some major attributes that help enhance each medium's purpose. Some major weaknesses and shortcomings of each segment will also be mentioned.

Analysis of Media

1. Broadcast Radio (1010 WINS, New York)

1010 WINS is an all-news radio station in New York City operating at 1010 kHz and owned by Infinity Broadcasting. With the slogan, "*You give us 22 minutes, we'll give you the world.*" the main purpose of the station is to inform its listeners about all current events and issues taking place the world over using non-interactive broadcast audio. On Wednesday October 19, 2005, between 9.00 and 9.30am, I listened to a news broadcast by this station, and the salient aspects of this medium I could identify are: (i) Coverage, (ii) Expert Presenters, (iii) Live Presence, (iv) Description, and (v) Summary. These attributes will now be elaborated to show how the medium applies each of them for optimum effect.

(i). Coverage: As a unidirectional communication medium that does not require any input or active participation from listeners, radio is capable of covering a wide range of issues within a limited time. For example between 9.00 and 9.30am, 1010 WINS had covered the local and world news, weather, traffic, sports, finance and health matters. Though the issues are not presented in very fine detail they afford listeners a panoramic perspective of topical issues and events taking place locally and globally. This can be of educational value in situations where only a superficial knowledge of issues is required.

(ii) Expert Presenters: Rather than have one particular broadcaster read out what is to be presented, radio can employ the services of experts who by incorporating their personal knowledge and skills, can present the issues clearly and concisely to the general public. Thus for 1010 WINS, whilst Lee Harris presented "News", Judie DeAngellis handled "Weather", Steve Torre, "Sports", Larry Cosky for "MoneyWatch" etc. This can be of sound educational value as the experts can highlight topical issues in their respective fields as they convey their messages across. For example, whilst presenting the "Your Health" segment on 1010 WINS, Dr. McDonough, a practicing Board Certified Family Physician and Associate professor of Family Medicine and Community Health at Temple University School of Medicine, expertly educated listeners on prescription and over-the-counter drugs.

(iii) Live Presence: The medium of radio affords a broadcaster (or educator) to report issues as they unfold directly from the location rather than from a broadcast studio. This live presence can

be beneficial to listeners as they are able to keep track of events through the regular updates from reporters on location. The "Traffic" segment of the 1010 WINS news broadcast gives up-to-the-minute traffic situations on various locations within New York City, indicating where there are hitches in traffic flow, and also suggesting alternative routes. This is of vital importance to the commuting public.

(iv) Description: Availing somebody who is at a different location the opportunity to visualize and create a mental image of an object or issue can only be achieved if that object or issue is described vividly and concisely, and this can be of immense educational value to a listener. The medium of radio depends a lot more on description and other audio signals since the listener never gets the opportunity to see what is taking place. For instance, on the morning of October 19, Al Jones who was reporting on the disappearance of a boy in New Jersey on 1010 WINS radio, gave a vivid description of the boy - 10 year old, 4 feet 6 inches, last seen wearing a red T-shirt and white pants etc etc. The same news item on television only showed a picture of the boy.

(v) Summary: Giving a brief summary of what is going to be covered at the beginning of any learning exercise is highly recommended as it serves to properly orient learners. 1010 WINS not only gives brief outlines of what will be broadcast but also intermittently recaptures what has been said already. By so doing, a listener who did not completely grasp a story the first gets the opportunity to do so. The educational usefulness of this cannot be overemphasized.

Weaknesses of Broadcast Radio

Like every human endeavor, broadcast radio, despite some of its positive attributes enumerated above, certainly has its limitations when it comes to its application especially in educational settings. Three main weaknesses which are easily identified include (i) Non-Interactive, (ii) Non-Visual, and (iii) Inflexible Scheduling

(i) Non-Interactive: Like books and most other broadcast media radio does respond to audience's enquiries, and a learner must make what he or she can of the information that is communicated. When applied to an educational setting, broadcast radio may only offer descriptions of the teacher's conception, with no opportunity for iteration through the remaining learning activities.

(ii) Non-Visual: Whist not denying the fact that audio can be a great communication medium for non-sighted learners, for majority of learners (who are sighted), the lack of visuals in radio broadcasts is pedagogically unsatisfactory as visuals provide iconic or graphic versions of the verbal description. In describing the New York traffic situation, there was so much the 1010 WINS reporter could do, since without graphic images of the scene, a listener will be practically lost unless he or she has prior knowledge of the terrain being described.

(iii) Inflexible Scheduling: In an attempt to reach as broad a mass of listeners as possible, and sometimes for commercial purposes, programs on broadcast radio are scheduled at particular times which in some cases may not be suitable for some listeners. 1010 WINS for example gives its business news only at some particular time during an hour-long broadcast and so a listener who is interested in this segment obviously has to wait for that particular time, a situation which can be quite inconveniencing to a learner.

2. Broadcast Television

Unlike radio, broadcast television's primary purpose is to inform, educate and entertain viewers using text, audio and motion picture to present content. On Sunday October 23, 2005, between 12.00 and 1.00 pm, I watched a sports broadcast on FOX5, a New York based Television station of the Fox Broadcasting Company. On the same day at 6.30 - 7.00 pm, I also viewed the "World News Tonight" on ABC. Some salient attributes I could pick up from this viewing experience are: (i) Expert Presenters, (ii) Live Presence, (iii) Multiple/Ideal Perspectives, (iv) Suitable Locations, and (v) Engaging. These are elaborated further below.

(i) Expert Presenters: As previously discussed, using expert presenters, especially with the view to educating viewers, can be very beneficial. In reporting on hurricane Wilma that was ravaging through Florida, ABC's Bob Woodruff and David Muir did an excellent job of educating viewers on the origin of the hurricane, its effect so far and what it was capable of doing in the days to come.

(ii) Live Presence: FOX5's sports broadcast was mainly a coverage of the NFL. Since several teams were playing on the same day and at different locations throughout the country, the broadcast, while covering one particular event live, regularly switched to other venues to update viewers on the other events.

(iii) Ideal Perspectives: Slowly replaying (and viewing from different angles) an event that has just flashed past, is of tremendous educational benefit as the learner gets a second or even third chance to fully grasp the issue. With amazing camera antics and trick photography, FOX5 was able to display and redisplay the various sporting activities from different locations and different angles, all accompanied by expert narrations and discussions. A person watching the sports coverage on television will therefore probably be better educated than a counterpart who went to the stadium.

(iv) Suitable Locations: Motion picture typically conveys powerful messages, especially if it is being seen live as the events being covered unfold, and broadcast television effectively capitalizes on this. Apart from displaying computer-generated images indicating how hurricane *Wilma* was behaving, ABC's showing of rain-soaked reporters in Florida swaying and staggering in the wind effectively conveyed the message.

(v) Engaging: Though not controllable by viewers, television is powerfully engaging, and this advantage can be exploited effectively to assist student learning. Briefly and dramatically highlighting the main items to be covered in a broadcast, as well as intermittently using "*Still to Come...*" serves to attract and keep viewers glued to the screen. For instance on Sunday evening, ABC's "World News Tonight" opened with headlines such as "*160,000 People to be Evacuated from Florida Keys,*" "*Saddam Hussein's Dramatic Day in Court,*" "*How to Live Longer and Better*" ...

Weaknesses of Broadcast Television

Broadcast Television also obviously has its weaknesses, some of which include: (i) Non-interactive, (ii) Fast-Pace and (iii) Information-Overload.

(i) Non-Interactive: As already discussed, the non-interactivity of any medium severely limits its educational usage. Broadcast television, occasionally rhetorical in its narration of events, hardly supports a learner's cognitive efforts to discern the meaning embedded in the implicit structure of the discourse, as a viewer cannot seek clarification or make any input. On the FOX5 sports presentation, a panel of five presenters occasionally spent time discussing issues which were seldom related to what was happening on screen, yet a viewer could not partake.

(ii) Fast-Pace: In an attempt to cover as many issues as possible within a limited time (most of the time being taken up by advertising), broadcast television ends up moving at very fast pace, showing images for brief seconds, and even occasionally interrupting reporters in the middle of their presentations. For example, within a space of 5 minutes ABC had covered stories from Florida, Mexico, Cuba and Iraq. This can obviously overwhelm any learner using medium of such nature, especially as there is no opportunity to review the content.

(iii) Information-Overload: With scrolling text, voice and pictures running concurrently and uncontrollably, broadcast television easily swamps viewers with information. Whilst broadcasting the main sporting event, FOX5 for instance had scores of previous football games scrolling at the bottom of the screen, updates of the current games displayed in text in another portion, whilst occasionally discussing other issues such as baseball.

3. The World Wide Web

On Saturday October 22, 2005, I browsed two websites - <http://www.bbc.co.uk/> a multimedia web portal that covers almost everything, and <http://www.wikipedia.org>, and online encyclopedia. As typical websites, the primary communication or learning purposes of these presentational media is to use hypertext, hypermedia and multimedia web-based resources to deliver content interactively with a user. The salient features of this media I picked up include: (i) Interactivity, (ii) Direct Access, (iii) User-Controlled, (iv) Dynamic Content, and (v) Multiple Representations

(i) Interactivity: The World Wide Web is a medium in which a user can navigate and select content at will, query databases as well as ask questions and receive either pre-scripted answers or answers from other learners and from the appropriate experts. This makes the medium highly interactive and affords learner-construction of their own knowledge in contrast with the narrative media in which a learner is compelled to accede to the author's narrative. People can thus learn through discussion and collaboration, even at a distance and asynchronously. The wikipedia pages for example offer opportunities to visitors to browse for information, ask questions, post comments and responses to other user's queries, form collaborations etc.

(ii) Direct Access: The hypermedia environment as well as interconnectivity of the World Wide Web ensures that we can have direct access to several resources at a given time, access to alternative perspectives on a given topic, and also access to the authors themselves where we can initiate communication both synchronously and asynchronously. The pedagogical advantage of this is that a learner can switch directly from one topic or discipline to another and still continue on the same line of thought. On the BBC homepage, there are links to practically anything that will be of interest to a learner - News, Science, Society, Lifestyle, Entertainment, Business etc.

(iii) User-Controlled: Unlike the broadcast media where a user sits back and surrenders pace to the control of the author or broadcaster, the web medium is entirely user-controlled and learning is self-paced. An obvious pedagogical advantage over other media applications is that learners can take time to ponder over issues and can make their contribution in their own time. In browsing the wikipedia site, I had the option of either clicking certain links or skipping them, searching for information I needed, proofreading and editing my text before posting etc.

(iv) Prompt Feedback

Feedback is one motivational aspect of human learning, and it is even better if such feedback is obtained promptly as it helps in the focused, goal-oriented gathering of information and ideas by the learner. Graded quizzes at the end of most of the BBC site's learning pages benefit learners tremendously.

(v) Multiple Representations

The World Wide Web caters for almost all categories of learners as it is able to provide multiple representations of content. Text, graphics, audio and video created by various experts in their respective fields can all be delivered through webpages. This allows learners to construct multiple perspectives of issues as they criss-cross the landscape of the content area. The BBC site for instance has pages that employ text, sound and pictures to teach languages.

Weaknesses of the World Wide Web

Some shortcomings pertaining to the use of the World Wide Web for educational purposes include: (i) Interface Design, (ii) Navigational Issues and (iii) Non-Discursive. These are briefly elaborated below.

(i) Interface Design: Mixing colors, different font sizes and images in such a way that will satisfy majority of web users is a near impossible task. As web-based delivery requires more active learner participation, an interface that is repulsive to a particular learner can impact negatively on the person's learning experience. For instance I found the wikipedia pages to be heavily text based - hardly using graphics for illustration.

(ii) Navigational Issues:

In a bid to present as much relevant information as possible to users, webpages sometimes structure their information in a way that users sometimes get lost in cyberspace. The cognitive overhead i.e. "the additional mental overhead required to create, name and keep track of links" (Conklin, 1987, p.40) that results from browsing such pages, sometimes makes less processing power available for comprehension and learning. Wikipedia's numerous links can easily disorient a novice web user.

(iii) Non-Discursive: In a classroom, the discursive iteration between lecturer and student sometimes becomes a continual loop, with each person's response arising out of what the other had said. Webpages, though can offer alternative perspectives to the same question, are non-discursive or better still, cannot be interrogated, and so there can be no re-articulation in light of the student's performance or puzzlement. Despite all the rich resources, the BBC site could possibly not respond to all my inquiries related to health matters.

Conclusion

Generally, emergent technologies and media increasingly support richer forms of communication and collaboration, and education should be able to exploit this to the full. In so doing however, we must be mindful of the fact that these technologies have their limitations, and the more we recognize these limitations, the more purposeful these media will be. In this brief analysis of broadcast radio, television and the World Wide Web, several issues have been brought to the fore. The key issue however is that the quality and type of learning activity that we want these media to support, and the role that these media will play in supporting that learning process as a whole should be clearly identified.

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