Isolating the Barriers Responsible for the Reluctance of Students and Faculty to enhance their Asynchronous on-line Presentations with the Addition of Audio

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Abstract

The Graduate School of Management and Technology (GSMT) first introduced audio enhanced asynchronous instructor voice lectures into University of Maryland University College (UMUC) in fall 1998. This was done using low cost software as part of the University System of Maryland's Web Initiative in Teaching (WIT). As far as the instructor component of the asynchronous audio lectures is concerned, many students liked the audio and commented that it brought the feel of the classroom to their distant locations. This is extremely important given that one of the major criticisms levied against distance education is the perceived lack of intimacy. Student and faculty response and adoption of this technology however, has been mixed and can be characterized by a marked lack of enthusiasm. This paper describes the research project that sought to identify some of the perceived barriers to the adoption of the technology and recommend a methodology to overcome them.

Background

Dr. Kasser, then of the Graduate School of Management and Technology (GSMT) first introduced instructor voice lectures into University of Maryland University College (UMUC) in his WebTycho[1] class on software maintenance in the Computer Systems Management (CSMN) degree (CSMN) in fall 1998. He was able to do this using low cost software to add audio to his PowerPoint presentations while converting his synchronous classroom presentations to asynchronous delivery format as part of the University System of Maryland's Web Initiative in Teaching (WIT). Glimpsing the potential of the technology[2], Dr. Kasser sought to encourage his students and faculty

[1] WebTycho is the software classroom platform at UMUC.
[2] In order to provide a better understanding of the type of environment we are discussing, there are examples of such presentations on Dr. Kasser's web site on the "Asynchronous Distance Learning" page

peers to utilize the technology. Thus in Spring 1999, a team of his students in the Master of Software Engineering (MSWE) Software Project class (MSWE 617) developed a prototype WebConference capability based on a perceived need provided by the instructor. His students in the following classes have used the audio enhancement technology.

- Systems Engineering (MSWE 603) - in the spring of 1999- students in the classroom section were allowed to make their presentations asynchronously instead of in the classroom.
- Software Maintenance (CSMN 648) Sections 9040 and 9041 in the summer of 1999 - students made presentations via the WebConference.
- CSMN 648 Section 9040 in the fall 1999 - students were allowed to make presentations via the WebConference.

As far as the instructor component of the asynchronous audio lectures is concerned, many students in CSMN 648 liked the audio and commented that it brought the feel of the classroom to their distant locations. This is extremely important given that one of the major criticisms levied against distance education is the perceived lack of intimacy. Other anecdotal evidence also seems to imply that the major difference between the on-line and classroom presentations, as perceived by the audience, is the lack of "interrupt the speaker" capability in the on-line presentation.

On the other hand, Student and faculty response and adoption of this technology have been mixed. In CSMN 648 in the summer 1998, 21 out of 50 students elected to present audio presentations. In fall 1999, one out of 17 students elected for audio. In addition, three students out of 23 in the classroom section of MSWE 603 elected to produce audio and make their presentations via the class web site instead of in the classroom. Faculty response and adoption of this technology at UMUC seemed to be characterized by a marked lack of enthusiasm. It was thought that perhaps some of the same student reluctance in using the technology was occurring with the faculty, and thus instructor reluctance was investigated as part of this study.

Having achieved mixed results in terms of their participation, we were initially able to identify two barriers to developing the vocal presentation, namely –

- Actual production of the student presentations (time it takes to learn and produce), and
- Reluctance to utilize the technology (fear of failure).

This research project sought to confirm that the barriers listed above were indeed accurate, identify other perceived barriers, and based on the research, recommend a methodology to overcome them.

The usefulness to distance learning of the enhancement of classes with asynchronous audio presentations

The direct benefits of adding voice capability to the on-line asynchronous classroom are:

- The ability to enhance the on-line experience for students and provide a superior product with respect to text only classes.

(http://www.umuc.edu/~jkasser). The most notable examples are UMUC's participation at two of the PICMET conference panels in July 1999.

- Unlike the classroom lecture, which is in, real-time, the asynchronous version can be proofed and edited before posting in the classroom.
- Our opinion is that, it is easier to produce a quality lecture for asynchronous delivery than it is to deliver it in the classroom.
- The reuse potential of the entire presentation or components for incorporation into another classes. For example, Dr. Kasser's audio enhanced on-line Requirements Workshop [HREF1] module was used in two different classes on software engineering in Fall 1999, and is in place for re-use in the future sections of the classes.
- The technology also allows multiple sections of a class to be taught on-line with a lot less preparation time. This reduces the pressure on the university to locate qualified instructors in software engineering.
- The CSMN 648 on-line class at UMUC [HREF2] currently serves as a nice showcase to encourage and demonstrate the technology to other faculty, students, and other interested parties.

Thus, we believe on-line audio has value and thus it is important to understand how the technology is being perceived and why it is not being more widely adopted at UMUC.

The design and methodology of the study

This study had three phases as outlined below

a) To investigate the resistance to producing audio presentations.

   Students who did not produce audio in the WebTycho sections of CSMN 648 were surveyed to determine why they opted not to produce audio presentations. Anecdotal evidence based on preliminary data obtained by visually scanning the student's answers to survey questions posed in the final examinations in the three on-line sections of CSMN 648 pointed to 'risk of failure' and 'lack to time to experiment' as two of the factors. In addition, several adjuncts were surveyed in order to find out why they were also not using the technology.

b) Live conference test

   The University of South Australia (UniSA) is hosting a conference on 'Distance Education: An Open Question?' in September 2000 [HREF3]. A number of the conference forum sessions will be web assisted by having the presentations posted on the conference web site in a WebForum[3] environment. The reluctance and enthusiasm of presenters to produce asynchronous audio will be discussed with the presenters, and assistance provided as required.

   The opportunity will then be taken to perform side-by-side experiments into on-line communications dynamics using the "Question and Answer" (Q&A) discussions as follows:

   - One - The Q&A discussion on some of the papers will be held in an asynchronous manner similar to the use of the WebConference in CSMN 648.

[3] WebForum is a follow on to the WebConference -a separate paper on topic is in preparation.

- Two - Q&A discussion on a number of other papers will be set up synchronously at a fixed time in a chat room.
- Three - The Q&A discussion on a further set of papers will be set up asynchronously via a Listserver. This will make the discussion appear as a series of E-mails arriving at the participant's machine. The participant will thus not have to do anything special to listen to the Questions and Answers.

By virtue of this experiment, we hope to understand more about synchronous and asynchronous interactions in on-line class/conference discussions.

The conference participants at 'Distance Education: An Open Question? In September 2000 will be notified that the experiment is in progress and will be invited to participate. A survey will be developed to obtain information about the user preferences between the asynchronous and synchronous interactions.

The initial results of the earlier elements of the research will be presented at this conference.

References

HREF1 http://www.umuc.edu/~jkasser/Requirements/Workshop.htm
HREF2 http://polaris.umuc.edu/~skerby/wit/wit_presentation.htm
HREF3 http://www.com.unisa.edu.au/cccc/