Repackaging and Recycling:
Using Information Technology to Enhance Education
in the Present and the Future

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This presentation will describe a project in which MLS students repackaged the information presented in a conference on Libraries in International Development using the Internet, video, and CD ROM technologies. Students gained practical experience, melded theory with practice, and produced tangible products to show prospective employers. Faculty gained experience in teaching using new technologies. We believe that the education of the future will be exemplified by this blend of learning, doing, reflecting, and creating products to enhance the educational experience of others.
Context

A fundamental change is taking place in the way we teach, how we deliver content, how we interact with students, and how we manage innovative educational programs. The relentless pace of globalization and technological innovation are accelerating the rate of change and will impact higher education even more in the decades ahead. Educational change is proceeding at variable rates on university campuses, driven primarily by the speed of adoption of information technology, faculty willingness to experiment with technologies, and the positive stance of administrative leadership. Additional factors include changing educational needs of students, nation-wide and global student customers, underlying economies of scale and an ever increasing competition for new students. Information technology enables universities to capture the economies of scale by going state-wide, national, and global. Smart universities rely on technological innovation to increase their market share. Technology is therefore driven by, and a key driver of, the educational market place.

As a school, the School of Library and Information Management at Emporia State University embodies the view of education described above. The following phrases illustrate how we would describe ourselves:

- people first
- using technology as a tool
- customizing services
- entrepreneurial
- cutting edge
- risk taking
- valuing nimbleness
- valuing diversity
- valuing interconnectedness
- repackage/recycle/reuse
- multiple delivery methods for student learning
- global in vision and curriculum

Striving to make the above values a part of our curriculum and our delivery of the curriculum, we prepare MLS students to repackage and customize information to meet the needs of a diverse clientele using appropriate technology such as the Internet, the World Wide
Web, video production, CD ROM production, and more traditional
database searching. Creativity, entrepreneurial spirit, and passion
the topic of information transfer are admission criteria for our
students. We offer an American Library Association and North
Central Association accredited MLS on the Kansas campus and at
distance sites in Denver, Colorado; Portland, Oregon; and Grand
Forks, North Dakota. We have graduated students from distance
sites in Lincoln, Nebraska; Albuquerque, New Mexico; and Sioux
City, Iowa. We will start a new MLS cycle in Salt Lake City, Utah
in June. Currently we have about 600 students enrolled in our MLS
programs.

Philosophy of Education

Our philosophy of delivering our curriculum is to be responsive to
the needs of working adults by providing classes in different
formats. In our distance programs, students earn a degree in two
years and eight months by attending weekend intensive classes
offered about once every four weeks. These weekend intensives
meet on Friday nights from 6:00 to 9:00, on Saturdays from 8:00 to
5:00, and on Sundays from 8:00 to 12:00. The face to face weekend
intensive is supplemented by satellite, video, two way interactive
classes offered via CODEC, Internet classes, home study classes, and
classes in a mixed delivery format. Our goal is to be able to offer all
our classes off-site and off-time in a variety of media to fit different
learning styles.

This vision is consonant with that espoused by Carol Twigg in a
recent article in the Educom Review calling for the creation of a
national learning infrastructure. This national learning
infrastructure is made possible by a variety of technology mediated
learning environments “including stand-alone, computer assisted
instruction (CAI) applications; networked information resources;
experimentation via new modes of communication (e.g., computer
conferencing); and distance learning developed by both individual
institutions and consortial or statewide efforts and offered primarily,
thought not exclusively, via television.” This proposed national
learning infrastructure would “simultaneously increase access (via
the network, improve quality (through the availability of
individualized, interactive learning materials), and contain costs (by
reducing labor intensity in
instruction”(1994:21). To her vision we would add the example of a school which is blurring the boundaries between theory and application, instruction and professional practice, and education and business.

The curriculum of the School is responsive to the idea of situated learning. We believe that a strong theory base in information transfer is necessary for preparing the information professional of the future. Our students therefore receive a thorough grounding in the appropriate theories of the psychology of information use, the sociology of information, information engineering, and management of information organizations. Then in a variety of tools courses and elective courses, they apply what they have learned in the theory courses. Recently the strength of this curriculum has received national attention. In the July/August 1995 issue of American Libraries, Ostler and Dahlin discuss the crisis in library education and end with a description of three entities who are enriching the theory and vision of library education. They describe our program in the following way.

Emporia State University has developed a cogent new curriculum for library education at both the master’s and doctoral levels.

The Project

One example of the application of our curricular philosophy to the repackaging of information is seen in the activities of a number of students and faculty last year. In May of 1995, the School of Library and Information Management hosted The Fifth Conference of Librarians in International Development which brought together one hundred twenty guests and twenty-six invited papers.

The conference was organized around the theme of "A Global Conversation about Information Transfer." Experts on the international information economy, information policy, information technology, as well as librarians who have worked on international information infrastructure projects discussed the implications of the emerging global information infrastructure. Four themes emerged:

1. New Geopolitical Order. The bi-polar world that began at the
end of World War II has ended and change in the social, economic, and political order is evident to anyone who watches CNN. While it is not clear what these changes mean, it is apparent that the world is increasingly complex, dynamic and volatile.

2. New Technology. As information technology is embracing international standards, it integrates data, text, voice, and image information for delivery via networks. It is open and networked. Based on interconnectedness, it is modular and dynamic. Technology empowers knowledge professionals across the planet through real-time on-line identification and distribution of information and knowledge.

3. New Information Centers. The old storage oriented library does not work anymore. Instead a virtual, linked, global information-based organization streamlined for quality and productivity is called for.

4. New Information Environment. The stable, industrial-based system of limited competition is gone. It is being replaced with a dynamic, information-based system of unlimited competition. Markets, niche identification, and economies of scale determine the success of organizations. Old rules and ways of doing things are disappearing.

Universities as well as libraries are affected by the emergence of the new information environment. Educational markets have expanded beyond the traditional regional geographic boundaries and now serve national, as well as an international audience. Programs must be customized, timely, delivered wherever and whenever convenient to the learner.

We strongly believe in the message of the conference and in its timeliness. Part of our mission is to disseminate the content of the conference to an audience larger than that which was able to attend. Simultaneously we were able to provide our students with an educational opportunity which allowed them to apply their theoretical learning to practice and to create a product which repackaged and recycled current and timely knowledge.

Normally the knowledge created at a conference is captured at best through the publication of proceedings or may be disseminated in
articles based on topics discussed. Later these ideas may also be diffused in classroom discussion. These modalities reflect the dynamics of a positivist, industrial world view regarding dissemination and its role in education. Much information gets lost.

For example, questions and answers following presentations are rarely captured for posterity. Nor is the opportunity of having experts on-site used to pursue ideas that they have presented. Most conferences continue with the old forms and procedures. Yet we have the technology in place to capture the details and nuances of a conference that enriches and adds value to the proceedings.

Modern electronic and digital information technology embody a new intellectual order reflecting the dynamics of non-linear, self organizing, self transcendent, and loosely coupled systems. Examples would include videos, CD-ROM's, listservs, and World Wide Web pages. Use of this technology can alter in fundamental ways the diffusion of ideas in classrooms.

To capitalize on this idea, the conference processes and interactions had to be captured within the context of new technology. Thus the entire conference was videotaped. In addition to the formal presentations, a wide variety of conference activities were documented. Examples include discussions among presenters, questions and answer sessions, as well as selected interviews with presenters.

The planning and organizing of the video documentation started six months before the conference occurred. A video production class was scheduled to begin in January continuing to its conclusion in the weeks immediately following the conference. This scheduling allowed the students to learn the philosophy and techniques of video documentation. The result was conference documentation by a trained production staff undertaking their third project rather than their first. High quality recording of video sequences with accompanying sound was thereby facilitated. Students benefitted greatly from this process: high level of skill acquisition, conceptual understanding of the process of production in relation to the theoretical whole, as well as a sample for their portfolio.

While undertaking the complex processes of pre-production, production, and post-production would normally be beyond the usual
resources of a school, the fact that we had knowledgeable faculty in video production, students who had taken the aforementioned video production course, and technical support from our own Information Technology Lab helped reduce the complexity of such a project.

The Video and the Class

Once the conference in all of its variety and richness was captured on tape, the second phase of the project began. A number of students worked with faculty to edit the presentations of the keynote speakers into a series of videos. This was accomplished within six weeks of the end of the conference. These videos were then mailed to the group of students enrolled in the summer course on the Global Information Infrastructure. The students viewed the videos and discussed the issues they raised on a listserv expressly created for this purpose. Discussion was prompted by a question raised by the instructor. Then conversation was allowed to flow freely. Research by students was posted along with comments and critique by faculty.

Periodically the faculty printed out listserv messages covering a one to two week period. To facilitate content analysis printouts were assembled horizontally by time and vertically by subject. Themes were identified and correlated. The faculty members shared their analysis with listserv participants. Questions generated by the analysis instigated a rich process of value adding and dynamic scholarly discourse. Faculty analysis provided a key element in this digital discourse. The analysis provided the essential structure to what could have been merely a meandering conversation often exhibited in class discussion. Structure transforms information into knowledge.

This kind of teacher student interaction illustrates one way in which technology enhances and changes teaching. Class time is no longer spent delivering information since class participants viewed the video which captured the presentations of the conference keynote speakers. Instead class time or listserv time is spent discussing ideas. Instead of the surface discussion which is the usual hallmark of face to face classes, students could view the video at their leisure. Then they could construct thoughtful responses to the discussion questions posed on the listserv. In the same thoughtful way, the faculty
members could look at patterns which emerged in listserv discussion and shape and mold the discussion in a way different from the face to face classroom.

This kind of learning draws on what Walter Ong describes as “secondary orality.” As Ong states, “This new orality has striking resemblances to the old in its participatory mystique, present moment, and even its use of formulas. . . . Secondary orality has generated a strong group sense, for listening to spoken words forms hearers into a group, a true audience, just as reading written or printed texts turns individuals in on themselves. But secondary orality generates a sense for groups immeasurably larger than those of primary oral culture, McLuhan’s ‘global village’” (1982:137).

The learning engendered by this combination of video and listserv class allows students the richness of multiple perspectives of a large class, access to world class thinkers on a timely topic, and the ability to assimilate the knowledge reflectively and craft responses to issues in their own time frame. By having to write their responses, they have had to draw on a deeper level of cognitive ability than an oral response calls for. Faculty also benefited from the experience of teaching in this new medium. The learning activities had to be reshaped and rethought.

The CD ROM

The next stage in the process is to involve a team of students in the creation of a CD ROM based on the original video of the conference activities. This activity is another example of the repackaging and customizing that is a vital part if the School’s philosophy. The repackaging will draw on the theory of the visualization of information and on information engineering to make a new product available that is not bounded by linear constraints as is a video. Because CD ROMs will hold more information than a standard videotape, they will allow students to make more sophisticated choices in deciding how to make the information from the conference available to a user. As they log the information contained on the original video down to the sentence level, students will decide how to link ideas to make available the information in a hypertext format.
In ways not possible in real life or on video, students using the CD ROM will be able to juxtapose the ideas of different experts on the same topic and replay them at their own time. They will be able to view how the formal and informal conversations among conference participants amplified the discussion of the topic. They will be able to see the text of the speeches and hear them being spoken by the expert as they were originally delivered.

Thus the students involved in the CD ROM will be repackaging and recycling information and creating new knowledge in the way they making new combinations of information available. This kind of repackaging can continue for a number of semesters since a pool of video information has been created that can be used again and again as it is shaped for different audiences.

An initial evaluation of the success of the taping, video and CD ROM activities tells us that it is accomplishing the goals the faculty desire. It gives students an opportunity to apply their theoretical learning. It disseminates the content of a conference containing valuable information beyond what the usual life span. It allows a larger student audience to benefit from current information that can be accessed off site and off time. We are now looking forward to our next project. In 1997, the Sixth Conference of Librarians in International Development will be held at the University of Colorado at Boulder. A team of our students in the distance program in Denver will do the videotaping of the conference and have first choice of the activities of editing the video and creating the CD ROM.

This repackaging has a commercial application for the School also. Although we have done no marketing, people have begun to contact us and ask to buy copies of the video. We anticipate the CD ROM will have an equal or greater attraction for business people interested in the Global Information Infrastructure as well as for librarians and area studies faculty. As a faculty we have to decide how much effort we want to put into marketing and distributing these products. It looks like this is a project for the class in information brokering.

Conclusion

This new approach to curriculum design embodies the values and techniques of the global information economy. Some of these
include seizing opportunities, sharing risks, allowing for multiple inputs and multiple outcomes. It also embodies the philosophy of the School to use technology as a tool to enhance learning. This cutting edge, entrepreneurial thrust will enable us to repackage/recycle/reuse information while giving our students the opportunity to apply what they have learned--hopefully becoming more marketable in today’s competitive job market. We believe that this kind of experimental activity is the way higher education can remain viable in the 21st century.

References

