Reconceptualizing the Linked Courses Model

MARY BAXTER
University of Houston
Houston, TX USA
Mebaxter1@sbcglobal.net

To help students meet the demands of society, the University of Houston is using the framework of learning communities and constructivism to create a cross-disciplinary approach to teaching to provide media-rich thematically linked courses to engage a diverse student population. A case study investigated three semesters of thematically linked courses, *Places in Time and Multicultural America*, that used a thematic cross-disciplinary approach to curriculum involving the History and English departments, the Instructional Technology Program, the University Writing Center, and the Museum of Fine Arts, Houston. During this study, the need for a new linked courses model evolved that supports the inclusion of university and community resources.

THE STUDY

At the University of Houston, faculty members employed the framework of learning communities and constructivism to create a cross-disciplinary approach to teaching to provide media-rich thematically linked courses to engage a diverse student population. The American History and English courses were related by themes and syllabi reflected in student compositions and multimedia projects assigned in the English course. An overview of the component interaction between English, American History, Information Technology (IT) Program, and art taught by an instructor from the Museum of Fine Arts Houston (MFAH), are depicted in Figure 1.
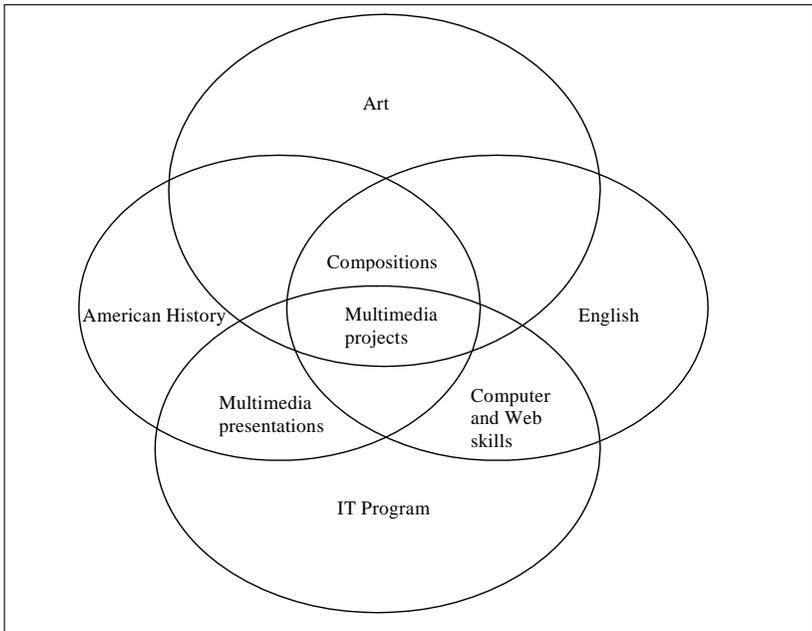
Figure 1. Linked Courses component relationships

University resources were needed for successful implementation of the linked courses. The IT Program supported the technology needs of the model. The IT instructor taught the students the skills needed to complete the multimedia projects and supported the American History instructor as needed to generate and support multimedia lecture materials. The allocation, configuration, and support of laptops were vital to ensuring the learning activities ran smoothly.

This study at the University of Houston demonstrated the importance of using community resources. Art was added as a component to provide another dimension to student learning. Introducing art within the history course framework provided a visual arts component that expanded student ideas about art and society and to get them to critically think about art. The thematic relationship of the content and sharing of syllabi between the English and American History courses is depicted in Figure 2. The intersection of the Venn diagram shows the interlacing of English composition, American History, technology, and art components.
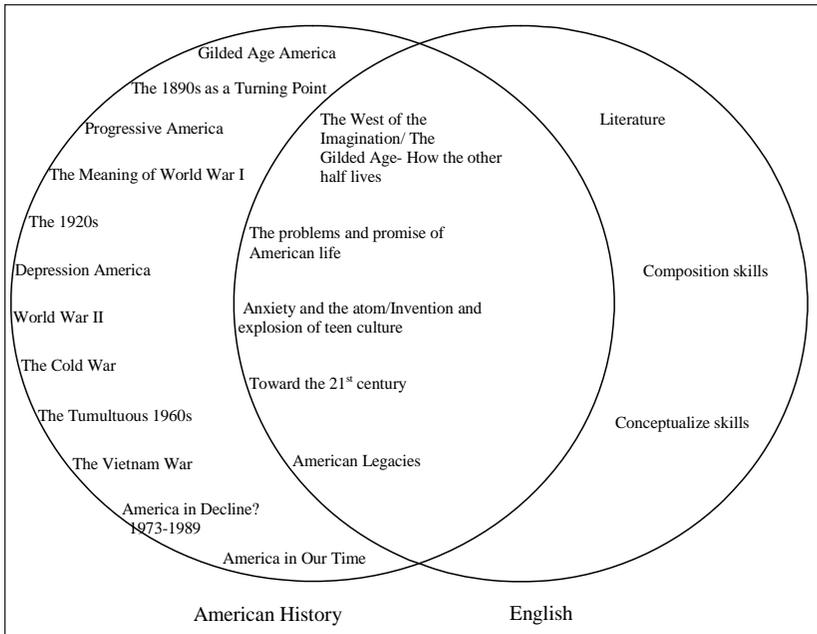
Gilded Age America

The 1890s as a Turning Point

Progressive America

The West of the
Imagination/ The
Gilded Age- How the other
half lives

Literature

The Meaning of World War I

The 1920s

The problems and promise of
American life

Depression America

Composition skills

World War II

Anxiety and the atom/Invention and
explosion of teen culture

The Cold War

Toward the 21st century

The Tumultuous 1960s

Conceptualize skills

The Vietnam War

American Legacies

America in Decline?
1973-1989

America in Our Time

American History

English

Figure 2. English and American History thematic relationship

Questionnaires and in-person interviews were used to gather data from the American History, English, Art, and IT faculty, as well as the supporting staff to evaluate their perceived outcome covering three semesters of linked course offerings. The analysis of data indicated that both strengths and challenges were identified by all members of the team.

Strengths

One of the greatest strengths of the linked courses concept was the collaboration effort in planning and implementing the learning community. There continued to be an environment of communication, testing of ideas, and of obtaining feedback that helped this concept evolve into a rich and meaningful experience. This experience energized instructors and provided not only a learning community of support and personal relationships with the instructors, support staff, and freshman students but ultimately became a community of learners. Instructors continued to be creative and innovative;

they learned more about teaching and experimenting with how to use technology in the classroom.

Important to the success of this effort, a group of committed and motivated instructors joined together across disciplines to implement the linked courses. Each semester, the students responded positively to the linked courses: they were more motivated, excited, and enthusiastic than students in a standard lecture class. They were also engaged and benefited from a meaningful experience which resulted in higher grades and attendance than the standard lecture classes, and there were no discipline problems. The students benefited from the ownership of their multimedia projects and in writing and performing research.

Planning and implementing the first linked course, *Places in Time*, required instructor time to reinvent the curriculum and to plan and coordinate this experience. Weekly meetings supported the planning and coordination efforts which allowed for real-time syllabi changes that helped prevent the overloading of the students. Instructors, IT graduate students, writing consultants, and freshman students all benefited from the communication and planning efforts. IT graduate students were able to observe real-world teaching and collaborating and some were able to participate as researchers. For the second and third linked course offering, *Multicultural America,* the instructors were able to reuse existing concepts and some resources, which helped reduce the planning time. It was also easier to coordinate because the number of web projects was reduced from five to three and both classes were held in one large room. After *Places in Time*, a core instructor team evolved to continue the concept. These changes eliminated the need for more formal planning meetings, which further reduced instructor time.

 The use of technology in the classroom added another dimension to this concept. Students not only learned the technology skills needed to complete their multimedia projects, they were able to use laptops to become active investigators of knowledge by researching topics on the Internet. An instant feedback system was used to help reinforce the lecture and to help instructors interact with the students.

CHALLENGES

A challenge at first for the faculty was learning to work as a team in an environment that is highly individualistic which resulted is differing visions and opinions; however, over time, all participants learned how to work as a team. Coordinating the syllabus between the English class and the American History class was a challenge. The syllabus required adjustments throughout the semester and as needed to accommodate the technology components.

Balance of content between the English and American History courses were a challenge at first. The first two semesters, the English content was diluted due to insufficient class time, the increased number of multimedia projects, and that Fridays were dedicated to learning technology and students working on their projects. Including technology in the English class also reduced writing time and collaboration activities. This problem continued the following semester even though the number of multimedia projects were reduced from five projects to three and help with technology skills was moved to a lab outside of class time. The final semester, in addition to the changes made in the previous semester, an extra hour of class time was added which helped to alleviate the problem of diluted English content. This balance of content and focus on writing and rhetoric were also a concern of administrators.

Registration problems, academic bureaucracy, and the willingness to take risks were challenges identified by some of the participants. Registration problems were a challenge each semester. The open registration system of the university did not enforce the coenrollment requirement; this required the instructors to resolve this problem on the first day of class. Instructors are hopeful that using Peoplesoft software in the future will enable the university to handle the coenrollment requirement of the linked courses. In addition to the registration problems, one instructor commented that they need to overcome the bureaucracy of making changes slowly and be willing to accept risks to effectively meet the challenges of preparing students for a digital society.

After *Places in Time* and *Multicultural America* linked courses, the desired goal of scaling the linked courses to at least 100 students did not materialize. *Places in Time* had 33 students; *Multicultural America* had 60 students the first semester; 40 for the next semester. Advertising and registration problems contributed to not achieving the desired level of class size. Scaling

the linked courses to the desired size requires additional resources such as computers for each student and additional support staff. The primary challenge for the students was that it took several weeks before some students began to understand what was going on and how the linked courses were connected.

EVOLUTION OF A NEW LINKED COURSES MODEL

The linked courses evolved over time to a model that transcends beyond the basic Linked Courses. Linked courses titled *Places in Time* and *Multicultural America* stressed the importance of active learning and using technology to help achieve this goal. The American History lecture changed to include the sharing of digital historical artifacts such as movies, music, and photographs. To provide students with an enriching experience, an instructor from MFAH shared the historical significance of art. The English class changed to include required technology skills that would enable them to produce effective multimedia Websites. These multimedia assignments would weave the history and composition requirements of the linked courses. The interweaving of technology and art extended beyond the basic definition of the Linked Courses mode. Kellogg (1999) explained the Linked Courses Model:

> This model links a cohort of students with two common courses. One course is typically content-based (science, math) and the other is an application course (writing, speech). The faculty of each course may teach independently or together and coordinate syllabi and assignments so that the classes compliment each other. The Linked Courses Model provides a shared experience for students that focuses on a content-based course that is actively supported by a skills course. (p. 1)

The university resources component is vital to successful implementation. For example, university resources included the role of IT Program instructors who taught the technology skills to the students. This teaching of technology was not a third class, but a blending of the English class content and the teaching of technology skills. It also included the Writing Center, which provided computer resources as well as support staff to help students complete their assignments. Also vital was the community component. Instructors need to find resources that extend beyond the university campus

boarders such as the MFAH instructor who taught art concepts to American History students.

A new model is needed to reflect expanding educational possibilities in providing students with a more powerful 21st century educational experience. This new model I am proposing is the Extensible Linked Courses Model that includes two or more thematically linked courses as well as other university departments and resources that extend beyond the university campus borders. This new Extensible Linked Courses Model is based on the building block approach of using two or more existing courses that are thematically linked, university resources such as the IT Program and the Writing Center, as well as community resources such as the MFAH. This building block approach is depicted in Figure 3.
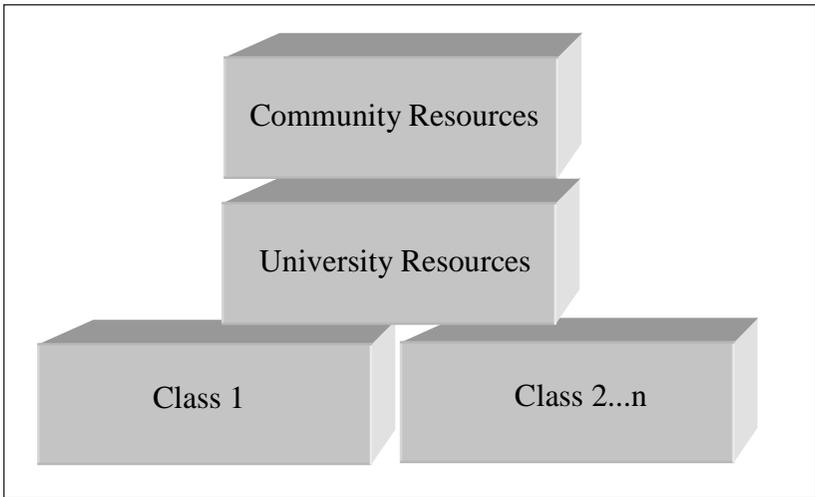
Figure 3. Building blocks of the Extensible Linked Courses Model

IMPLICATIONS OF THE EXTENSIBLE LINKED COURSES MODEL

As discovered in *Places in Time* and *Multicultural America*, using university resources, such as the IT Program and Writing Center, provides the resources and skills needed to provide a media-rich active learning environment to engage a diverse student population. The implications of using

community resources to enhance student learning are far-reaching. Just as the MFAH instructor introduced art as part of our society; other community resources can be used to help instructors add another dimension to student learning. The Extensible Linked Courses Model draws on the abundance of resources available within the university campus and in the community.

The potential for using the Extensible Linked Courses Model for other programs is promising. As discovered in this study, and touched upon in Lenning and Ebbers (1999) study, there was an environment of communication, testing of ideas, creativity, innovation, and in obtaining feedback that helped this concept evolve into a rich and meaningful experience. Instructors designed a supportive learning community, which included the support staff, the University of Houston Writing Center staff, the IT Program, and the MFAH that benefited the freshman students. Each semester was an enlightening experience for the instructors. The instructors commented that they learned more about teaching and experimented with how to use technology in the classroom. The instructors discovered, as did Huba, Epperson and McFadden (2002), that student grades and attendance were higher than the standard lecture classes and that no discipline problems occurred. Participants in the study observed that students had positive attitudes as Huba, Epperson, and McFadden (2001) found in their research. Students in this study were more motivated, excited, and enthusiastic than students in a standard lecture class and they benefited from the ownership of their projects and in writing and performing research.

Planning and implementing *Places in Time* required instructor time to reinvent the curriculum and to plan and coordinate this experience. This finding corresponded with Rasmussen and Skinnerà's (1997) discussion of instructor time and flexibility needed to plan and implement a linked courses. For *Multicultural America,* the instructors were able to reuse existing concepts and some resources which helped reduced the planning time. After *Places in Time*, a core instructor team evolved to continue the concept. These changes eliminated the need for more formal planning meetings which further reduced instructor time.

Places in Time and *Multicultural America* linked courses achieved the goal to provide students with a richer, more meaningful freshman experience. The new Extensible Linked Courses Model is a reflection on the success of *Places in Time* and *Multicultural America* undertaking. As this study demonstrated, American history, art, and writing skills can be taught in more

meaningful ways by developing creative educationally meaningful projects that demonstrate student understanding of American history and art. Students also benefited from this experience by learning technology skills that will carry forward into their academic and professional careers.

CONCLUDING REMARKS

As a researcher participating in *Places in Time* and *Multicultural America*, the opportunity to witness the magical interaction between the students, instructors, and IT support was an illuminating experience. The student motivation and engagement in the classroom was obvious. The student increase in motivation, engagement, attendance, grades, and completion rate over the standard lecture class sends a clear message that this concept is working. Instructors implemented a collaborative environment of support that allowed for the testing of ideas, creativity, innovation, and in obtaining feedback that helped this concept evolve into a rich and meaningful experience.

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