UNIVERSITY OF HOUSTON
OFFICE OF INSTITUTIONAL RESEARCH

# EXPLORATORY STUDY

# OF

# HYBRID COURSES

## AN EXECUTIVE SUMMARY

Dr. Susan E. Moreno

Sherri Lowrey

Dr. Libby Barlow

February 2006

## Executive Summary

Hybrid courses are defined at the University of Houston as courses in which 50% or more of the delivery is conducted asynchronously via instructional telecommunications (online) with the remainder being conducted synchronously in a traditional, face-to-face environment. The reasons to adopt this format at the university are varied, and sometimes have included a desire on the part of instructors to explore or develop instructional possibilities in the combination of on-line and face-to-face instruction. Often, however, the impetus has been related to saving classroom space, achieving a more favorable student-teacher ratio, or offering more scheduling flexibility for students.

The number of courses offered in the hybrid format has increased in the last few semesters with 54 in fall 2005. Knowing that the hybrid format departs from traditional teaching practices, the university undertook an exploratory study in the 2004-2005 school-year. Study objectives were to identify instructional techniques used in the on-line component, identify how students and faculty experience the course, and examine preliminary indicators of whether the format is promising as an instructional tool and as a means of learning.

Data were collected from 37 of 46 hybrid courses offered fall 2004 and spring 2005 at the University of Houston. Most courses were offered in the College of Liberal Arts and Social Sciences (CLASS) or in the Bauer College of Business (Bauer). Students in all sections were asked to complete a survey about their experiences in the course and their attitudes toward technology. Student data were also collected from two student focus groups. Data were downloaded from WebCT for each course, including usage logs and discussion board transcripts. Data from faculty were collected in two focus group discussions, and in written responses to a small number of emailed questions. Data were also collected from a focus group with instructional designers who work with faculty in CLASS and Bauer. The quantity of data collected was large. Analysis was conducted by three researchers who divided up the tasks and met periodically to review results. The main findings were collected and organized into themes by the group of researchers. The discussion following is a summary of the findings. While quantitative analysis results would be appropriate for some of the data, the quantity of information and exploratory nature of the study made an executive summary format preferable.

The main findings cover three topics: engagement, which includes depth of learning and changing habits and styles; flexibility; and use of technology. Sections are organized according to the broad themes in the data, which may come from any number of data sources. Overall, the findings painted an encouraging picture of the current use of hybrids and the future potential. Not all results were positive, however, and both the positive findings and the items of concern are presented together by theme. The summary format precludes systematic citation of data, but examples from the data are given where illumination is appropriate.

## Engagement

A dominant theme emerging from the data centered on the engagement of students and faculty in both the content of the course and the structural elements of the course. Although the data can reasonably be organized under the broad umbrella of "engagement," the findings break down into two subtypes: depth of student learning, and the changing habits and styles experienced by both students and faculty.

*Depth of Learning*

**Classes which require a synthesis of ideas may thrive in a hybrid classroom setting.** Faculty felt that students have an opportunity to think through and process the material before responding in a discussion board or discussing the topic during the face-to-face class time. Further, it may be possible for professors to know in advance which topics, concepts, and assignments students are having difficulty grasping. By monitoring the discussion board or assignments it is possible to identify student maneuvers to disengage with the material when a topic becomes difficult. The instructor can then intervene or follow up appropriately either in class or on-line to redirect students in more productive ways.

**Hybrid courses allow for topic immersion.** Face-to-face class time can deal with complex issues and materials when less demanding tasks are put on-line or preparation work is done ahead of time. Further, background information can be put on-line which makes the use of class time more efficient. Professor and students are able to spend class time engrossed in topics when all have been adequately prepared before class.

**In some courses the boundary between the classroom and the real world disappeared.** Using the real world to engage students was a successful instructional activity for students. Being exposed to real world activities made material more real, reinforced concepts and information, fostered deep learning/remembering, and set the stage for applying the material to a different context.

- The hybrid format allowed faculty to bring the real world context into the classroom to engage students in course material. There was collaboration with outside community resources as well as collaboration between students in other classes. With fewer face-to-face meetings an art history instructor asked students to participate in mandatory events at the Houston Museum of Fine Arts rather than as an add-on or for extra credit as in previous years. He was also able to build a collaborative relationship with the museum in which the art gallery became the "classroom." He explained:

    *"They (students) were also able to have a 'real world' exchange with the gallery material rather than viewing an object in class as a picture removed from its context."*

- Another professor had students in Section A critique the papers written by students in Section B when studying the same topics. The students reported receiving and giving better and more detailed feedback to students in the other section because they did not personally know the students and were not as afraid of offending non-classmates.
- A government professor added a discussion board during the last presidential election to a course where the curriculum is state-mandated. The discussion board allowed him to take advantage of the election as a teaching tool about government process while still maintaining the integrity of the course content. He answered questions and generated discussion as well as corrected student misconceptions and misinformation about the democratic process.

**Providing additional resources, links, and supplemental information allowed for deeper exploration of the subject matter.**

- One professor put background information for the course on-line, thus eliminating the usual three weeks of class time spent on background information before starting the "meat" of the course. Added materials on-line was one reason students offered as to why they would enroll in additional hybrid courses.

**Thorough use of discussion boards in hybrid courses changes the nature of student participation in the classroom.**

- A hybrid course format makes it possible to provide instruction that opens learning space for different types of students. Discussion boards open the door to students who may not otherwise participate or interact in a traditional classroom. These students may feel more comfortable expressing their ideas in writing and somewhat anonymously as opposed to publicly expressing their ideas in a large classroom. Further, discussion boards may build student confidence about course material.

- In some classrooms, the depth of discussion is sometimes notable and possibly exceeds what is taught in large classes. Lengthy and thoughtful explorations of a topic were possible and found in several courses. Some faculty were more skilled than others at getting students to respond to the discussion board. Further, the faculty often sets the tone of the discussion through explicit expectations about participation.

- Changes in the tone of discussion boards over the course of the semester point to changes in student participation. In many of the discussion boards, the tone changed from formal in the first weeks, with students giving test-like answers to questions, to an orientation in latter weeks of dialogue and questions to peers. This was characterized by the appearance of responses to messages posted by peers, and paraphrasing such as "I agree with your point" or "I don't really feel that Nora's tragic flaw was selflessness…." or asking a question of others as in the need for clarification. On student surveys, 54% of students agreed or strongly agreed that they were comfortable sharing ideas with the class, another 35% were neutral to the question and only 11% disagreed or strongly disagreed with the statement.

- Among students whose classroom used discussion boards, 50% of survey respondents agreed that the on-line discussion forum helped them learn more about the course subject. Almost 18% disagreed with the statement. When students were asked how often they posted to on-line discussions and activities, about 41% reported posting once a week and a small minority (5%) replied they posted to a discussion board several times per week. Over half (53%) indicated that they had never posted to a discussion board, which may be more of an indication that there was no discussion board operating as not all hybrid classes used a discussion board.

**Hybrid courses may allow for student collaboration that otherwise would not take place.**

- The use of students across hybrid course sections to critique each other's work by one professor enabled students to be more open and receptive to constructive criticism because of the anonymity associated with such collaboration. When the student being critiqued was not in the same classroom, students doing the critique were free to express themselves more openly. Furthermore, the comments students received from their peers felt more substantive and worthy of consideration.

4

- Hybrid courses may facilitate the development of a community of learners rather than maintaining the one-way conversation between professor and students that often occurs in a traditional course. Students reported talking, thinking, confronting, and asking questions of each other in ways they would not normally do. Discussion boards helped students feel more prepared for class because they learned about information from other students. Further, the hybrid structure allowed for multiple viewpoints, including more student opinions and less instructor opinion. For example, the interactions and discussions highlight what is important to learn. In the words of one student talking about the discussion board:

*"..(You) pick up stuff you didn't know you needed to know."*

**For some students engaging in discussions was difficult.** As reported about 19% of students did not have access to a discussion board as part of the format. Lack of discussion board utilization and preferring to interact with the professor in class may make it difficult for some students to feel engaged in hybrid course discussions.

**While structure or multiple assignments enabled some students to feel engaged and stay on task, others felt over-burdened.** Some students felt overloaded by the number of assignments required for the hybrid course. The course work felt like "busy" work and covered too much material for them to learn efficiently. These students were less inclined to register for further hybrid courses. This was the third most frequently cited problem (after general preference for traditional classes and technical difficulties) among students who indicated they would not register for another hybrid course, and the only reason cited among students who answered "maybe" to the question of whether they would sign up for another hybrid. Ten of the students who said they would register for another hybrid said they would do so *if* the work load was decreased.

*Changing Habits and Styles*

**The hybrid classroom delivery made it possible to explore the subject matter differently as the course may change substantially from a traditional lecture format. Content flexibility and an increased range of activities to engage students are two ways in which hybrid courses may significantly differ from non-hybrid, traditional classrooms.** Professors added new material to their courses or rethought the way the course content was taught or delivered. The off-class meeting time was used in a variety of ways. For example, instructors might put a lecture component on-line and use the face-to-face for discussion and other activities, while others used the on-line component for writing, discussion, or field trips and delivered lectures during class time. Faculty described a variety of ways the on-line component was used to engage students productively which gave students something "to do" during the off class meeting time. In addition to discussion boards, examples include:

- Teaching difficult skill sets. Students are rarely taught how to distinguish between good and poor internet research. One English instructor in a gateway course for the major incorporated internet research work into her gateway English course. Students attended two library workshops and were assigned extensive internet research assignments. This

on-line component allowed the professor to accomplish an educational objective that in the past had proved difficult.

- Reoccurring or interactive learning experiences. Displays, graphical representations, visuals, and audios on-line enabled students to access important information as many times as needed and at any hour for mastery.

**Lost face-to-face class time potentially means less student and faculty interaction. To compensate for this, professors built in others ways to interact with students.**

- Discussion boards. One of the major types of interaction tools used in several hybrid courses was a discussion board. In the words of one faculty member:

    *"The discussion board is a way for students to feel integrated into the class. It gives students a sense of well-being because they know they can get help. There is a sense of satisfaction of not feeling "stranded."*

    Discussion boards were used in many ways:
    - o To discuss different points of view and to confront and/or support one another's thinking.
    - o To reinforce concepts and methodologies
    - o To stimulate thinking.
    - o To foster a community among learners.
    - o To foster awareness about course content or current events.
    - o For peer critique.
    - o To post questions and supply information.
    - o For specific projects.
    - o To supplement mandated curriculum to keep information current.
    - o To resolve mundane class tasks.

    Further, the tone of discussion boards often changed over the course of a semester. Postings shifted from formal and automated in the first few weeks to more of a dialogue in the last weeks.
- Email communication with professors. While not all professors allowed students to communicate with them through emails, students did appreciate email access to professors. Forty-eight percent of survey respondents indicated that using email to get in touch with their course professors was useful. Further, some students were more comfortable communicating by email which increased the amount of interaction they might normally have with a professor in a face-to-face classroom.
- Student-faculty interaction. At the end of the spring 2005 semester, students were asked about their interaction with hybrid course instructors in comparison to instructors in traditional face-to-face courses. Thirty-two percent of the spring survey respondents indicated that there was significantly more or somewhat more interaction in the hybrid course. Students explained higher interaction with faculty by the use of on-line announcements, coursework, and access to a professor. Forty-two percent indicated that the student/instructor interaction was about the same as in a strictly face-to-face class because lost face-to-face time was made-up with on-line access and office hours.

Twenty-five percent of students thought there was somewhat less or significantly less interaction in the hybrid class. Students explained less interaction by professors directing them to meet with teaching assistants, loss of face-to-face classroom time, and discomfort or difficulty interacting with professors through technology. Over 80% of the spring survey respondents indicated they were satisfied with the amount and the quality of the interaction with the instructor.

**Students were better prepared and the quality of the work was better for the face-to-face portion of the class.** When structured effectively, the non-classroom time allowed students to prepare ahead for face-to-face class time and on-line assessments made sure students kept current. When preparation was required ahead of face-to-face class time, professors reported better professor-to-student and student-to-student interactions in the classroom. Students also felt that they came to class more prepared and were more engaged with the material because of the non-classroom requirements. Student survey results support higher student engagement because of on-line material. Over 67% of survey respondents agreed or strongly agreed that they were involved with their course because of information found on the website, that the course structure allowed for high engagement with the material, and that the on-line material was well planned. Generally students felt they spent more time on tasks and were more involved with class information.

**Paced quizzes and assessment activities may deter student procrastination.** Part of the instructional design process is to help structure and organize the learning environment. Faculty who reported developing a workable structure were able to reign in student uncertainty. Over 85% (N=313) of students "agreed" or "strongly agreed" expectations in the class were clear and their responsibilities were understood. Over 75% of students reported the structure of the course allowed them to be highly engaged with the material. In addition, courses that were more organized and structured enabled students to be more organized and independent in their course work.

**Students reported that the habit of checking the hybrid course daily for update information transferred to checking other non-hybrid courses for update information.** Thus, checking in with their hybrid course enabled students to keep up with other classes, an activity that they would not normally have done without the hybrid course.

**Hybrid courses may allow for differences in students' learning styles.** When instructional designers were part of the course planning several "best practices" were found to be present. In some courses, it was possible to find the same information in different formats. For example, in one course the same content was found displayed in a power point, in an audio lecture, and again in lecture notes. Instructional designers suggest this strategy to engage students who have different learning preferences.

**Hybrid courses create more work for faculty both upfront and during the course.** Time is heavily invested in course preparation initially and then updating throughout the semester. As such, most faculty agreed that it would be inappropriate to have non-tenured faculty teaching hybrid courses as they would not be able to devote the necessary time to their research to meet

tenure requirements and to hybrid course preparation. The tenure reward system would have to be rethought, if non-tenure faculty were to participate in hybrid courses.

Training for faculty to use hybrids effectively is another time commitment issue that must be considered. Developing a hybrid can be quite time consuming, depending on the level of interest and/or technical ability of the faculty.

**Some faculty were uneasy with some aspects of student communication.** Because students' ability to communicate with each other is increased with the use of discussion boards, faculty were concerned that students may lose respect for the professor's position in the classroom. The hybrid course format might increase the probability of a breakdown in the teacher-student power relationship. If several students are unhappy with something within the classroom, things could quickly get out of hand. As one professor put it:

> *"You can have a mutiny on your hands if you don't*
> *keep on top of things."*

Students do not necessarily notice a difference in faculty power particularly if the professor set clear guidelines and structure for the classroom. For example, one instructor had dropped a significant portion of the students at the beginning of the class when those students failed to respond to required assignments in the first two weeks of the class. Setting such standards in the course sends a clear message of who is in charge.

**Failure to integrate the use of technology with the course content made it difficult to engage with the course.** Students could articulate the difference between a hybrid in which the content was the main component and the technology was used as the vehicle for delivery of the content, and courses where content was not integrated with the technology. For some students, the inconsistency between the on-line material and the course readings lead to their decision not to participate in further hybrid courses. As one student wrote,

> *"…I felt as if I was very unprepared for tests and quizzes due to the fact that the*
> *information provided on the [website] had no reference to the information being*
> *provided in the class."*

**Student procrastination has the potential to be problematic in a hybrid.** Students can become overwhelmed with the amount of work required causing them to spiral downward in meeting their deadlines. A shift in responsibility from the student to the instructor to make sure that student keeps up on work is one response to this issue. To maintain contact with and awareness of student learning, faculty required participation in discussion boards, attendance, and or weekly quizzes. These activities assisted students in staying on task.

## Flexibility

**Accessibility through discussion boards or email may allow students more flexibility with their faculty interactions.** For some students the ability to communicate with professors through email was one explanation as to why they felt they had more interaction with hybrid

faculty over faculty in more traditional classroom settings. They were more comfortable communicating through this medium than in face-to-face interactions with faculty.

**Hybrid courses allow students flexibility in scheduling school and work.** Many students reported using the extra time they would have spent coming to class on other school-related tasks such as studying. Students also indicated that coming to class one less day a week helped them with their work and home schedules. In fact, students who indicated that they would take more hybrid courses pointed to the convenience, efficiency, and flexibility of the hybrid course to explain their intent to take more hybrid courses. Further, the flexibility of the hybrid course saved students time, cut down on drive time and gas money, enabled them to access the course at work and at home, and gave them access to missed material on-line when they needed it.

**Hybrid courses build in flexibility to professor's weekly schedule.** In times of professional or personal emergency, the professor can maintain contact and connection with the class without too much loss of time or coverage of course material. For example, one professor had a family emergency over a period of weeks but was able to stay in contact with students, and class went on largely undisrupted.

## Use of Technology

**The use of technology in the hybrid course is convenient and secure.** Advantages of technology include:
- easy bookkeeping especially in large classes;
- ease of dispensing information on-line and through discussion boards;
- ease of turning in assignments;
- taking attendance;
- decreased cost to students as copyrighted materials can be securely accessed; and
- sharing examples of how to approach assignments.

**Technology was problematic when WebCT or CourseCompass was not running or home computers were not configured to easily interface with the technology.** When WebCT was down a student's test or homework might not be accepted or only partially accepted or the student was unable to access course material in their planned time. There was also a learning curve for students as they had to learn to manipulate the internet explorer browser for use with their home computer. Further, some students were hindered by limited access to computers and/or the internet and by limited computer skills. Faculty were, at times, understanding of technological issues as they were victims of technology themselves. One student said,

> *"Our professor understood that when I told him I lost my part of my test because WebCT erased my answers-- he understood immediately because the same thing had happened to him."*

**There is tremendous learning required on the part of the instructor to make the most of the medium.** The challenge in hybrid instruction is to make the on-line component of the hybrid central to what is going on in the class. Lack of technical expertise manifested through uncertainty about how to develop and use hybrid. Deciding on content is not the issue. Rather, the need is to explore options for incorporating the on-line component with a technical expert.

9

- Many hybrid courses have benefited from input from instructional designers. For faculty who work with an instructional designer, there is also the challenge for the designer to "get inside an instructor's head" and know what to use where. It takes time to experiment.
- Faculty may not be comfortable with many aspects of the technology and need technology support people. This includes support in "smart" classrooms as well as on-line support with WebCT. Some faculty expressed the feeling that they and the students were having similar technology experiences. As one faculty member put it:

> *"When the technology did not work, they (the students) could see that I was struggling just like they were."*

**Use of technology may be a deterrent for some students**. Students often reported they did not know they were signing up for a hybrid. In fact, some students indicated that they would not enroll in another hybrid course in part because they did not know the course was a hybrid when they enrolled. Lack of knowledge that the course was a hybrid may be due partly to students' lack of information, but it is also possible that the professor did not want the course to be listed as a hybrid. One professor indicated this desire and explained that students seemed more willing to engage in the course when they were initially unaware that the course was a hybrid. Five of the 89 students who said they would not register for another hybrid indicated they had not known the current course was a hybrid when they registered for it.