

A Cross-Case Analysis of How Faculty Connect Learning in Hybrid Courses

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Abstract: This qualitative, multiple case study analysis found that faculty use hybrid courses to facilitate learning by creating a continuous learning loop between the in-person and online environments. Connecting learning in both environments helps students acquire and integrate new knowledge, extend and refine knowledge, and use knowledge meaningfully.

The Importance of the Issue to Research and Practice

Higher education continues to increase the use of computer-mediated communication (CMC) technologies to support instruction. Eastmond (1998) points out pedagogical benefits of CMC technologies include “important educational promise for engendering active and experiential learning, encouraging reflection and application, and fostering collaboration and individualized construction of meaning in learning communities” (p. 40). To reap the benefits of both online and in-person learning, many universities have adopted a “hybrid” instructional solution (Garnham & Kaleta, 2002). Using online activities, instructors reduce how many times students meet face-to-face during the semester. Many hybrid courses conduct between 30 to 75% of the course online with the remainder offered face-to-face (Swenson & Evans, 2003). There are many hybrid variations based on the instructor’s instructional style, course content, course size, and course goals. The challenge is that many faculty members have not been taught how to effectively integrate face-to-face and online methods in a hybrid course (Skill & Young, 2002). While many articles provide guidance on how to convert face-to-face content to the online environment, few research studies have been conducted.

Research Questions and Theoretical Framework

The purpose of this study was to find out how instructors use hybrid courses to facilitate adult learning. For faculty and practitioners who want to use the hybrid model, this study will provide best practices for integrating real and virtual environments to facilitate adult student learning. The research focused on the instructional design methods instructors used in a hybrid course and how they connected the face-to-face and online environments. The following research questions guided this inquiry: How do faculty use hybrid courses to facilitate adult student learning? How do faculty connect face-to-face with online learning in a hybrid course? Marzano and Pickering’s (1997) Dimensions of Learning was used as a framework to help answer these research questions. The premise of the Dimensions of Learning is that five dimensions of thinking are essential to successful learning (Marzano & Pickering, 1997, pp. 4-5):

Dimension 1: Attitudes and Perceptions. Eliciting positive attitudes and perceptions from learners and teach how to maintain positive attitudes and perceptions or change negative ones.

Dimension 2: Acquire and Integrate Knowledge. Students learn new knowledge by relating the new knowledge to what they already know, organizing that information, and then making it part of their long-term memory.

Dimension 3: Extend and Refine Knowledge. Learners develop an in-depth understanding through the process of extending and refining their knowledge by making new distinctions, clearing up misconceptions, and reaching conclusions.

Dimension 4: Use Knowledge Meaningfully. Use knowledge to perform meaningful tasks, like decision-making, problem solving, invention, inquiry, investigation, and analysis.

Dimension 5: Habits of Mind. Develop positive habits of mind that enable students to think critically, think creativity, and regulate their behavior.

Using the lens of the five Dimensions of Learning, a qualitative design was employed to investigate how instructors use hybrid courses to facilitate adult learning in higher education.

Research Design

The research was conducted using a qualitative, multiple-case-study design comparing two hybrid graduate-level courses. The two cases are secondary to the understanding of an issue, which in this study is how instructors facilitate learning in a hybrid environment (Stake, 2000). The constant comparative method was used to analyze the data. Inductive category coding was combined with simultaneous comparison of all units of meaning obtained and then subsequently grouped (Maykut & Morehouse, 1994). The units of meaning used were the Dimensions of Learning. A cross-case analysis was conducted to determine the different instructional methods used by the two instructors to facilitate adult learning and connect the face-to-face and online learning activities. Data collection methods, in the tradition of the case-study method, included in-depth interview data from the instructors, observations of the face-to-face and online course activities, and analysis of course documents. This triangulation of data ensured trustworthiness of the data along with review of the data by the research participants. The two instructors were chosen for this study because they are known as experts in using the hybrid course method.

Case Studies

The first case study was the *Anthropology: Cross-Cultural Study of Religion* course taught by Alan Aycock, Ph.D., at the University of Wisconsin-Milwaukee. The hybrid format was used to engage students in learning the content and add more active learning strategies to a course based on critical discussion and reflection. The in-person environment provided “the spontaneity that comes from immediate feedback and immediate insight” that group discussions offer. In contrast, Alan said the online environment “removes a lot of the distracting features of social categories like race or gender or idiosyncratic expression.” This helped students share personal information and allowed for “self reflection.” The format of this course consisted of 20 classes held face-to-face twice a week and nine sessions of synchronous online discussions held during the week in-between the two weeks of consecutive face-to-face sessions. The instructor brought online postings to the face-to-face sessions to spur discussions. Students also completed entrance assignments at the beginning of class to answer questions about the readings and online discussions and turned in exit assignments that briefly commented on a topic shared in class.

The second case study was the *Managerial Decisions & Negotiations* course taught by Johnette (Jay) Caulfield, Ph.D., at the University of Wisconsin-Waukesha. Over 15 weeks, 14 classes were held in-person and 5 were conducted as asynchronous online discussions. The first

half of the class focused on understanding the work environment through in-class discussions and group presentations of case studies and online open-ended question quizzes, case studies and Web site analyses. During the second half of the semester students worked in teams to negotiate business issues with another team until they came to agreement. In class they shared their virtual negotiation process and the instructor and students asked questions. The hybrid format solved the problem of trying to simulate the negotiation process that takes place in a business environment. Jay explained, "What makes people successful in the negotiation process is the preparation that takes place first. This is done online in a hybrid course when they reach a deal or not online. In the face-to-face class, we discuss the process." According to Jay, students tend to develop clearer arguments online and are better prepared to present their process in the classroom.

Dimensions of Learning

The Dimensions of Learning provided a useful framework to answer the first research question: How do faculty use hybrid courses to facilitate adult student learning?

Dimension 1: Attitudes and Perceptions

In order for learning to occur, both instructors fostered positive attitudes and perceptions about hybrid learning in the first class and throughout the course. To build rapport and clarify course expectations, both instructors started their hybrid course with several face-to-face sessions. They both believed that the instructor needs to share their enthusiasm for the hybrid approach and clarify any misconceptions. Both instructors said how important it is to clearly explain why certain assignments are required and what they will gain from the activity. Jay explained, "I always try to let students see the big picture from the first day of class, what are we going to do to meet the learning outcomes that are identified in the syllabus." For example, Alan explained the nature and function of scholarly conversation that takes place online since many students are worried about their comments being negatively evaluated. Most importantly, both instructors designed very organized courses with clear expectations, deadlines, and assignment directions that link directly to the learning goals. Both Alan and Jay provided very specific directions about what students should do online and face-to-face so they can understand the class organization. According to Jay, "what can make them unenthused real quickly, other than being disorganized, is getting too much information." Both instructors cautioned against the "course-and-a-half syndrome." This is when instructors add online activities on top of activities that they don't want to give up from their face-to-face course. "If you have properly integrated the face-to-face and online components of the course," according to Alan, "modes of discourse actually fit together and complement and extend one another." Clearly organized and integrated online and face-to-face activities create a positive and productive learning environment.

Dimension 2: Acquire and Integrate Knowledge

Both Alan and Jay used both the online and face-to-face environments to teach students new knowledge. Alan, the anthropology instructor, preferred the face-to-face environment to teach new theories. He said it is the best environment to "interrogate the instructor to find out nuances, to raise exceptions, to ask for elaboration and examples, and to make a counter case." Alan said that in the face-to-face classroom, "simply because of the spontaneity of human discourse, people are more likely to have the 'ah ha' experience. They are more likely to have an emotional reaction to the content, the moment of discovery." Alan also used the online environment to share videos and Web sites that provide new information. The new information

presented face-to-face is then extended to the online environment with discussions and assignments. Jay, the managerial decisions instructor, shared new knowledge in both environments equally with access to PowerPoints, Web sites, and other resources. Then students integrated this knowledge online by discussing what they learned to their current situations. Jay had students discuss past negotiations they may have conducted either at work or with family. To facilitate the acquisition and integration of knowledge, both instructors preferred face-to-face, but also shared new information online. The content determined the best environment to share new knowledge. The new information was extended into the online environment by encouraging students to connect the new information with knowledge they already had about the subject.

Dimension 3: Extend and Refine Knowledge

Both instructors required students to use complex reasoning processes. In the managerial decisions class, students discussed negotiation strategies and case studies online and then brought this information to the in-person setting and reflected on the process. The anthropology instructor used connections between the online and face-to-face classes to extend and refine knowledge by making connections between the content shared in both environments. Alan explained that the online environment allows students to “unpack each term of a particular posting. You can ask specific questions about it, and people still have the original posting to guide them as to the general thread for the conversation.” The hybrid format allowed students to get a more profound understanding of the work because they had time to think about the questions or discussion and produce their own arguments online. Alan also said that the online environment is a safe place for students to explore their own personal ideologies. Students respond critically to each other’s arguments about culture and religion online and further discuss why they have these beliefs during small, in-person group discussions. Both instructors overwhelmingly preferred the online environment to encourage critical thinking and reflection. Critical reflection allowed learners to further extend and refine their knowledge by critiquing their presuppositions and understanding of a problem or issue.

Dimension 4: Use Knowledge Meaningfully

Both instructors used discussions extensively for students to share their real-life examples to make meaning of the content being learned. Mezirow (1990) defines learning as “the process of making a new or revised interpretation of the meaning of an experience, which guides subsequent understanding, appreciation, and action” (p. 1). To use knowledge meaningfully, a variety of learning activities were used to help students interact with the content and link to real-life experiences. Students in both courses were encouraged to share their personal experiences in case studies or general discussions – both online and face-to-face. In the negotiation course, students worked in online teams to resolve negotiations that mirrored the real life. Then presentations and discussions were extended into the face-to-face classroom to reflect on what they could do to improve the process and apply what they learned at work. Jay said, “I want them to be able to apply it in a situation that they are likely to encounter in their professional life.” She believes they can learn how to use knowledge meaningfully well in both the online and face-to-face classroom. In the anthropology class, students shared life experiences and what they learned to their own cultural experiences and current events. Both instructors used interactive activities in both environments to help the learner connect to their own experiences.

Dimension 5: Habits of Mind

Marzano and Pickering (1997) note that productive mental habits, along with positive attitudes and perceptions, form the framework for the learning process. Both instructors utilized

a variety of activities that encourage critical and creative thinking. They also encouraged students to manage their own behavior and thinking to be successful.

Stimulate critical thinking.

Alan and Jay both said that the online environment provides the best format to stimulate critical thinking. Jay and Alan required students to evaluate and respond to other students' postings and encourage them to challenge each other on their assumptions. Both instructors noted that the online environment allows students to critically review arguments because they can review, reflect, and respond to the threads of conversations. Alan commented, "You can't do that face-to-face." Both Alan and Jay noted that students and instructors have more time online to reflect and respond to other students' postings. This would be difficult to achieve to the same extent in the face-to-face environment where time is limited and not every student is able to participate. To continue the critical thinking to the face-to-face environment, online postings were often brought to class and discussed further in teams.

Encourage creative thinking.

To push students to move beyond their comfort zones and present more creative discussions, both instructors asked challenging questions. Since the online environment tends to be a safer environment, provocative questions were asked more online. Videos were also used in both the in-person and online environments to encourage creative and critical thinking. In the online environment, additional techniques like graphics and surveys were also used to encourage creative thinking. Writing online was also a creative process for both courses. In fact, the anthropology instructor asked students to "entertain him" with their writing.

Regulate students' thinking and behavior.

Both Alan and Jay helped students manage their behavior and thinking by providing clear deadlines with visible course calendars, numerous reminders, and suggestions for how to be successful in their classes. Each instructor had scheduled a balance of online activities and in-person meetings that allowed students to complete assignments online and then discuss what and how they learned in the face-to-face classroom. It is even more important to encourage students to self-regulate their thinking and behavior in a hybrid or online environment because it is easy to fall behind if students don't quickly learn positive learning habits and actively participate. Students' behavior is also regulated because they received significant points toward final grades for both the online and face-to-face activities. This forces those who may not speak up normally to participate more fully through both environments. "In a face-to-face classroom, the learning community is typically an elite community in the sense that no matter how hard you try, only a very small percentage of students are going to contribute regularly to the course," explained Alan. "In the online classroom, there is no place to hide.... And in that sense, they can become more responsible than you could ever make them in a face-to-face classroom." Both instructors noted the importance of nurturing the ability of students to work independently. Skill and Young (2002) point out: "The integrated hybrid course emphasizes learner empowerment and responsibility as a key value in the course design" (p. 25). Students are encouraged to take control of their learning so they are successful in both the in-person and virtual environments.

Discussion and Implications for Practice

There were a number of similarities on how these instructors connected the face-to-face and online environments, as well as differences based on the content being taught. Both

instructors shared students' online postings in class to empower students to share their ideas and have richer in-class discussions. The anthropology instructor used entrance and exit assignments to help students connect what they learned online to the content being discussed in the face-to-face environment. In addition, students brought to the face-to-face classes their online postings where they debriefed and discussed in groups their justifications for the beliefs they shared online. The negotiation instructor used a formal online environment where students responded to open-ended quiz questions and planned their negotiations in groups online. Then during the in-person class, they informally discussed the process of negotiation that they planned online.

A significant finding of this research study is that the replication and extension of knowledge between face-to-face and online learning activities creates a "continuous learning loop," as noted by Jay. This loop includes acquiring and integrating new knowledge to extending and refining knowledge to using knowledge meaningfully. By connecting the online and face-to-face environments, all phases of learning are connected to create a more active and meaningful learning experience. Alan pointed out that "the real art of the hybrid" is the integration of the face-to-face and online activities. Instructors first need to think through the course learning objectives and determine what activities work best face-to-face or online. Then instructors need to integrate activities from both environments so they seamlessly work together to create continuous learning. According to Skill and Young (2002), "The integrated hybrid course is carefully redesigned so as to best leverage powerful in-class, face-to-face teaching and learner opportunities with the content richness and interactivity of electronic learning experiences" (p. 25). The key to hybrid courses is a learner-centered model that provides a variety of choices, meaningful activities, and opportunities for student interaction.

Hybrid courses allows for flexibility and choice in pedagogical strategies that work best in both face-to-face and online. Face-to-face allows for more spontaneity and immediate feedback, while online allows for more reflection. Both instructors listed similar benefits to teaching and learning using the hybrid model. For example, students are forced to come to class prepared, discuss the readings online, and "have much richer" discussions in the in-person classroom. In addition, the instructor can monitor the online discussions to ensure that students understand the information, clarify misconceptions, and follow students' thought processes and strategies for thinking through and solving problems. Because of these benefits, Garnham and Kaleta (2002) noted that faculty "almost universally believe their students learned more in a hybrid format than they did in the traditional class sections" (p. 2). Alan agreed, "Students think they are learning more, and I think they are learning more." In conclusion, connecting the face-to-face and online environments creates a continuous learning loop that takes students from the beginning phase of learning to the final stage of using knowledge in meaningful ways.

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