

The Best of Both Worlds: Combining Synchronous Audio with Asynchronous Text Discussion

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Abstract

Online students and faculty often miss the energy and connections that the live, face-to-face classroom can bring. This paper describes how one faculty member combined a weekly live audio class (using Centra) with subsequent weekly text discussion to create a more dynamic learning community and an enriched teaching and learning experience. Research of student perceptions across two different graduate classes demonstrates strong endorsement of the combined approach.

Background

The most common method used for interaction in the online college classroom has been asynchronous text discussion (Ellis & Dringus, 2005). There are some important reasons for this. First, bandwidth requirements for data transmission other than basic text were beyond the technological and budget reach of most colleges and their students. Fortunately, data compression techniques and voice over IP (VOIP) technology have resulted in streaming audio and video being much more plausible for distance education (Chastine & Preston, 2003). Second, until recently there had also been a lack of user-friendly and affordable software options for multimedia streaming and live group discussion. However, there are now multiple software options (i.e., Centra, Horizon Live, Elluminate, Speak2Me, etc.). A third reason for the dominance of asynchronous text discussion in distance education is perhaps the one still most prevalent: It is convenient for both student and instructor. One of the strongest selling points of distance education has been that it could be done *anytime, anywhere*. Thus, for many online instructors and students, not having to be online at a particular day and time is one of the most attractive features of a distance education course.

Asynchronous Discussion Alone Insufficient

While exclusively asynchronous discussion in distance education courses may be very convenient for students and instructors, research suggests that the higher than average dropout rates among distance education students can be correlated with feelings of isolation (Besser & Donahue, 1996; Cookson, 1989; Galusha, 1997; Hara & Khling 1999; Kubala, 1998; Lockett, 1998; Soles & Moller, 2001). Those feelings of isolation can be positively addressed by fostering interaction in the distance education classroom (Lee & Im, 2001). Lee & Im (2001) found that students perceived interaction as the most significant factor for desirable online higher education.

Rensselaer Polytechnic Institute, a winner of the U.S. Distance Learning Association's Best Distance learning Program in Higher Education, was concerned about fostering interaction in its online courses and developed an approach referred to as the 80/20 Model (Lister, Danchak, Scalzo, Jennings, & Wilson, 1999). The approach is a combination of synchronous and asynchronous discussion where 80 percent of students' time is spent on self-paced engagement of online materials and 20 percent in interactive, synchronous learning sessions with the instructor and other students. It is important to point out that the percentages of 80 percent asynchronous and 20 percent synchronous are flexible. They should be adjusted based on the learning objectives of the course, particular student variables, etc. The presentation of the case study that follows is based on Rensselaer's 80/20 model.

Case Study of Combined Approach

The 80/20 model was applied in two different graduate courses at Western Carolina University. The synchronous audio discussion platform used was Centra. One ninety-minute live Centra discussion conference was held per week (7:00 p.m.-8:30pm). There was also a six-day-

long asynchronous threaded text discussion (utilizing the WebCT platform) each week that began the day after the Centra live discussion. Those asynchronous text discussion topics were many times developed based on particular points raised in the live Centra discussion the night before. While attendance and participation in the live Centra discussions were strongly encouraged, they were not required. Each Centra discussion was recorded and archived for student access after the conference. At the end of the course, specific questions were asked in the course evaluation about students' experience with the synchronous discussion (via Centra) and the combined approach. The findings are presented in Table 1.

Table 1. WCU Synchronous/Asynchronous Case Study Findings

Question	Mean Rating of Agreement (1-5 scale)	Median Rating
The online live discussions in Centra were challenging and helped me learn.	3.99/5.0	4.0
The Centra discussions enhanced my distance learning experience.	4.29/5.0	5.0
The Centra discussions made me feel part of a learning community.	4.26/5.0	4.57
The Centra discussions were effective in combination with the text WebCT discussions.	4.36/5.0	5.0
The Centra discussions provided a unique opportunity to interact with the professor and fellow students.	4.6/5.0	5.0
**No significant difference in ratings across classes		

Discussion

The scale used in each question in the table above was a five-point Likert with values ranging from *strongly disagree* (a value of 1) to *strongly agree* (a value of 5). While the mean values reflect very high levels of support for the synchronous discussion and combined approach, the median values are actually more representative of the central tendency of the sample set because they are less affected by outliers. Based on these median values, students in the two courses overwhelmingly saw value in the synchronous audio discussions via Centra and in the combined synchronous/asynchronous approach.

Collis (1996) identified four benefits of incorporating synchronous discussion into online classes that can be considered in this case study:

- *Motivation* – Synchronous systems focus energy of the group. This certainly appeared to be the case with both classes in this case study. During the Centra discussion conferences, energy was very focused on the readings assigned for the week.
- *Telepresence* – Real-time interaction, which gives the opportunity to convey tone and nuance. It helps to develop group cohesion and sense of being part of a learning community. Based on the student responses to the survey statement about a learning community, the data supports that this telepresence was achieved.
- *Good feedback* – Synchronous systems provide quick feedback on ideas and support consensus and decision making. The real-time context did allow for a number of decisions related to class logistics (i.e., group presentation sequence, PowerPoint format, etc.) to be decided very quickly.
- *Pacing* – Synchronous events encourage students to keep up-to-date with the course and provide discipline to learning, which helps them prioritize their studies. Students in these

case study classes anecdotally commented that there was definitely something about needing to be prepared at a particular time on a given day that kept them from falling behind in the readings for the course.

The findings of this case study are similar to the limited number of other studies in this area. For example Chastine & Preston (2003) conducted case studies of computer science courses where a live audio chat was integrated with asynchronous text discussion. The study found that having live audio drastically changed the atmosphere of the online course, comparing it more to a live classroom lecture. The study also highlighted how even students with dial-up internet connections had no problems participating. The findings are also consistent with the findings of the Hines & Pearl (2004) study of forty-four students who participated in discussions using both synchronous and asynchronous discussion. The study found that the combination fostered interaction at each of Lynch's (2002) four levels of interaction: 1) interaction with content, 2) interactions with instructor, 3) interactions with classmates, and 4) interactions with self.

Im & Lee (2003) studied 2,820 postings from synchronous discussions and 336 postings from asynchronous discussions and found that synchronous discussion is more useful for promoting social interactions while asynchronous discussion is more useful for task-oriented communication. While this type of analysis was not formally conducted in this paper's study, an informal analysis did find that the synchronous chat was definitely more social, often with students asking each other more personal information (i.e., what courses they planned to take next semester, weekend plans, etc.)

As Schullo (2007) points out, there is very limited research that examines the integration of synchronous and asynchronous discussion. However, this study's findings and the other research

to date suggests that the combination is very well received by students. The findings indicate students believe it enhances their learning experience.

Limitations of Study/Future Research

There are several limitations in this study worth noting. First, the case study research design limits its generalizability to the larger population of distance education students. Additionally, the study was limited to student perceptions of value and did not focus on academic performance as a variable of interest. In order to better understand the benefits of combining the use of synchronous and asynchronous discussion, future research will need to focus on the achievement of learning outcomes. Finally, this study did not examine dropout rates of students participating in classes with this combined approach. The high level of student satisfaction in this study supports a hypothesis that dropout rates would be lower using this approach, but this needs to be specifically tested through research.

Implications for Practitioners

Instructors who are interested in pursuing a combination of synchronous and asynchronous discussion should consider the following as they develop their courses:

- 1) Both the students AND the instructor need to prepare for the live discussions in order for them to be productive.
- 2) Some students will be unable OR unwilling to be at their computer at a set day/time. Options include making participation optional or requiring students to attend only a percentage of the live classes. Giving extra points for participation in the live discussions is another option. Archiving the live classes should always be done, and most of the software platforms offer this feature.

- 3) Evaluating class participation is challenging. However, this is a challenge in a class of any format. Each instructor must determine how to evaluate attendance and both quantity and quality of comments made. It is important (as in any class) to establish this up front. Letting the class decide these parameters can be very effective in fostering a collaborative learning community atmosphere.
- 4) Instructors do have to be reasonably proficient with the software being used. Given that the synchronous discussions are live, problems must be dealt with immediately. Additionally, the university should have technical support that can provide prompt assistance in such situations.
- 5) Using the emoticons and other synchronous discussion icons enhances the experience. LaPointe, Greysen, and Barrett (1994) found that the use of such icons *warm* and *personalize* interaction. Common synchronous discussion software icons include applause, laughter, as well as the more functional raised hand icon to pose a question or a checkmark icon for agreement.

Conclusions

The findings of this research showed that students saw unique value in integrating synchronous and asynchronous discussion elements into their courses. As with any course, the various tools used by an instructor should be selected based on what he/she feels will best facilitate student learning and the accomplishment of identified learning outcomes. An important concluding point is that this paper is not suggesting that synchronous discussion is superior to asynchronous. As Im & Lee (2003) assert, both methods provide unique value in the learning experience. In particular, asynchronous discussion offers the benefit of allowing students time for reflection and reaction as well as enabling people to manage and facilitate the discussion and

resolve conflicts that may arise (Lim & Tan, 2001). However, as we endeavor to reduce online students' feelings of isolation, integrating synchronous with asynchronous discussion in the online classroom may go a long way toward building a more engaged online learning community.

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