Synchronous Technology Integration in a Blended Course: The Instructors and the Students' Experiences

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Synchronous Mode in Higher Education

- **Role in online courses**
  - socializing, brainstorming, or virtual office hours (Branon & Essex, 2001)
- **Issues**
  - high costs, bandwidth, tools, and scheduling issues (Duemer et al., 2002; Learning Circuits, 2006)
- **Current and future trends** (Learning Circuits, 2006)

Research Purposes

- To investigate how synchronous tools were incorporated in a graduate course
  - To identify the students' and the instructors' perceived benefits and disadvantages
  - To examine the instructional approaches
- To suggest instructional guidelines

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Research Context

- Course: a graduate course
- Students: 11 residential students & 22 distance students
- Instructors: One full-time faculty & 5 teaching assistants
- Course Assignments:
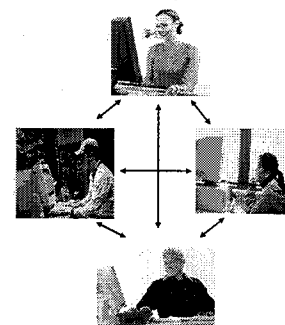 - Media design products
  - Peer critique on ongoing projects

Research Context

- Synchronous Peer Critique
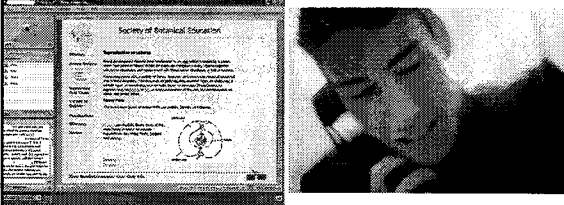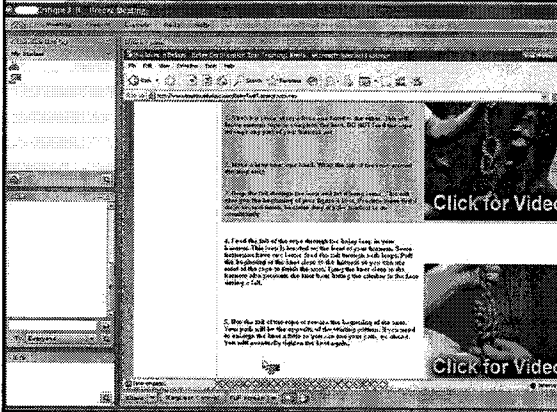 - Blended team from two contexts

Synchronous Peer Critique
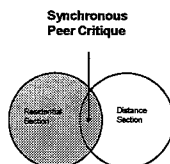
Research Context

Synchronous Peer Critique
- Small-group based discussion
- Three to four students and one instructor (facilitator)

Research Context

Synchronous Peer Critique
- Mediated by the Breeze system & a Telephone

Research Context

- Synchronous Peer Critique

Numbers of Synchronous Critique Sessions and Tools Used

Number of synchronous Critique sessions held	Tools used for synchronous critique sessions
49 (including 3 practice sessions)	Breeze & telephone (38)
	Breeze & Breeze voice chat (4)
	Breeze & Breeze text chat (5)
	Breeze & Breeze voice chat & telephone (2)

Data Collection

- Data collected from January to July in 2006
- Open-ended questionnaire and interview
- Participants
  - 4 distance students
  - 4 resident students
  - 1 primary faculty
  - 4 teaching assistants
- In person or face-to-face interview

Data Collection

- Additional Data Sources
  - Online course evaluation survey
  - Asynchronous discussion records
  - Instructors' critique reports
  - One of the researchers' teaching experiences in this course

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Findings

- Online course evaluation survey
  - Seven (of 11) residential students and Nineteen (of 22) distance students participated in the survey
  - Synchronous critique were helpful.
    - 85 % of the residential respondents
    - 84% of the distance respondents

What are benefits of synchronous interactions?

Perceived Benefits of Synchronous Interaction

- Meaningful and active engagement
- Fast feedback
- Rich verbal cues
- Social presence
- Instructional supports

Perceived Benefits of Synchronous Interaction

- Synchronous Overcame Previous Problems with Asynchronous

A distance student wrote:

"The group work was challenging [in the other course]...but it also helped me to feel connected, and like I was on the same page as at least a few other people =). I'm looking forward to some chats so I can feel connected again."

Perceived Benefits of Synchronous Interaction

- Supported fast feedback
  - For instructors:
    - Instantly addressed questions
    - encourage more active participation
  - For students:
    - directed questions to instructors
    - exchanged feedback between students

Perceived Benefits of Synchronous Interaction

- An instructor said:

"It is consistently happening to students [in an asynchronous forum]. Many of them don't know what they have to [say] and they are insecure in being able to discuss the topic. They are very cautious; conservative in the amount of what they say or what they try to address. [However] synchronously, especially with voice, they go faster and they try things out little more."

Perceived Benefits of Synchronous Interaction

" In this blended course, the residential students probably benefit from seeing the work of the distance students because many of them are employed professionally now and just gave them [the residential students] a wider group to interact with."

Perceived Benefits of Synchronous Interaction

- **Provided Rich Verbal Cues**
  - tones and emotions

A student said:
"When you actually hear the voice speaking those same words there is **helpfulness and kindness in the tone.** There is **little room for error** in the meaning of the words or critique when you are speaking in real time and can immediately **correct any misconceptions of your intent.**" (Park & Bonk, in press)

Perceived Benefits of Synchronous Interaction

- **Increased Social Supports**
  - encouragement and compliment
  - humor and verbal immediacy

One instructor wrote:
"The critique participants **joked around and linked back** to times they have met in other critique sessions. They talked about the process they had been going through while working on this project and compared experiences. They appeared to **enjoy and value the meeting together.**"
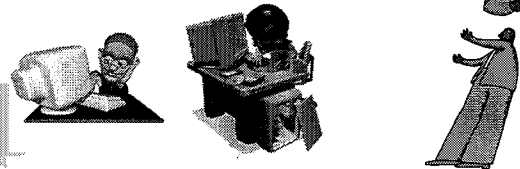
Perceived Challenges of Synchronous Interaction

- **Time constraints**
- **Lack of deeper thinking and reflection**
- **Superficial feedback**
- **Technology related issues**
- **Language barriers**

Instructional Supports

- **Prepare Students**
- **Promote an Active Involvement**

Instructional Supports

- **Prepare Students**
  - **Provided ground rules and guidelines**
  - **Held practice sessions**
  - **Provided materials**

Instructional Supports

- **Promote an Active Involvement**
  - **Structured the discussion**
    - **Presentation, Q&A, Critique, & Summary**
  - **Scaffolded students' discussion**
    - **Provided info, clarified, summarized, brought up issues, directed question to a quiet student**
  - **Used a small-group & flexible management**

Instructional Supports

- Student A: "She [the instructor] effectively **controlled the pace** and led us to **focus on important points** of our projects. She also came up with **meaningful questions or suggestions** about our projects, which gave me a lot of help."

- Students B: "A **summary** at the end by either the instructor or the participant was helpful. Even though I had the same remarks noted it was good to hear the instructor repeat them."

- Students C: "Her comments were made clearly; they were constructive with a positive tone, but they were critical...which you need...I felt like **her insights actually taught me to see slightly differently**."

Conclusions

- **Unique benefits of the synchronous mode of communication**
  - **live, fast, and interactive**
- **Cognitive and social supports**
- **Importance of instructional approaches**
- **Team teaching capability**
- **Proper selection of synchronous tools**

Suggestions

- **Prepare Students for Synchronous Learning**

  - **Clarify technology requirements.**
  - **Explain task purposes.**
  - **Schedule practice sessions.**
  - **Be flexible.**
    (tools, duration and number of sessions, number of participants, meeting)

Suggestions

- **Promote Active and Meaningful Interactions**

  - **Scaffold students' discussion.**
  - **Create a social climate.**
  - **Provide materials to be discussed.**
  - **Facilitate a small-group based discussion.**

Suggestions

- **Provide Faculty with Planned Supports**

  - **Provide technology options.**
  - **Offer faculty professional development.**
    - **Pedagogical skills and technology skills**
  - **Provide new incentive programs.**
    - **e.g., Funding, a new reward system, technical and instructional infrastructure**

Comments & Suggestions (Happy to send a copy of our papers)

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