

Bringing Distance Communication Closer

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What was studied

- Distance education in classrooms
- Seminar Sessions
- User tests utilizing collaboration applications
- General Meetings

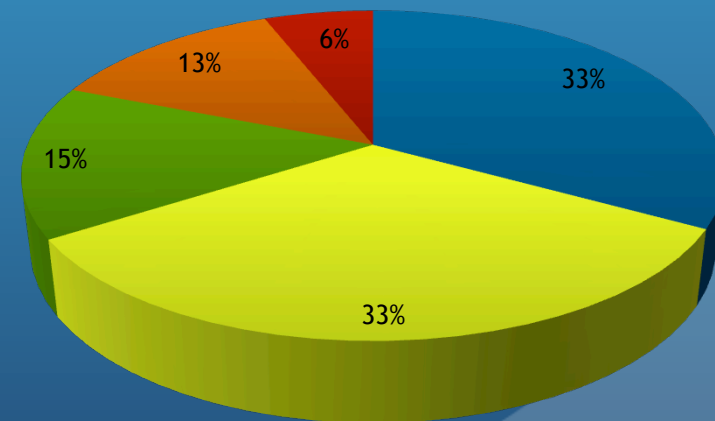
Communication Methods Observed

- Phone Calls
- Conference Calls
- Video Conferences
- Chat
- Whiteboards
- Voice over IP
- Face-to-Face

Where the problems were

(280 total observations)

- **Tech Issues (33%)**
Problems with individual media channels. Examples include whiteboard setup, audio echoes, and media problems outside of the courses
- **Interactivity (33%)**
How people used the channels (video, audio, phone, & collaboration tools)
- **Interactive Behaviors (15%)**
What people did while using the media in the learning environment
- **Human Networking (13%)**
Who talked to whom, in the course or class organization & participation.
- **Roles in Learning (6%)**
The combination of including instructor, teaching assistant, on/off-campus students.



Findings of the Study

- The best learning experience happened when everyone participated
- Actively using the technology to include ideas from all groups participating make everyone feel more connected
- Managing many data streams is not easy, but made easier by having assistants interjecting as appropriate.
- Collaboration was best when transparent.
- Handoff issues occur when instructors or students switch among media or when they switch roles from presenters to audience members.

Findings of the Study

- Technical issues were the largest group of findings
- Video delay made communication between sites difficult
- Participants seek the quickest and most efficient way to complete tasks
- There are many things that compete for a user's attention and any impediment to interaction adds to the user load
- Collaborative etiquette is necessary to good interaction

Hierarchy of Communication

- There was a pattern of desired communication and participants gravitated towards those communications.
 - Face-to-Face -vs- Video Conference
 - Conference Calls -vs- Video Conference
 - Phone Calls -vs- Chat
 - Chat -vs- Whiteboard

Improving the interaction

- Setup the session and test the session before beginning
- Technology cannot be a replacement for human interaction
- Make interaction more inclusive
- Establish etiquette for participation

Results from Second-year Testing

- Observations of students using a new support platform
 - Usage was workable, but there were technical problems (e.g. upstream audio was brittle)
 - Students were unhappy with lack of control over their screens.
 - Video materials that were limited due to technical problems could be boring to watch.
 - Students concentrated on peer-to-peer learning
- Faculty impressions of the new platform
 - Less brittle than feared.
 - Struggled in balancing system limitations & quality of ID
 - Valued student responsiveness, but focused on supplying optimal material downstream

Second- and Third-Year Questionnaires

- Second-year results were consistent with preceding data
 - Distance education can be made to work.
 - Students appreciate the capability of the technology to provide a parallel universe of peer-to-peer instruction.
- Third-year results will be available at conference time.

Questions

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