



**New Directions Forum
Friday, 10:00 a.m.-2:45 p.m., Lecture Hall
New Models of Learning: Blending Asynchronous and Synchronous Formats**

Introduction and Overview of new IP Conferencing Tools Standards

**Dr. Rosemary Lehman, Instructional Communications Systems,
University of Wisconsin-Extension**

New Models of Learning: Blending Asynchronous and Synchronous Formats

Introduction and Overview

Dr. Rosemary Lehman, Instructional Communications Systems, University of Wisconsin-Extension

Fifteen years ago, when I was working on my doctoral thesis, I had many discussions with Terry Gibson, who was one of the members of my dissertation committee. In the course of one of our conversations I asked Terry what he envisioned for the future of teaching and learning with technology – his answer made an indelible impression and I’ve thought about it often since that time. He said – and I paraphrase - “What people need to consider is the range of technologies, not just one technology. They need to look at the available technologies, at their potential and their limitations and use and blend them to meet specific needs.” That was 15 years ago and over the past few years we have begun to see the wisdom of that thinking.

At Instructional Communications Systems (ICS), University of Wisconsin-Extension (UWEX) at The Pyle Center, we work with the spectrum of synchronous technologies, audioconferencing, videoconferencing, and webconferencing. We technically support these technologies, bridge multipoint sessions, and through our Instructional Design Team develop materials and provide orientation and advanced training workshops and courses.

Although ICS' prime focus is supporting synchronous technologies and applications, we also regularly integrate asynchronous technology as a component part of synchronous technology training sessions and work with our clients to think "blended." On a regular basis, ICS staff research and compare new and emerging technology and tools, both hardware and software, for instructional and meeting purposes.

A recent example is the formal evaluation of two types of software that were evaluated as part of a formal Webconferencing Evaluation Project, funded by a University of Wisconsin Academic Advanced Distributive Learning Co-Lab and Learning Technology Development Center grant. For the project, two webconferencing products were selected for demonstration, module development, and evaluation. The two selected webconferencing products were: 1) Centra Syposium and 2) PlaceWare Virtual Classroom. Project participants included UW System faculty/staff and Instructional Communications Systems (ICS) administrative, scheduling, training, and technical staff. Evaluations were designed to cover: ease of software use, software tools and features, ease of designing and adapting of materials, ease of managing developed sessions, flexibility of use in various situations, collaboration and

sharing, accessibility, security, support of foreign language, evaluation components, vendor support, network requirements, reporting, connectivity, and hosting.

A general conclusion was reached by taking ratings, comments, and participant discussions into consideration. The general consensus of participants was that for the present they were satisfied with the PlaceWare Conference Center software that ICS is now using and see no need for a change at this time. They welcomed the opportunity to work with the two new types of software and expressed their willingness to participate in future evaluations. (The Report of the Evaluation Project is included with your handouts.)

Another example is the research and experimentation and services that ICS technical staff have conducted for Internet Protocol (IP-based) videoconferencing. The support of H.323 Internet videoconferencing builds upon ICS current services for multi-point videoconferencing via ISDN, ATM and DS3 delivery systems. ICS has partnered with WiscNet and the Wisconsin Technical College System during the past year to jointly test the technical feasibility and costs for implementing a H.323 Internet videoconferencing service for statewide organizations. Staff also worked with networking and distance education colleagues in Ohio, Missouri, Indiana and other educational institutions as part of this effort.

Through research and development, orientation and training, appropriate technology and software selection, and thoughtful instructional design, synchronous tools, coupled with asynchronous, can deepen and enhance student engagement in the learning process. Through the blending of these tools, course designers can help educators enhance class participation, collaboration, and content integration. The key words are “research and development,” “technology selection,” “orientation and training,” and “instructional design.”

You’ll hear these words used often during the morning session as the Panelists describe their case studies of current courses and training projects that blend these technologies.

Wayne Pferdehirt – Director of the University of Wisconsin-Madison Master of Engineering in Professional Practice (MEPP), Department of Engineering Professional Development
Dr. Rick Lillie – Instructor at California State University, San Bernardino and UCLA Extension Program
Ellen Goldstein – Instructional Designer at GE Medical Systems’ Performance Solutions

In the afternoon, an Instructional Design Panel will help you think strategically about blending learning initiatives and implementing effective learning activities.

Jennifer Hofman – Training Consultant and President of InSync Training Synergy
Dr. Chuck Kater – Associate Dean of Professional Studies & SC Online at
Southwestern College



Webconferencing Evaluation Project Report

This Instructional Communications Systems (ICS), University of Wisconsin-Extension (UWEX), Webconferencing Evaluation Project was developed and implemented with funding from a UW/Advanced Distributed Learning (ADL) Co-Lab/Learning Technology Development Council (LTDC) grant. The Project Report outlines the project results.



**Instructional Communications Systems
University of Wisconsin-Extension
February 4-5, 2003**

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Webconferencing Evaluation Project Report

February 4-5, 2003

Instructional Communications Systems

The Pyle Center Madison, WI

Project Narrative and Summary Conclusions

Webconferencing Background

University of Wisconsin-Extension's (UWEX) Instructional Communications Systems (ICS) unit has provided webconferencing services since 1990 using PlaceWare's Conference Center software. ICS has branded this service as WisLine Web.

ICS currently manages 105 PlaceWare Conference Center licenses for UW institutions, Wisconsin state agencies, and other educational, governmental, and nonprofit groups. The software is used successfully to increase access to UW undergraduate and graduate courses, professional development, training, and meetings.

WisLine Web usage has steadily increased during the past 2 1/2 years. During the first six months of FY03, for example, the WisLine Web conferencing attendance increased 85% as compared to the same period a year before. Total connection hours increased 118% compared to the same period. Faculty and staff have been very satisfied with the PlaceWare Conference Center software since 2000.

In fall 2002, PlaceWare announced the addition of another software product. The Virtual Classroom product was developed in conjunction with Hewlett-Packard (HP). As part of its efforts to continually evaluate new products in this distance education arena, and as part of the University of Wisconsin System (UW System) Advanced Distributed Learning (ADL) Co-Lab/Learning Technology Development Council (LTDC) grant, ICS wanted to evaluate both this new PlaceWare product and the Centra Symposium product.

Introduction

This Webconferencing Evaluation Project was funded by a UW/ADL Co-Lab/LTDC grant. For the project, two webconferencing products were selected for demonstration, module development, and evaluation. The two selected webconferencing products were: 1) Centra Symposium and 2) PlaceWare Virtual Classroom. Project participants included UW System faculty/staff and Instructional Communications Systems (ICS) administrative, scheduling, training, and technical staff. Evaluations were designed to cover: ease of software use, software tools and features, ease of designing and adapting of materials, ease of managing developed sessions, flexibility

of use in various situations, collaboration and sharing, accessibility, security, support of foreign language, evaluation components, vendor support, network requirements, reporting, connectivity, and hosting.

Project Timeline

November 2002-January 2003 - software available to ICS staff.

February 2003 - vendors demo software, faculty/staff develop modules, and faculty/staff and ICS staff evaluate software.

February 2003 - results compiled, a report completed, and information presentations planned.

Project Participants

Project participants included the following:

- Four UW faculty/staff from varied disciplines and universities/colleges with backgrounds in using webconferencing. Three ICS trainers/instructional design personnel with backgrounds in webconferencing training.
- Three ICS administrators/schedulers with past webconferencing administration/scheduling experience.
- Three ICS technical staff with past webconferencing technical experience.

Project Process

The two types of software selected for the webconferencing evaluation event were:

1) Centra Symposium and 2) PlaceWare Virtual Classroom. ICS staff received vendor demonstrations via computer prior to the actual evaluation event on February 4 and 5 to obtain some familiarity with the two types of software. Three evaluation tools were developed for the actual webconferencing evaluation event on February 4 and 5: 1) a Faculty/Staff/Training Evaluation, 2) a Technical Staff Evaluation, and 3) an Administrator/Scheduler Evaluation.

On the morning of February 4, Centra demonstrated their Symposium software via computer to ICS staff and participating faculty at ICS in The Pyle Center. Faculty and staff participated in the demonstrations at individual computers in private rooms and offices. In the afternoon, the four faculty participants worked at separate stations and, using materials they had previously created for webconferencing, developed a sample webconferencing course/program and evaluated the software. ICS staff worked closely with the

faculty/staff as they developed their materials. Faculty/staff and ICS staff evaluated the software as they progressed through the sessions and completed the evaluations after the sessions. The same process was followed on February 5 with PlaceWare Virtual Classroom.

Discussion sessions were provided before and after the morning demonstrations and before and after the afternoon course/program development.

Summary Conclusions

(A scale of 1-5 was used for the evaluation with 5 = excellent, 4 = good, 3 = satisfac-tory, 2 = fair, and 1 = poor.)

Overall Rating of the Webconferencing Software by Participant Groups

Participant Groups	Centra Symposium	PlaceWare Virtual Classroom
Faculty/Staff/Trainers	3.3	4.2
Technical Staff	4.5	4.0
Administrators/Schedulers	3.0	4.0

Overall Rating of the Webconferencing Software Considering All Participant Groups

Participant Groups	Centra Symposium	PlaceWare Virtual Classroom
All Participant Groups	3.3	4.1

(Detail of all of the ratings can be found on pages 4-10 of this report)

A general conclusion was reached by taking ratings, comments, and participant discussions into consideration. While all participants were pleased with the extra features that the two new types of webconferencing software provided, they found areas of frustration with each type of software. In some cases using the software was complicated and not always intuitive.

All faculty/staff/trainers indicated that using the software would increase their workload, at least in the beginning, and that the learning curve for both trainers and faculty would be high. The consensus was that the present PlaceWare Conference Center software, managed by ICS for UW System, served their needs and should be retained. The technical staff participants were impressed with Centra Symposium and saw it as a very solid system. They also liked many of the features and the capability of self-hosting. The administrators/schedulers found difficulty particularly with Centra Symposium's scheduling and reporting. Their overall rating gave Centra Symposium only a satisfactory rating while PlaceWare Virtual Classroom received consistent ratings of good.

The general consensus of participants is that for the present they are satisfied with the PlaceWare Conference Center software that ICS is now using and see no need for a change at this time. They welcomed the opportunity to work with the two new types of software and expressed their willingness to participate in future evaluations.

Project Evaluation Results and Comments

(A scale of 1-5 was used for the evaluation with 5 = excellent, 4 = good, 3 = satisfactory, 2 = fair, and 1 = poor.)

1. Faculty/Staff/Trainer Evaluation Results (Seven participants and respondents)

Centra Symposium Overall Faculty/Staff/Trainer Rating	3.3
- Ease of Use - Included software setup, intuitive nature of software, and ease of becoming comfortable with the software	3.5
- Ease of Designing and Adapting Materials	4.0
- Ease of Managing Developed Sessions	2.8

- Flexibility of Use for Various Situations (see compliance memo from vendors on page 18)	4.0
- Software Tools - Provided all required tools, i.e. slide presentations, whiteboard, variety of text fonts, drawing, highlighting, polling and survey, question and answer, markup, and web touring	4.4
- Collaboration and Sharing - Included sharing of documents, applications, web-browser, full-screen, desktop, and small group work	4.6
- Other Features - Included private chat, archiving, threaded discussion, telephony integration, IP audio and video, recording, archiving, and printing	3.9
- Student and Faculty Security	4.5
- Support of Foreign Language	2.0
- Evaluation Component	5.0
- Vendor Support - Included online, helpdesk, 800# help, and vendor training on vendor web site	4.0
- General Questions - Comments included: 1) This software had many good and useful features, but so many can be overwhelming. Group breakout was great! 2) Other features needed are a wizard for setting up sessions, more fluid audio, more editing features in the various applications, and ability to markup GIFs in PowerPoint. 3) This software provides a feeling of control once it is setup, was confusing. 4) This software seemed consistent, but haven't tested over a period of time.	

- 5) This software would increase the instructor’s workload, especially during first creation of a program.
- 6) Think I could learn to use it if I had the training and time to work with it.
- 7) It is way too complex for customers.

PlaceWare Virtual Classroom Overall Faculty/Staff/Trainer Rating	4.2
- Ease of Use - Included software setup, intuitive nature of software, and ease of becoming comfortable with the software	3.4
- Ease of Designing and Adapting Materials	4.3
- Ease of Managing Developed Sessions	3.4
- Flexibility of Use for Various Situations	4.6
- Software Tools - Provided all required tools, i.e. slide presentations, whiteboard, variety of text fonts, drawing, highlighting, polling and survey, question and answer, markup, and web touring	4.5
- Collaboration and Sharing - Included sharing of documents, applications, web-browser, full-screen, desktop, and small group work	4.2
- Other Features - Included private chat, archiving, threaded discussion, telephony integration, IP audio and video, recording, archiving, and printing	4.4
- Student and Faculty Security	4.0
- Support of Foreign Language	3.7

- Evaluation Component **4.3**

- Vendor Support - Included online, helpdesk, 800# help, and vendor training on vendor web site **4.0**

- General Questions - Comments included:

- 1) This software has good annotation. While I doodled with useful features, it was a little cumbersome to access them.
- 2) Other features needed are real breakouts with audio in each group, also feedback questions during presentation. I wish the features were easier to access and more intuitive.
- 3) The software provides a feeling of control to a certain point, but I felt helpless at times because navigation is hard. There are plenty of bells and whistles, including a way to provide negative feedback.
- 4) The audio was more reliable than Centra.
- 5) This software would increase the instructor's workload. There is a lot for the instructor to learn. To use so many features might require an assistant.
- 6) It is too complicated for many to get good use from it. It needs to be consolidated and cleaned up. I wouldn't want it in its present form.

Additional Comments - Faculty/Staff/Trainers: (see Comments, pages 13-17)

2. Technical Evaluation Results (Three participants and respondents)

Centra Symposium Overall Technical Rating	4.0

- Network Requirements - Provided support for firewalls, proxy servers and encryption, is standards compliant, and is IP-based	4.0
- Ease of Software Use	4.2
- Rating of Features	3.7
- Rating of Reporting Tools	3.7
- Rating of Scalability	5.0
- Vendor Training for Technical Staff	5.0
- Provision of Self-Hosting – Does provide for self-hosting	4.5

PlaceWare Virtual Classroom Overall Technical Rating	4.0
- Network Requirements - Provided support for firewalls, proxy servers and encryption, is working toward standards compliance, and is IP based	4.0
- Ease of Software Use	3.7
- Rating of Features	3.9
- Rating of Reporting Tools	4.0
- Vendor Support - Provides online help, 800 # help, quality vendor communication, regular upgrade of program, but not timely upgrade notification (usually 1 week prior)	3.3

- Vendor Training for Technical Staff **3.5**

- Provision of Self-Hosting - Does not provide for self-hosting.
ASP-hosting only **3.0**

Additional Comments - Technical Evaluators

Centra Symposium - I like the ability in Centra Symposium to do local recordings a lot, and the fact that we can run the software on our own servers. From an operators standpoint, ease of use really just depends on the user, so it's hard to evaluate objectively. With the time frame we had to install, configure and test, this appears to be a very solid system. I was very impressed that our admittedly underpowered server, was quite able to keep up with the load placed on it during the faculty development and during some limited load testing I did. Well integrated client and server worked well together. IP audio and video were both of good quality, easy to join, administer, and install.

Placeware Virtual Classroom - In general I like PlaceWare's product better because it is more portable in the sense of content/creation/management. I also think that it is more versatile in that you can do so many different things with saving, printing, and creating "on the fly." This product is still in its infancy as far as integrating the HP technologies with the PlaceWare conferencing portion. There are still many rough edges that allow (force) the user to see a clear division of the technologies. HP import of PowerPoint doesn't allow user to rename or move the file during translation. Separate areas for URL content vs. whiteboard content which can be annotated. The IP audio was of good quality, and not too difficult to set up.

3. Administrator/Scheduler Results (Three participants and respondents)

Centra Symposium Overall Administrator/Scheduler Rating	3.0
- Administration Tools and Features - Included administration tools, scheduling, integration with Course Management Systems (CMS), and documentation	3.1
- Accessibility Compliance - (see compliance memo from vendors on page 18)	
- Ease of Use of Tools and Features - Includes scheduling,	

billing, report generation, setup, plugins, and downloading	3.5
- Software Reporting Mechanisms - Includes methods of reporting, posting to spreadsheets, automatic recording, and activity logging	2.9
- Hardware Requirements - Includes hardware stability and cross-platform capability	4.0
- Network Requirements - Includes firewalls, proxy servers, and encryption	3.2
- Scalability - Includes number of attendees, number of presenters, and costs - 500 attendees supported; 500 presenters supported. With a perpetual license we would own the software and pay for annual maintenance for 100 licenses - \$177,000 the first year, plus \$27,000 thereafter	3.5
- Connectivity - (see Technical Evaluation pages 7 and 8)	
- Security - Includes Administration, meeting, and registration security (see Technical Evaluation pages 7 and 8)	3.5
- Vendor Support - Includes vendor online, helpdesk support, 800# help, sharing of information, feedback on product, training for technical staff, listening, and fast action	3.5
- ASP or Self-Hosting - Centra offers both ASP and Self-hosting. Only ASP was tested in this evaluation project	3.7

PlaceWare Virtual Classroom Overall Administrator/Scheduler Rating	4.0
- Administration Tools and Features - Included administration tools, scheduling, integration with Course Management Systems (CMS), and documentation. It has a portal approach, no deep integration	4.0
- Accessibility Compliance - (see compliance memo from vendors on page 18)	
- Ease of Use of Tools and Features	4.0
- Software Reporting Mechanisms - Includes methods of reporting, posting to spreadsheets, automatic recording, activity logging, and integration of third-party reporting tools	4.0
- Hardware Requirements - Includes hardware stability and cross-platform capability. Cross platform for receiving, only PC for presenting and use of some tools	3.5
- Network Requirements - Includes firewalls, proxy servers, and encryption	4.0
- Scalability - Includes number of attendees, number of presenters, and costs - 2,500 attendees supported, and 2,500 presenters supported. Temporary licenses are available. Without integrated IP cost is \$960/seat/year +. \$960 + \$1,200 = \$2,160 seat/year. With integrated IP, the cost is \$1,560/seat/year+. \$1,560 + \$1,200 = \$2,760/seat/year. (These costs are in addition to the shared seat price of \$1,200/seat/year)	4.0

- Connectivity - (see Technical Evaluation pages 7 and 8)	
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- Security - Includes administration, meeting, and registration security - (see Technical Evaluation pages 7 and 8)	
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- Vendor Support - Includes vendor online, helpdesk support, 800# help, sharing of information, feedback on product, training for technical staff, listening, and fast action	4.0
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- ASP or Self-Hosting - Only provides ASP hosting	4.0

Full Group Discussion on February 4 and 5

Centra Symposium

Positive:

- 1) The Icons for hand raising, etc. are very nice for interaction.
 - 2) It is possible to either question anonymously or with a name.
 - 3) You can integrate voice over IP (VOIP) and phone lines at the same time.
 - 4) You can do two polls on the fly and one center page, as well.
 - 5) The time clock and countdown are nice features.
 - 6) The data can be saved and logged, a nice feature.
 - 7) You can transfer PDF.
 - 8) The video quality is ok, but not exceptional.
 - 9) You can do both presenter and student notes.
 - 10) You can resize images.
 - 11) The software has insert placeholders.
-

- 12) The software has an evaluation component with several options.
- 13) You are able to survey on the fly or in the agenda holder.
- 14) Students can upload and practice.
- 15) There is a cap on enrollment.
- 16) The software will use Camtasia in the future.
- 17) I liked the interaction and the audio flexibility.
- 18) I liked the option to self-host.
- 19) This software is more streamlined for download.

Concerns:

- 1) I had a problem getting into Event (and got into eMeeting by mistake).
- 2) The breakout rooms don't record.
- 3) Printing can take place only frame-by-frame.
- 4) There needs to be better instructions for going into breakout rooms and for how to act as a presenter and co-presenter.
- 5) The audio did cut out and was less "in sync" than with Placeware Virtual Classroom.
- 6) You can do slide transitions and animation, but it takes time and space.
- 7) Sometimes the hand icon would go up when it wasn't clicked.

Placeware Virtual Classroom

Positive:

- 1) You can take web tours without enabling the student participants.
 - 2) The Handouts feature was nice.
 - 3) You can drag and drop slides, but cannot have builds or animations in them.
 - 4) I like many of the features.
 - 5) I seemed to be able to accomplish more in course development than with Centra.
 - 6) The scheduling is easier in this software.
 - 7) This software seems to have more functions than Centra.
 - 8) There was not as much audio breakup with this software.
 - 9) I like the print and save feature.
 - 10) I really liked it, it demoed better.
 - 11) I liked the URL linking feature.
-

Concerns:

- 1) The orientation materials sent were inadequate.
 - 2) When developing a course there were too many windows open to operate.
 - 3) It is difficult to find out where to look for what is saved.
 - 4) Not having a slide list visible is distracting.
 - 5) Handouts support rich text only.
 - 6) The Spotlight feature is only on the participant side.
 - 7) This is two products together and needs integration.
 - 8) We can't host, so we give up control.
 - 9) I like the setup of groups in Centra better than in PlaceWare.
 - 10) This software is not intuitive enough.
 - 11) This software is too sophisticated for the normal user.
 - 12) This software is more intuitive than Centra.
 - 13) The Demo session was not as interactive as with Centra.
 - 14) I missed the breakout audio that Centra had.
 - 15) I liked the breakout rooms on audio in Centra.
 - 16) The Manager feature was cumbersome.
 - 17) You are not able to do local recordings.
 - 18) The audio doesn't support Netscape.
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Case Study 1

UW-Madison Master of Engineering in Professional Practice

Wayne Pferdehirt, **Director of the University of Wisconsin-Madison Master of Engineering in Professional Practice (MEPP) , Department of Engineering Professional Development**

MEPP is a two-year, cohort, Web-based degree program for engineers. The MEPP degree program won the University Continuing Education Association's top award in 2002 for degree programs in North America. The program combines several asynchronous and synchronous tools to enhance collaboration among students, and between faculty and students, creating a dynamic, supportive learning space that is accessible from anywhere. He has been an invited speaker at several distance learning conferences and recently authored a case study in the UW-Extension publication, "Using Distance Education Technology: Effective Practices."

Case Study 2

California State University; Intermediate accounting and accounting information systems

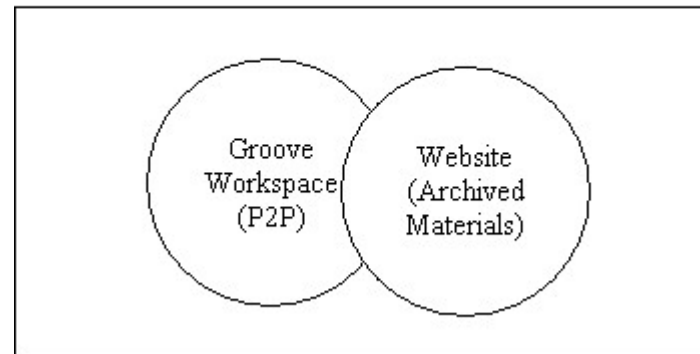
Dr. Rick Lillie, California State University – San Bernardino and UCLA Extension program.

Dr. Rick Lillie teaches advanced accounting courses at California State University – San Bernardino and distance learning courses for the UCLA Extension program. He uses “Groove” peer-to-peer software to support live-class sections and to deliver an online CPA Review Course. This fall, his classes will be in a blended format using a combination of Web pages, “Groove” workspaces, and SharePoint Team Services. In addition, he is measuring and comparing outcomes and attitudes of students from both traditional and online classroom courses in various accounting and information systems courses.

Dr. Rick Lillie
California State University at San Bernardino

Presentation Hand-out Notes

Groove Virtual Classroom



Synchronous Elements

- Groove workspace
- Individual conferencing
- Group conferencing
- Collaboration (co-editing and co-browsing)
- Study Groups
- Group projects
- Virtual office hours

Asynchronous Elements

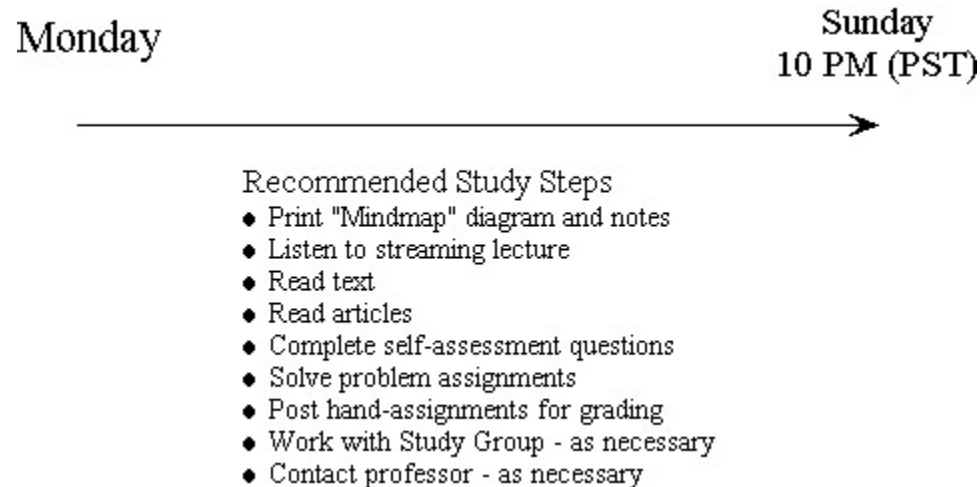
- Groove workspace
- Interaction - Delivery
 - Co-editing activities
 - Threaded discussion
 - File sharing
- Activities
 - Homework
 - Readings
 - Projects
 - Research

Streaming lectures

Tutorials

- Feedback
 - Threaded discussion
 - Audio-Video commentary
 - File sharing
- Measurement
 - Graded homework
 - Online survey
 - Online testing - feedback

Typical Weekly Rhythm of Online Intermediate Accounting Course



Lessons Learned from Using Groove (P2P) Workspace

Program Strengths	Program Weaknesses
<ul style="list-style-type: none">• Flexibility to tailor workspace to needs of course and students• Variety of tools for use within workspace• Ease of use• Communication capabilities• Focus on collaboration• Co-editing tools• Decentralized platform	<ul style="list-style-type: none">• Not web-based• Program file size and download time• Needs 256Mb or more RAM• Communication capabilities• Use on multiple-computers• Tech support• Need to supplement workspace with other software to overcome workspace

- Security
- Worldwide community of users
- Similarity to technology used in accounting practice
- Favorable student reaction to Groove
- Groove “comes to me”
- Inexpensive to use

weaknesses

- Not intended to be used as a full-blown LMS



Right Tools for the Right Job

(Tools that Work Within the Groove Workspace or in Conjunction with the Groove Workspace)

Activities and Delivery Methods	Collaboration	Conferencing	Feedback	Measurement
Groove workspace	Notepad	Groove workspace	Bulletin Board	ExamView testing
Bulletin Board	MS Word	Net2Phone	File Sharing	Online Survey
Threaded Discussion	MS Excel	Sessions (teleconference)	Audio/Video	
Calendar	Whiteboard			
Mindmap Diagrams				
PowerPoint				
Tutorials				
Audio/Video				
File Sharing				

Case Study 3

GE Medical Systems' Performance Solutions

Ellen Goldstein, GE Medical Systems

Ellen Goldstein is an instructional designer at GE Medical Systems' Performance Solutions, responsible for the creation of a rapid design process for synchronous training for GE's global field engineers. GE's training solutions involve distance education offerings using synchronous interactions, self-paced computer sessions, and performance support tools to optimize the time spent in training to improve productivity in the field.

Ellen Goldstein, GE Medical Systems

Making the Decision to Use a Blended Solution

The key to successful blended solutions is to tailor the blending appropriately. How much of what you'll teach needs to be in a classroom or laboratory? How much can be taken offline, either synchronously or asynchronously?

At GE Medical Systems, we teach technical training so that we need to have a balance between what we can teach our students remotely, and what must be taught in an actual setting. We use a matrix such as the one below to help drive our decision.

Synchronous Feasibility Matrix

	Better Suited To Synchronous		Less Suited To Synchronous	
Type of content	Knowledge/Prerequisite	Best Practice Sharing	Software Applications	Hardware Applications
Duration of class	Less than 4 hours	4-6 hours	6-8 hours	8+ hours
Location of students	More than a 3 hour plane ride	Less than a 3 hour plane ride but more than a 3 hour car ride	Between a 1 and 3 hour car ride	Less than a 1 hour car ride
Stability of material (Potential reuse)	Very stable, will not change	Stable, will change slightly	Somewhat stable, changes on a regular/predictable schedule	Unstable, changes are large and unscheduled/unpredictable
Students' connectivity	56K, broadband, or DSL	2 business lines	1 business line, 1 personal line	Personal line only

Circle the characteristics that best describe the class and your students. If most of your circles fall into the two columns on the left, your class is a very good candidate for synchronous. If most of your circles fall into the two columns on the right, you may need to work with a virtual classroom specialist to better define the scope of your class.

Develop a Business Case to Support Your Choice of Blended Solution

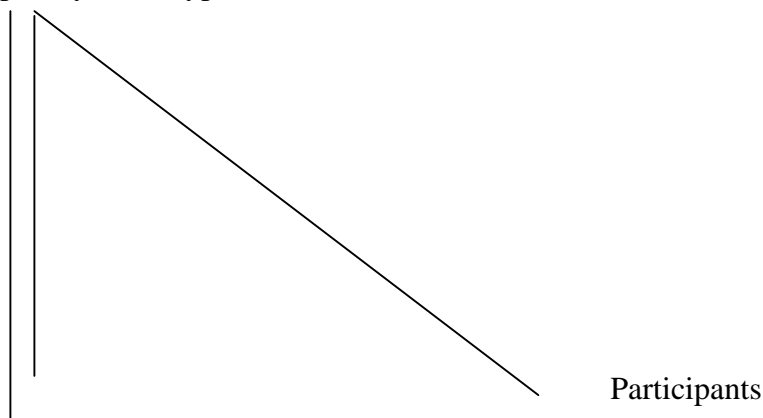
Below are some guidelines for your business case. Present to appropriate manager for buy-in/sign-off in whatever format works best for you (Word, PowerPoint, etc)

1. **Project Summary Info** (Course/Project Name, Summary, Delivery Dates, Audience, Goals, Items that are critical to success, etc)
 2. **Resources Involved** (Project Management, Content Creation, Delivery)
 3. **Other Costs** (Teleconferencing charges, Equipment, Synchronous Tool Charges (i.e. charges for Blackboard, or WebBoard, or your tool of choice)
 4. **Project Plan** (Timeline / Milestones, Risks and Abatement Plan, etc)
 5. **Cost-Benefit Analysis** (Will the expenditure of time, effort, funds, justify using a blended solution?)
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Optimal Class Size

A typical synchronous class can have anywhere from 8-15 participants. Fewer than 8 would not be cost effective and more than 15 would be difficult to manage. Think of a classroom. How many students can you effectively “keep your eye on” during the lecture or labs? The same applies to synchronous. You may “see” the participant by listening for his/her voice on the phone, by watching any hand raises, by the number of polling questions answered. But it is easy to lose people to email, other phone lines and other distractions. Limiting class size 8-15 will help ease this situation.

Complexity/# and type of Interactions



The higher the complexity of the topic, the fewer number of participants should be scheduled. The same applies to less complex topics where you want to really involve the participant. So the more you plan to have the participants interact either with the synchronous tools or with a system hooked up to the synchronous session, the fewer participants should be scheduled.

Some people may have hundreds of planned participants. While it may seem more cost/time effective (on the part of the facilitator and/or SME) to have larger sessions, your audience would be better served if you had more numerous sessions to accommodate the large number.

The larger the number of participants, the less like training and more like a teleconference it is.

***Blending synchronous and asynchronous:
building effective learning activities***

Thinking Strategically About Your Blended Learning Initiatives

Jennifer Hofmann, InSync Training Synergy

Jennifer Hofmann, president of InSync Training Synergy, is a training consultant who specializes in the design and delivery of synchronous learning. Her team provides seminars and development services to individuals and organizations looking to implement a synchronous classroom. She regularly contributes to the ASTD online publication, *Learning Circuits*, is the author of *The Synchronous Trainer's Survival Guide*, and has taught the Certified Online Instructor Program at Walden University.

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Showcasing Effective Synchronous and Asynchronous Learning Activities

Dr. Chuck Kater, SC Online at Southwestern College

Dr. Chuck Kater is associate dean of Professional Studies and SC Online at Southwestern College. He was the architect and lead instructor for the Walden Institute "Certified Synchronous Instructor" program, which successfully prepared corporate trainers to design and conduct interactive learning events using a blend of synchronous and asynchronous software. The former director of educational technology for a fortune 500 company, he has re-designed numerous learning programs and college courses for synchronous delivery.

Blending Asynchronous and Synchronous Tools To Promote Learning: Moving Beyond the Feature Set of the Software

Dr. Chuck Kater
Southwestern College

When I think about “distance learning” or “e-learning” projects and courses that have been successful, one word comes to mind, “simplicity”. Yes of course it should be engaging and interactive, but above all else, the design of the activity must be kept as simple as possible.

History has demonstrated that in many cases, distance learning or e-learning projects took so long that the content had changed before the (asynchronous) product was completed. The use of synchronous software reduces the lead time required to produce these projects, but of course you must get everyone together at the same time or ask them to watch the recording of the session later.

Simple activities and exercises that allow students and employees to interact with the content and develop questions as a result of that interaction is a strategy that works, especially in situations where resources to develop distance learning projects are minimal. Designing engaging activities and exercises that are simple is not easy.

If you monitor job openings in higher education you will notice a definite trend to add instructional designers and graphic artists to augment the capability of colleges and universities to create more engaging designs for distance learning. Corporate entities are adding graphic artists to improve the visuals used in training programs delivered via synchronous technologies. The primary question is: “Are we challenging these people to create simple effective designs or are we simply asking them to take our existing models of instruction that we have chosen to use in distance education and e-learning settings and improve their organization and appearance?”

Listed below are some of the “guiding principles” that I use in designing asynchronous and synchronous exercises and activities. I validate the exercise or activity against guiding principles during the conceptual stage of design before we spend any additional resources on building it.

My Guiding Principles for Effective “Distance Learning” or “e-Learning Designs”

Asynchronous

- two clicks or less access content
- instructions are not necessary
- it must be responsive for those with a slow connection speed
- it must be fun to do

Synchronous

- all activities and exercises require collaboration
- everyone must be able to participate simultaneously
- it must be responsive for those with a slow connection speed
- it must be fun to do

Pardon me while I climb onto my soapbox. Course management tools (asynchronous) are too often used right out of the box with no enhancements and we dub it “Sir Distance” for “Distance Learning”. The discussion board and the writing and submission of papers become the sole means of interaction people have with the content. Some colleges and organizations have witnessed this and simply said “let’s use e-mail. It is cheaper and less complex than a course management system.” The travesty is that **“We are defining the outcome “Distance Learning” or “e-Learning” by the interactive capability inherent in the tool, not by what we have chosen to do with it.”**

Synchronous tool usage suffers from the pre-conditioned behavior patterns associated with lecture. A technology that allows one to show slides in real time to a distributed audience is great. So many people default to what is comfortable for them and give lectures just like they did in the bricks and mortar classroom! Fueling this thought process is the popularity of the term “webinar”, which is often used to describe the use of a synchronous tool by a well known person to lecture to a large group of geographically distributed people.

The amount of innovation associated with the use of asynchronous and synchronous technologies to date is frighteningly low. Most people are taught how to use the tools by vendors who are interested in minimizing their technical support calls, as they should be. This leads to “experts” in the use of individual tools, but does not help us to create simple innovative designs that increase the engagement level of our distance or e-learning programs.

So what should we do, if we choose to accept the paradigm that distance learning or e-learning should be engaging and thought-provoking? The answer is simple. We need simple effective learning designs for use in both the asynchronous and synchronous environments. Once we have some learning designs from which to choose, we may still choose to use the “tool” alone,

but we will no longer be able to say that we don't know how to make our distance learning or e-learning programs more engaging and interactive.

When I think back to all of my classroom experiences I can not recall a favorite textbook or a favorite classroom. I can recall several teachers and the little things that they would do to stimulate my learning. Our success or failure with asynchronous or synchronous tools for distance learning or e-learning programs will not be a function of the feature sets built into the software by the vendors. It will be the "little things" that we choose to do as instructors with the tools to stimulate the learning of our students and employees.

We must create simple activities and exercises that can be re-purposed for different content areas when using both asynchronous and synchronous technology to deliver instruction. **We must move beyond the feature set inherent in the vendor provided software if we are to maximize the use of technology to promote learning.**

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