VIDEOCONFERENCING IN A NUTSHELL

Center for Teaching and Learning
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INTRODUCTION

Ask your grandfather what distance learning is and he would say, “Walking ten miles through six feet up snow, uphill without the aid of shoes at times, to get to school every day.” Ask your father and he would say, “Sitting in the very back row of a giant university lecture hall looking down on an instructor the size of an ant.” Ask your child, and he or she would say, “It’s the latest use of classroom technology designed to put the world at your fingertips without ever leaving the classroom or even your home.”

Many have become extremely comfortable with how classes are taught. Successful and experienced people often have negative reactions to change because they have become comfortable with what they are presently doing. This is called “Fear of the Unknown.”

Active learning that is student-centered is essential as it provides opportunities for critical thinking. The integration of distance instruction can provide this and more. To be an effective distance learning presenter, you need to be an effective teacher. Quality teaching practices, the use of instructional technology, and attention to planning and human needs are the essential elements.

Advances in instructional technologies continue to influence the way we design and develop educational systems, materials, learning styles, and collaborations. Distance education/learning is a broad and all-encompassing term that is applied to a wide variety of program designs. Videoconferencing is just one style or type of delivery to and for these programs. Videoconferencing offers additional delivery of instructional tools and strategies, which can and will complement any academic course, meeting, etc.

As the rapid advancement of technology continues, we should be mindful of their potential uses. This way of thinking only reflects the mission minded individual.
WHAT IS VIDEOCONFERENCING?
(A Technical and Instructional View)

**Technical** - Videoconferencing is a live, real time connection between individuals in a separate location(s) for the purpose of face-to-face communication to share information via IP or ISDN connectivity. This communicating distance could be a few miles or half way around the world and involves two-way or more transmission of audio, full-motion video, text, and computer data. All conference rooms have three basic elements: environment, equipment, and network – however simple or complex it may be.

**Instructional** – Videoconferencing, one means of Distance Education, allows the educator to reach participants outside the classroom or work environment due to distance and/or time restraints. Videoconferencing should provide a complete simulation of a normal meeting or class environment, enabling both parties to see, hear and present material, just as if they were in the same room. This way of communication is considered to be an integrative or alternative tool for delivery of courses or services and not a replacement.
WHAT IS IP or VoIP VIDEOCONFERENCING?
HOW DOES IT WORK?

IP/VoIP (Internet Protocol/Voice over IP – H.323) videoconferencing uses the internet as the transmission medium to send and receive analog digitized compressed video/audio/data signals via cameras, microphones, speakers, monitors via a codec. This mode of transmission uses less bandwidth, can go longer distances, no fiber optic or dedicated lines needed. It is also the most economical versus its counterpart ISDN.

On the low-end this can be as simply as a sitting at your desk computer with a small camera, microphone and speakers to the high-end having a high-end dedicated room system with integrated equipment.

The heart of the IP videoconferencing system is a piece of equipment called a CODEC (COder/DECoder). This piece of equipment is what sends and receives the encoded/decoded video/audio/data signals.
WHAT IS ISDN VIDEOCONFERRING?
HOW DOES IT WORK?

ISDN (Integrated Services Digital Network – H.320) videoconferencing use banded phones lines as the transmission medium to send and receive analog digitized compressed video/audio/data signals via cameras, microphones, speakers, monitors via a codec. However, integration of the ISDN setup is not as simple as IP. ISDN is based on a number of fundamental building blocks. There are many factors to consider such as: channels, BRI’s (basic rate interface vs. PRI’s (primary rate interface), NT1 (network termination device), routers, interfaces, hubs and much more. As like IP, the heart of ISDN videoconferencing is a piece of equipment called a CODEC (COder/DECoder) which sends and receives the encoded/decoded video/audio/data signals.

********************************

Before venturing into ISDN chartered waters, it is very important that you seek advice from someone who is very familiar with this type of information transmission. This can be a person who has been through the implementation process or a representative from your IT department.
IP vs. ISDN
Advantages & Disadvantages

IP – Advantages
• Cost effective (fixed rate - no per minute long distance calling charges or monthly maintenance fees)
• Is standards-based and able to connect across complex and diverse networks (QoS)
• Most users are more familiar and knowledgeable with IP
• Better accessibility/Can be moved around
• Can achieve television quality with a higher connection speed
• More widespread as a means of technology
• Better media integration and Web collaboration
• Enhanced manageability (software remote management)
• Installation simplicity

IP – Disadvantages
• Requires dedicated and high bandwidth networks
• Audio/Video/Data drop-out is more common than ISDN
• Transmissions can negatively impact network traffic
• Quality is not as high as ISDN
• Cannot guarantee QoS (Quality of Service)
• If Lan or Wan experience problems, there is no alternate network to host video traffic.
IP vs. ISDN
Advantages & Disadvantages (continued)

**ISDN – Advantages**
- A proven, reliable technology
- Delivers clear transmission of Video, Audio and Data better than IP
- Dedicated bandwidth for guaranteed performance
- Networks follow the existing telecommunication infrastructure
- Adheres to standards where systems created by other vendors can connect (wide compatibility)

**ISDN – Disadvantages**
- Very expensive
- Media integration and Web prove difficult
- Unavailable in many rural areas
- Must maintain a network solely for videoconferencing
- Stationary (cannot move around)
- No alternate network to host the video traffic
VIDEOCONFERENCING SYSTEMS

There are three main types of IP/ISDN videoconferencing systems and two ways to conduct or carry out this connection: Point-to-point (only two sites) or Multi-point (three or more sites).

**Desktop** – A Videoconferencing terminal (software or hardware) that interacts directly with a personal desktop computer. Not recommended for use with dedicated or portable systems. These units are relatively low in cost and can quickly be installed for use in minutes.
**Portable System** - (point to point/multi-point)

These are mid-level products designed for small to medium sized rooms but depending on the type of system bought, it can look and act like a dedicated system by adding monitors, carts, computer, microphones, video playback, etc., and can be moved from room to room. This type of system is good for small groups and classrooms.
**Dedicated System** – A stationary (or integrated) room system consist of hardware that is custom fixed within a centralized location. This is the ideal solution. Equipment usually needed are: 2 Monitors, LCD, codec, camera(s), microphones, computer, multiple video sources, special lighting and touch control. These type systems are usually used in group conferencing, medium to large classroom settings or when multiple site participation is a must.

Determining which to use or purchase will depend on some of the following factors listed on the next page:
6 Steps to Choosing a Videoconferencing System

When reading the following three main categories that should be addressed:
Infrastructure, Environment, and Presentation/Production

1. **Intended use for your system**
   What are the different situations for use? Who will be your primary audience? Will there be connections with sites outside the organization (national and international)?

2. **Number of sites**
   How many locations will be involved and what resources will each have at their disposal?

3. **Size of your Room(s)?**
   Is it large enough to add in a Videoconferencing system? Where will the equipment be placed? Is there sufficient lighting and secondary equipment to accommodate an appropriate VC solution? Will it hold the necessary amount of participants attending?

4. **Connectivity/Infrastructure? IP or ISDN**
   What connectivity best suits your internal communications requirements (Network over which it will run)? What types of communications do you plan? What type of connectivity will the remotes sites be using?
   Is there a need for multiple site connectivity?

5. **Do you Need Data in Addition to Video & Audio?**
   Do you want or need to share computer files, documents or the WWW on screen?

6. **Costs**
   What will be your bottom line allotted funding? This can determine your answers to the above questions.
WHY USE VIDEOCONFERENCE?
(Impact on Student Learning)

The advancement in technology is shaping every aspect of our life, including education. Not too long ago videoconferencing was not critical to education. However, now, it has become an integral part of the learning process.

Where once limited by the walls and resources that encompass them, teachers and students in remote locations now have the opportunity to expand learning beyond those walls to access information. With new emerging technologies, there are opportunities to tap resources around the world!

Students participating in videoconferencing will:

- learn in an effective emerging technological environment that improves and prepares them with real world communication and presentation skills
- Utilize world-wide resources that include experts, professionals, remote institutional resources and other students. Broadens the scope of learning resources.
- Function in a global climate that will link them to different social, cultural and economic backgrounds
- Enhances motivation and critical thinking

Most people who chose long-distance learning are often attracted by the variety of choices available to them. With new innovations in telecommunication technologies, lowered equipment and transmission cost, videoconferencing systems can make the impossible possible.

Classes, which would have been cancelled for lack of enrollment, can now be offered through distant learning. Pulling these low enrolled campuses together through videoconferencing increases the class size to a respectable number allowing for the class to be taught to the ones interested. In contrast, a class that has too many enrolled can be offered at another campus location at the same time by the same instructor. This is not to say enrolled can be unlimited.

Videoconferencing actually encompasses a range of technologies used in a wide range of situations. Since students have a wide variety of learning styles, various technologies can provide diverse learning methods accommodating the auditory, visual and kinesthetic, or a combination, when applied appropriately.

Videoconferencing can amplify poor teaching styles and strategies only when the presenter devotes a greater effort toward material preparation. It is the presenter who will need to streamline this technology with the information presented.
POSSIBLE USES FOR VIDEOCONFERENCING
(In and Out of the Classroom)

- Course Delivery (in whole or part)
  Videoconferencing can be integrated into a curriculum at three basic levels:
  Single Lesson – Where videoconferencing addresses one specific topic or concept, provides a lesson introduction, overview or summary.
  Selected Unit – Where videoconferencing provides a series of programs that provide content for a learning unit in the course curriculum.
  Full Course – Where videoconferencing is used to deliver the full semester course content.

- Staff development
- Mentoring individual students
- Talking to international experts
- Sharing and communicating with people from different cultures
- Learning about remote environments
- Curriculum development or enrichment
- Continued education
- Research follow-ups
- Department meetings & In-service activities
- Job Interviews
- Dissertations
- Presentations
- Community events: Town hall meetings, Government hearings, school board meetings, Court functions and other government-related activities
- Public health discussions
BENEFITS OF VIDEOCONFERENCEING

As an interactive communication medium stands out in a number of ways. When designed and implemented effectively, technology can assist information transfer. This can be very beneficial when influencing a student's learning ability or conducting a productive meeting. **Following are some of these benefits:**

- Reduces time and travel expense (cost effective)
- Reduces stress, pressure, and fatigue from travel
- Removes the barrier of distance that separates people (immediate)
- Encourages active participation (not a passive medium)
- Enables connection with external sources (ability to reach wide audiences multiply and simultaneously)
- Broader curriculum
- Supports the use of diverse media
- Ability to collaborate effectively in real time
- The medium is familiar (everyone has watched TV)
- Promotes discussion
- Promotes visual stimulation and heightens motivation,
- Relates new material to previous knowledge
- Allows for classes/meetings across different time zones
- Improved communication and effectiveness (body language can enhance communication: A picture is worth a thousand words)
- Improved presentation skills
- Immediate feedback
- Faster revisions
- Greater flexibility
- Very effective for introducing, summarizing, and reviewing concepts
- Ability to seize opportunities within narrow time frames
- Allows for different perspectives in course content
- Promotes active learning
- Improved accountability
BENEFITS OF VIDEOCONFERENCING
(continued)

- Enhances and adds value to the everyday class routine
- Better quality control for educators
- Contributes to the larger social mission of education & training
- Builds relationships
- Reduces the feelings of remoteness and isolation
- Increases depth of learning: ask better questions, better understanding of material, learning from a source rather than just a textbook or online material
- Increases productivity
- Focuses on real-world problem solving
- Provides an alternate learning method for those who cannot make it to a campus or for classes not offered because of school size or teacher limitation (connecting teacher to student).
- Share classes between schools
- Increased safety (great for medical students to learn and review operating procedures)

Disadvantages: unfamiliar environment, newness, extra time needed for preparation, infrastructure, access to equipment, feelings of isolation, Technical problems, Hidden expenses, good for students who are self directed and more active.
WHAT MAKES A SUCCESSFUL VIDEOCONFERENCE?

Everyone has their preferred teaching style and students exhibit a variety of learning styles. The following list does not attempt to advocate any particular pedagogical approach but there are issues that need to be considered. To be successful in using videoconferencing as the medium for presenting material, you will need to enlist the following qualities and practices:

1 - Be passionate and enthusiastic about educating your audience
   If you are not thrilled to be there neither will your audience. Set an excited and upbeat tempo right from the start. Put yourself in the learner’s shoes. Visualize and see yourself as a dynamic presenter who is presenting the material successfully. Remember to keep an energetic persona even if something goes wrong. A sense of humor is a valuable asset. Your body language and voice deliverance can go a long way when trying to communicate information. Changing your presentation style could make a world of difference.
   **Be yourself and have FUN!!!**

2 - Believe in the possibilities of videoconferencing while being aware of its limitations
   Everything has a limit and videoconferencing is one of them. Not all systems are the same so make sure you fully understand what a system can do. Going into a room without understanding the equipment can feel like being on the flight deck of the starship enterprise. By being well aware and informed, you are able to adjust your presentation accordingly.
   **Remember, being informed does not leave you lost in space!**

3. **Be flexible**
   Presentations will not always go as planned. This is why you have to be able to “go with the flow” as they say. Technology, advanced as it is, will not always be dependable. Being flexible can turn almost any problem into a teachable moment.
   **Have a backup plan!**
WHAT MAKES A SUCCESSFUL VIDEOCONFERENCE?
(continued)

4. Be prepared and organized
Preparing distance based material will take longer (almost double) to prepare and deliver than that of a standard class setting. Make sure that your presentation adapts for the medium. Material should be presented with an easy flow to coach, facilitate or assist participants. Make sure that the information is not only in your mind but that your handouts, slides, video presentation, etc... are in a clear and logical sequence. Trying to communicate unorganized information will only lead to confusion and time loss. Presentations should excite, stimulate, motivate and demonstrate.

Remember you are the video artist with a video canvas with lots of pixels to tell a story!!

5. Practice
An effective presentation demands good delivery. Rehearse your presentation several times. At least one rehearsal should be in the room you will be presenting. Make sure you are comfortable with your surroundings and you understand the equipment being used. Timing is critical! Practice your pace. Use a stop watch if necessary. Don’t read directly off of your slides, handouts, etc… or memorize your whole speech. Be natural and use the key points of your presentation.

Remember, practice makes perfect!!!
PLANNING FOR AN EFFECTIVE DISTANCE LEARNING EXPERIENCE
(Integrating Videoconferencing)

There are different views for course design depending on teaching method. The information that follows gives a basic foundation when trying to design a course using technology.

**Delivery**
You will need to address if a room based, computer based, or both models will work into your plans depending on connection need (long-term courses / short-term projects / expert access / individual or small group), teaching style (lecture model / interactive model / combination model), site limitations and material being presented. It is important to balance flexibility with the lesson’s priorities.
Content Planning

There are many components when planning lesson content. Including videoconferencing technology into your lesson plan should focus on learning rather than the technology but the technology should be presented as a seamless part of the content driven lesson. The core content remains basically unchanged. Focus on learning, focus on content, focus on the outcome and videoconferencing piece will fall into place.

Following are only five basic design components along with suggested techniques that can be adapted to your course. Even though they might all not apply to your situation, they can help to promote other possibilities.

HUMANIZE – creating an atmosphere which focuses importance on the individual and the individuals need. Communication is the key!

Importance:
Breaks the ice and allows for everyone to get acquainted
Builds group rapport
Closes the distance gap
Can impact all classes that follow
Establishes ground rules and sets standards (fewer surprises means a more enjoyable experience and students routinely know what is expected of them)
Better prepared

Techniques: Welcome email, roll call and introductions (make a seating chart to help learn names/ask about their interests, hobbies and goals), rotate you attention to each site not focusing on just one, allow from time before and after class for questions, make sure all students get to be on camera, follow-up email, information packet (provide in print and post on the web), praise them
PARTICIPATION – getting beyond the technology by providing opportunities for interaction (active learning is most effective when the learner is fully engaged)

Importance:
Gains meaningful information (due to social interaction)
Influences opinion change
Affects creativity
Determines if students are understanding and accepting material being presented
Boost confidence
Closes the distance gap
Provides a sense of satisfaction
Part of a community of learners who are connected (more prone to succeed)
Central when using an interactive system

Techniques: start class with an activity, give personal examples, use directed questioning, group work sessions, discussions & debates, role play, brainstorming, oral reports and presentations, award extra points and assign pre-class preparation assignments

PRESENTATION STYLE – delivery is important and preparation is the key

Importance:
Enhances content being relayed
Maintains Interest (less fatigue)
Motivates
Promotes participation
Challenges
Promotes understanding and retention of material
Establishes routine

Techniques: mix it up (combine “lecture” & “interaction” approach), plan as a student centered learning environment, positive attitude, humor, enthusiasm and flexibility a must, be creative, short segment formats, develop a contingency plan, team teaching, integrate a variety of supporting media (embrace the technology), develop a script for each class (outline of lesson procedures, activities and materials), summarize, repetition, most importantly - seek expert advice. See pages 22 - 27 for additional information.

REMEMBER: When we communicate, 10% of the meaning is contained in the words we choose; 20% is contained in the style of delivery; and 70% is contained in non-verbal cues or body language.
FEEDBACK & ASSESSMENT – gaining information

**Importance:**
Corrects misunderstandings and omissions
Improves effectiveness in what we say (clarifies/reiterates)
Motivates
Move skills forward (positive reinforcement of what went right)
Gauges the process and development of your efforts
Allows for refinement

**Techniques:** Assessments should be created during planning phases, Rubrics (for student and teacher), review or listen recorded classes, assignments that fit the medium (presentations, exams, quizzes, writing projects), solution oriented discussion following scenarios (prevents in future sessions),

**Skills**
It is recommended that anyone wanting to engage in distant education via whatever means, contact an expert in that particular area of technology so he/she can discuss all requirements that would or would not be expected them. All too often a decision is made to implement a distance learning program with specific technology without really understanding the implications for instruction and learning.
Lesson Matrix

<table>
<thead>
<tr>
<th>Learner/Outcomes</th>
<th>Methods and Activities</th>
<th>Materials/Equipment/Team</th>
<th>Time</th>
<th>Notes</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who are you conveying to?</td>
<td>How will you convey the topic (lecture, discussion, hands-on activity)?</td>
<td>What audio/visual aids, handouts, supplies, software, etc. will you use to support your instruction?</td>
<td>About how much time will it take? (preparing &amp; presenting)</td>
<td>Do you need to prepare visuals or get handouts to remote learners?</td>
<td>Is there a plan and/or system in place to allow for feedback?</td>
</tr>
<tr>
<td>What do you expect your learners/participants to accomplish? (List this specific results)</td>
<td></td>
<td>What equipment will be needed to present these aids?</td>
<td>Identify Team Members their responsibilities</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

After completing lesson plan, review it with the following questions in mind:

- How much total time is spent in lecture? (Keep it less than 50%--30% is better).
- How much time is spent lecturing at any given time? (Keep it less than 20 minutes).
- Are breaks included?
- Can a remote facilitator or guest lecturer facilitate some of the lesson?
- Is rapport established with remote learners?
- Do learners know what to expect?
- Can any of the lessons be done prior to the video connection (via print, e-mail or web)?
- What support is needed to make the lesson a success?
- Is evaluation time included?
VIDEOCONFERENCE TIPS
(Preparing for the Event)

There are many factors that can impact the quality of your videoconference experience. Your videoconference site should have a coordinator to guide you through the process. Below are just some of the factors to consider when participating in or arranging a videoconference. They are in no certain order.

- Plan ahead!
  Contact the Coordinator to make the necessary arrangements for your videoconferencing session. The coordinator will always be your “go to” or “in charge” person. This person will plan, inform, evaluate, and plan again. Some possible questions a coordinator may ask are: Date and time of the event, How many will be attending, Will you be presenting video or computer information, Who will be the connecting site(s), What is the contact information (name, email and phone number) for the coordinator or technical person for all site(s) participating, Short synopsis of the session. The coordinator will also inform you of any charges that may incur.

- Make sure that the coordinator keeps you informed of all decisions and changes made.

- Setup a time with the coordinator to visit the videoconference room where you will be presenting to get a feel for the room. It is always good to know your environment. Also, set up a time with the coordinator to go over the abilities of the room and receive any necessary training regarding equipment and material preparation. This will be the time you and the coordinator will discuss how your event should run. This should be done WELL in advance. The more you prepare, the smoother it goes and the more rewarding it is for everyone.

- Once you have your presentation together call your coordinator and setup a time to practice a run through your presentation. This will allow you to make any adjustments or changes that are necessary.

- Email or fax a copy of the agenda, syllabus, hard copy of graphics being presented, reading list, ethical behavior practices, ground rules, policies for attendance/makeup work/ advisement times, contacts, phone numbers, emails, and any other necessary information or material to all participating sites.

- Make sure that the videoconference room you will be in has a speaker phone as a backup plan. Make sure connecting sites have one also.

- Make sure you are provided with a trained facilitator to help facilitate and troubleshoot the event, assure connection is made, and all equipment is up and running properly.
• It is best to do several run through practices before the initial event. This will give you ample time to make any corrections or adjustments to your material.

• Have a backup plan!

• Arrive at least fifteen minutes early on the day of your presentation(s).

• Have material out and ready to present before connecting.

• Consider recording session for later viewing. This could help the presenter in making adjustments to presentation style or material and give participants that were not able to attend a chance to obtain missed material. If streaming is an option, talk with your coordinator about details.

• Begin on time.

• Always have a clock on hand.

• Introduce yourself when speaking for the first time.

• Smile and have a positive attitude.

• Always ask if everyone can hear and see you properly before you begin.

• The host site should be responsible for introducing all participating sites and to make sure everyone has an opportunity to enter the discussion. This eliminates silent participants from disappearing.

• Introduce or announce when someone enters or leaves the room.

• Speak in your normal voice and clearly without shouting. Repeat questions if necessary.

• Ask questions by name and site.

• Balance the interaction among all sites.

• Do not interrupt when someone else is speaking.

• Pause briefly before responding.

• Maintain eye contact.

• Do not participate in side conversions, everyone will hear you! It also shows you aren’t listening.

• Do not tap microphones, move them around or bang/tap on table. Also be careful not to cover microphones with papers.

• When allowable, keep mics muted until ready to speak. Let everyone know when you are muting the microphones. Otherwise the other site(s) may think you have a problem.

• Include time at the beginning and end of presentation for questions if allowable.
• Make sure all cell phones are turned off before you begin.

• Dress neatly and appropriately to enhance your image on camera (Avoid Contrast). Suggestions: Avoid wearing reds and blacks, as they tend to “bleed” on the screen, and all white will cause for a jumpy glow-in-the-dark or halo effect. Avoid plaids, stripes, tweeds, checks, prints and glittery fabric (anything considered busy - this goes for ties and scarves also). Participants may watch your clothing rather than listen to what you are saying. Be careful not to wear excessive amounts of jewelry (bracelets hit the table and cause extraneous noise). No heavy clothing as you may become too warm due to nervousness or heat from the extra lighting. Do wear solid shirts and blouses in pastel or earth tone colors. Go light on the makeup.

• Try not to make excessive sudden moves. This could lead to choppy audio and video due to bandwidth overload. Use natural gestures when you speak.

• In closing, summarize key points, decisions, deadlines, and issues of concern.

• If your session last more than 60 to 90 minutes, give everyone a stretch break. This can also give participants and presenters time to prepare additional questions, fill out evaluation forms, confirm important information that could have been missed or overlooked during the presentation, etc.

• Keep a drink near by.

• Always look directly into the camera. This gives the remote sites participants the sense you are looking directly at them.

• When cancelling a class or event, contact the coordinator ASAP!
AUDIO-VISUAL GUIDELINES
(General Rules)

*Rule of thumb, when planning a presentation or lecture you will not be able to use the entire time for presenting your material. For a 50 minute class you will present 30 minutes worth of material. Keep it simple. Presentation materials are enhancements to presentations NOT the presentation itself.

*When you should use graphics: presenting outlines or lists, Illustrating key points or relationships, changing topics, showing questions as they are asked, and summarizing.

*When preparing material for television, keep the following instructional design principals in mind: Color, Contrast, Text Style, Text size, images, and layout.

*Pay attention to the screens aspect ratio. There are different outcome views from different equipment. Make sure you adjust your presentation to fit the television screen from whatever equipment you may be using.

- For Powerpoint and document camera presentations use large, bold, legibility text. Arial, Helvetica, Palatino, Lucida Sans, and MS Sans Serif fonts are good choices because of their equal thickness. Fonts with thin horizontal lines will vibrate on the television screen.
- Minimum font size for legible body text is 24 points.
- Optimal font size is 32 or larger. Use a 36 point for headers.
- Do not prepare material in ALL CAPS. Text will be too difficult to read. However, you can emphasize a point using caps.
- Keep all text and images 1” from all screen edges.
- Bullet information
- Avoid the use of glossy or shiny material.
- Keep graphics and charts simple and use large labels.
- If graphic is complex, consider building it in subsequent steps.
- Do not underline unless necessary. When underlining, use a thick line. Thin lines will vibrate on the TV screen.
- Set spacing to 1 ½ or 150% of font size.
- Use the Master Slide Template within the Powerpoint program if possible. This will create a background and font style that carries through on all slides. It also makes it easier to make any necessary changes.
- Use a horizontal format (landscape) opposed to a vertical (portrait) format.
• Print on 8 ½ “ x 11” paper for document camera material.
• For overheads use the 6 x 6 rule: 6 words or less per line and no more than 6 lines down.
• For Powerpoint use the 5 x 5 rule: 5 words or less per line and no more than 5 lines down.
• Use colors in the middle of the color spectrum. Yellow on blue is very common use. Black text on a pastel background is always safe.
• Avoid reds, oranges, and pinks – they tend to bleed when projected and black print on white paper – they tend to vibrate on screen.
• Ask the question, “Can I stand 10 feet from my computer and see my material clearly”? 
• Obtain written permission for any material that is copywrited.
CONCLUSION

There is no doubt that two-way compressed video (Videoconferencing) can provide exciting and valuable experiences for learners and the like. By allowing access to and interaction with resources that were too expensive, inconvenient, or non-obtainable, Videoconferencing opens up a world of new opportunities.

Yes, there may be more planning and preparation than usual, but to take advantage of this medium and finding the strategies that work best for this medium are only going to improve motivation and learning, which is more than enough to compensate for the extra effort necessary for an effective videoconference experience.
RESOURCE LINKS

http://www.ctl.uga.edu


http://www.oucom.ohiou.edu/fd/videoconppt.pdf

http://www.iddl.vt.edu/instructors/ivc/before.php

http://www.uga.edu/netinfo/vconf/

http://www.uga.edu/netinfo/vconf/vc.network.concerns.html

http://www.uga.edu/netinfo/vconf/vc-tech-recs-how-to.html

http://www.kn.pacbell.com/wired/vidconf/intro.html

http://www.uidaho.edu/eo/distglan.html

http://www.unitedvisual.com/2tips/2tips1.asp#Videoconference