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MULTI-UTC ON-LINE FREIGHT SEMINAR

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ABSTRACT Four University Transportation Centers, (composed, at the time, of twelve universities in total), worked with local and regional partners to develop and deliver a simultaneous multi-university online freight seminar during AY 2010-11. The goal of the project was to foster collaboration among these various stakeholders, share information, and provide university students and practicing professionals with the tools they need for successful careers in this important transportation area. The pilot project successfully demonstrated that courses, which cover specialty areas such as freight transportation, can be offered by more universities with transportation programs if we effectively exploit UTC resources collectively. The project described in this paper investigated the feasibility of this approach by developing a graduate seminar, which brought together faculty and students from several universities and professional experts from four separate regions in a video-based, real-time format. The project was proposed as a first step toward developing a Multi-UTC program of courses that can be accessed by students at each individual UTC for course credit in their graduate transportation programs.			
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Preface

I want to thank all those people who worked so hard to make our experiment a success.

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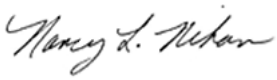
I alone am responsible for all errors and omissions.



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Chapter 1 . **Introduction**

Problem Statement

Many universities around the country offer training in logistics. This training is designed for corporate logistics managers at transportation firms (railroads, air cargo handlers, freight forwarders, etc.) and corporations engaged in national, regional or worldwide commerce. Very few universities have programs that study the movement of freight from a transportation engineering perspective.

On the other hand, most university transportation engineering courses include analyses of the effects of trucks on roadways: the effect of truck weights on pavements, of truck turning radii on roadway geometric design or of truck speeds on congestion and highway safety. Almost no one, however, takes a comprehensive look at the movement of freight from the time that it arrives at a port in the form of a shipping container, during its transshipment from drayage hauler to long distance truck or railroad, to the time that it is delivered to the retailer or factory.

As a result, there is no truly complete program of coursework designed to teach freight oriented transportation engineering at just one university. The project described in this report aimed to remedy that situation by assembling relevant course material from freight transportation researchers at various UTCs into an on-line seminar in freight transportation engineering.

The primary goal of this project was to provide university students and practicing professionals with the tools that they need for successful careers in this important area of transportation engineering in a cost-effective manner. Our second goal was to demonstrate the ability of University Transportation Centers, with similar and complementary areas of expertise, to collaborate and pool resources, to develop a program of course work that would be beyond the ability of any one university to accomplish with its available resources.

With the growth in the number of University Transportation Centers over the past decade, many UTCs have overlapping areas of expertise. Because our multi-UTC online seminar project involved the sharing of research ideas, approaches and findings, we expected to discover areas where the expertise at these UTCs could be complementary, which could lead to future collaborative, multi-university projects.

According to one of the major project participants, Thomas O'Brien, Director of Research at the Center for International Trade and Transportation at California State University, Long Beach, (CSLUB) and Associate Director, CSLUB Programs, for the METRANS UTC, we met and exceeded our goals. Tom said: "the focus is on engineering which is understandable but I think one of the strengths of our format was how truly interdisciplinary it ended up being with more broad-based interest (even beyond the classroom)."

We succeeded in demonstrating the feasibility of the online seminar for simultaneous multi-university education and also its advantages, made possible by economies of scale and scope, and by the synergy created when a diversity of participants can talk to each other in real time.

Background

A few UTCs in the federal UTC program have been working with their local and regional partners to conduct research and develop educational materials that address freight transportation problems. Three of these, in addition to Transportation Northwest (TransNow)[1], stand out: The National Center for Freight and Infrastructure Research and Education (CFIRE)[2] at the University of Wisconsin-Madison, METRANS[3] at the University of Southern California (USC)-Los Angeles and the Southwest Region University Transportation Center (SWUTC)[4] at Texas A&M University (TAMU).

This project investigated the feasibility of developing a Multi-UTC program of courses in freight transportation by developing a pilot, graduate seminar that could be offered to students at the UTC institutions for course credit by their respective graduate transportation programs. The seminar was developed by faculty and other affiliated experts from each of the four UTCs and offered on-line during the 2010-11 academic year in the form of eight simultaneous video-conference sessions. The research funding for this pilot project, provided by TransNow, was used to plan, design and implement the first on-line Multi-UTC shared seminar. TransNow Director, Professor Nancy L. Nihan, was the PI responsible for organizing and implementing this initial effort with faculty and staff support from the three other UTCs.

Objectives

This collaborative education project ultimately converged on the following objectives:

1. Develop a concise, focused freight transportation seminar designed for future transportation engineers, urban planners, and other transportation students who are interested in freight operations.
2. Collect the material on freight transportation available from various UTCs working in the area and make it available on-line to a wide audience.
3. Demonstrate the ability of UTCs to collaborate to collectively develop and offer a program of interdisciplinary courses that no individual UTC would be justified to offer, based on level of effort and student demand, in offering.

Approach

Development

During the initial scoping phase of the project the four UTCs worked together to develop a seminar theme, a schedule, and to assign responsibilities to each UTC for video-class sessions. TransNow was responsible for scheduling, coordinating, and collecting participant surveys for these sessions.

Initial conversations suggested a strong interest in sharing knowledge and experience regarding creating and maintaining relationships with regional agencies, corporations, and institutions. For example, the Pacific Northwest has a strong history of developing effective cooperative groups to lead freight initiatives, which TransNow could showcase, including the Puget Sound Freight Mobility Roundtable, the Freight Mobility Strategic Investment Board (FMSIB) and Whatcom County's International Mobility and

Trade Corridor (IMTC). Furthermore, METRANS has been very effective in working with various cities in Southern California, and CFIRE organized the Mid-America Freight Coalition. Consequently, an important element of the course development phase was the intended involvement of such experts in the delivery phase

Delivery

The second phase of the pilot project involved offering the shared video classes in the first few months of 2011. Each participating university could offer course credit to students in their individual transportation graduate programs for an existing class in its current curriculum. The average expected enrollment was five or six students from each UTC for a total class size of 20 to 24 students.

The shared freight seminar consisted of eight 1½-hour classes offered via video conference during a common time for all four UTCs. Each class featured a presentation by subject matter experts associated with one of the UTCs (including their affiliate partners) and an interactive question/answer session involving the participants from multiple universities.

Evaluation and Reporting

The final phase of the project involved the following tasks:

1. Collect and analyze participant survey data.
2. Conduct an evaluation of the project, using these results, reviewer's comments, and additional feedback received from UTCs, stakeholders, and other interested parties.
3. Develop recommendations for future use of shared UTC resources for collaborative Multi-UTC education projects.
4. Prepare and distribute a TransNow report covering the above tasks.

Expected Benefits

This project was expected to:

1. Provide students with access to experts in the field of freight transportation that would be prohibitively expensive to assemble in person for this amount of time.
2. Pool UTC resources and expertise to increase the breadth of material available on this important subject.
3. Pool UTC resources to economically develop a course that would be out of reach for any single UTC to develop.
4. Reach more students at less cost per student
5. Provide a model for future collaborative UTC efforts

Participating UTCs and Their University Consortia (AY 2010-2011):

1. Transportation Northwest [TransNow] – University of Washington (UWA)-Seattle and Washington State University (WSU)
2. National Center for Freight and Infrastructure Research and Education (CFIRE) – University of Wisconsin(UWI)-Madison, Milwaukee, and Superior, University of Illinois-Chicago, University of Toledo[5]
3. METRANS Transportation Center– University of Southern California (USC)-Los Angeles and California State University, Long Beach (CSULB)
4. Southwest Region University Transportation Center (SWUTC) – Texas A&M University (TAMU)-College Station, University of Texas at Austin (UT), Texas Southern University (TSU)

Chapter 2 . **Literature Review**

Modes of Delivery in Education

There are two ways a teacher can interact with a student: in person or at a distance. Face-to-face teaching has been the traditional way of teaching university students, but sometimes distance teaching is either necessary or better than face-to-face.

Traditionally distance learning meant mailed materials and lectures on radio or television, but the Internet has created new ways to teach at a distance.

By 1999, a published article found:

> One of the most dramatic developments over the past few years has been the establishment of 'on-line' degree-granting universities. This is occurring in at least three different ways: (i) some universities with little or no physical facilities intend for distance education to the major method of delivery (an example is the University of Phoenix); (ii) many established universities are developing 'on-line' presences to extend access to existing programs; and (iii) established universities are forming alliances or consortia to extend access to programs and conserve resources (examples are the Southern Regional Electronic Campus and the Western Governors' University). These programs offer undergraduate and graduate degree programs as well as certificate and other non-credit courses. At present, at least 3700 college level courses (including about 150 health-related courses) are 'on-line' through over 100 different institutions.[6]

University of Washington faculty have been active in using the Internet for distance learning, offering many Internet courses and short programs, nineteen Internet certificate programs, and thirteen masters degree programs where course credit can be earned online.[7]

The State of Washington has created an accredited university that is 100% online, the WGU (Western Governors University) Washington, which awards bachelors and masters degrees.[8]

Other universities have teamed up to put courses on the Internet. For example, in 2000, Oxford joined Princeton, Stanford and Yale in a joint venture to develop distance-learning courses via the Internet. Charles Junkerman, Associate Provost and Dean of Continuing Studies at Stanford, said the future of distance-learning remains uncertain. "This is completely unknown territory," he said.[9]

The number of online university courses has exploded since 2000; few, if any, universities offer no online coursework. In fact, at least 450 university courses are offered online, free for anyone to download, from prestigious universities such as Stanford, MIT, and Yale.[10]

The paradigm for university distance learning on the Internet has been video-recorded lectures posted online, with little or no opportunity for teachers and students to interact.

Our project took Internet learning one step further, by streaming presentations online as they were happening, with simultaneous interaction among students and faculty at four different universities. The format of this Multi-UTC shared on-line seminar is described below.

Multi-UTC Format

This course was a combination of both classroom and online learning, i.e., blended learning[11]. There are multiple forms of blended learning but the one most similar to the Multi-UTC seminar is known as the online lab, which refers to an online course that is delivered in a physical classroom or computer lab.[12]

In the Multi-UTC seminar, students, faculty, and transportation professionals at each location met at the same time to hear a presentation, which was followed by a question and answer period, a type of synchronous learning, which has been shown to increase student motivation and interest.[13] [14] The other form of learning that this course offered was collaborative learning. Collaborative learning occurs when groups of people share knowledge and learn from one another[15].

To the best of our knowledge, the combined learning approach used in the Multi-UTC project has not been tried before. This type of on-line collaborative, synchronous learning between transportation students, faculty, and professionals at multiple UTCs is unique and worth studying. If successful, this type of interactive learning approach will allow students from multiple universities, across the nation, to:

1. hear and interact with experts who are specialists in the different parts of the field, and, thus, expand their knowledge
2. engage in interactive discussions among students, faculty, and transportation professionals at other universities and , therefore, gain new perspectives.

Chapter 3 . Course Development, Delivery, and Evaluation

Phase 1. Preliminary Planning Tasks

Shared core course

The Multi-UTC distance learning project had to coordinate different time zones, class schedules, and quarter and/or semester breaks among the four different host universities. We used preliminary video conferencing sessions with the other UTC faculty and their IT experts to work together to solve problems and produce the core video-seminar sessions.

We were able to arrange 8 consecutive 80-minute video sessions, which comprised the shared core of Multi-UTC classes. As part of the original planning process, a list of potential back-up speakers was developed for each session. This turned out to be a significant factor in the subsequent course delivery, since a last-minute replacement of the planned speaker for TAMU had to be recruited. A back-up speaker from UWA helped us make a smooth and seamless transition. The original and final schedules of speakers and host UTCs are shown in Figures 3-1 and 3-2.

Speakers were asked to limit their presentations to 40 minutes, allowing time for introductions and a shared Q&A session each week. Speakers were also asked to provide a list of reading materials 2 weeks before the presentation and a copy of the presentation slides one or two days in advance so that the participants at each port could have a local screening of the slides during the presentation and could read relevant material prior to the interactive session.

Independent incorporation in each UTC curriculum

Each of the four participating UTCs had considerable flexibility in how they incorporated the core classes in their site-specific transportation programs. The following choices were made:

1. UWA offered the seminar as 1 credit of a 3-credit course Winter Quarter, 2011;
2. UWI offered it as a 1-credit core course in CFIRE's Transportation Management & Policy (TMP) certificate program, Spring Semester, 2011;
3. USC offered it as a free weekly seminar with no scheduled course credits; and
4. TAMU offered a single video class (Session 7) as a free 80 minute seminar.

Figure 3.1 gives the initial schedule of video sessions.

Although SWTC was able to connect its faculty and students for the seventh interactive video session, it was not able to host this session as planned, because the planned speaker could not be available at the TAMU location and, therefore, had to be replaced. Consequently, the UWA served as the replacement host for Video Session 7, while the TAMU students and faculty joined the session on-line. Figure 3.2 shows the revised schedule for this video presentation.

Figure 3-1. Initial Schedule of Shared Video-Class Sessions

Multi-UTC Course
Winter Quarter or Winter/Spring Semester

Nihan - 1/5/2011

Multi-UTC[1] Course: Maritime Freight and Associated Issues

Live Video-Seminars Shared Interactively with 4 UTCs: TransNow, CFIRE, METRANS, and SWUTC

SCHEDULE

Video Session Dates (10-11:30 am, PST)	Topic	UTC Host	Speaker
January 21, 2011	Global Transportation Trends and their Potential Impact on West Coast Port Competitiveness	TransNow - UWA (Seattle Campus)[2]	Greg Shelton, Director, Global Trade, Transportation & Logistics (GTTL) Studies, UWA
January 28, 2011	Port-Related Sustainable Economic Development	METRANS - USC (L.A. Univ.Park Campus)[3]	Michael Vanderbeek, Manager of Strategic Planning, Port of Long Beach, CA
February 4, 2011	Port of Milwaukee and Great Lakes Shipping	CFIRE - UWI (Madison Campus)[4]	Eric Reinelt, Director, Port of Milwaukee, WI
February 11, 2011	Marine Terminal and Drayage Coordination (using GPS data)	TransNow - UWA	Anne Goodchild, Assistant Professor, CEE Department, UWA
February 18, 2011	Institutional Issues and Port Mitigation Policies	METRANS - USC	Tom O'Brien, Assoc. Director, CSULB Programs, METRANS, and Director of Research, Center for International Trade & Transportation, CSULB
February 25, 2011	Grain Movements on the Inland Waterway Network	CFIRE - UWI	Pat Ries, Commercial Manager for Consolidated Grain and Barge, Princeton, IL
March 4, 2011	Short Sea Shipping, What Is & Isn't Working, & What Can Be Done to Resolve Existing Obstacles.	SWUTC -TAMU (College Station Campus)[5]	Jim Kruse, Director, Center for Ports and Waterways, Texas Transportation Institute (TTI)
March 11, 2011	St. Lawrence Seaway Development Corporation Operations and Overview	CFIRE - UWI	Craig Middlebrook, Deputy Administrator, U.S. Saint Lawrence Seaway Development Corporation.

[1]UTC: University Transportation Center
[2]Consortium: UWA-Seattle and WSU
[3]Consortium: USC and CSULB
[4]Consortium: UWI-Madison, Milwaukee, and Superior, UI-Chicago, U-Toledo
[5]Consortium: TAMU, UT at Austin, TSU

Figure 3-2. Revised Schedule of Shared Video-Class Sessions

Multi-UTC Course
Winter Quarter or Winter/Spring Semester

Nihan - 1/5/2011

Multi-UTC[1] Course: Maritime Freight and Associated Issues

Live Video-Seminars Shared Interactively with 4 UTCs: TransNow, CFIRE, METRANS, and SWUTC

SCHEDULE

Video Session Dates (10-11:30 am, PST)	Topic	UTC Host	Speaker
January 21, 2011	Global Transportation Trends and their Potential Impact on West Coast Port Competitiveness	TransNow - UWA (Seattle Campus)[2]	Greg Shelton, Director, Global Trade, Transportation & Logistics (GTTL) Studies, UWA
January 28, 2011	Port-Related Sustainable Economic Development	METRANS - USC (L.A. Univ.Park Campus)[3]	Michael Vanderbeek, Manager of Strategic Planning, Port of Long Beach, CA
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February 25, 2011	Grain Movements on the Inland Waterway Network	CFIRE - UWI	Pat Ries, Commercial Manager for Consolidated Grain and Barge, Princeton, IL
March 4, 2011	Freight Security: Borders/Customs/Technology,	TransNow - UWA	Ed McCormack, Research Assistant Professor, CEE Department, UWA
March 11, 2011	St. Lawrence Seaway Development Corporation Operations and Overview	CFIRE - UWI	Craig Middlebrook, Deputy Administrator, U.S. Saint Lawrence Seaway Development Corporation.

[1]UTC: University Transportation Center
[2]Consortium: UWA-Seattle and WSU
[3]Consortium: USC and CSULB
[4]Consortium: UWI-Madison, Milwaukee, and Superior, UI-Chicago, U-Toledo
[5]Consortium: TAMU, UT at Austin, TSU

Phase 2. Course Delivery

Session Components

Preparation Components

The speakers were contacted well in advance and asked to provide the following items prior to their presentation dates.

1. An abstract and reading list (1½-2 weeks before the presentation).
2. A copy of their presentation slides and/or other visual aids (2-3 days before the presentation).

Each UTC was responsible for setting up the slide presentation locally on one of their screens so that the participants at each location could:

1. follow the slide presentation on one screen and
2. simultaneously see & hear the speaker and participants from other UTC locations, plus
3. review the slide presentation again later on.

Students from UTCs who read the suggested readings prior to the live presentation were well-prepared for the Q&A exchanges during the last part of each video class, which led to some lively and very interesting discussions.

Delivery Components

Each 80 minute video session had three components that were scheduled to use the following time intervals:

1. Introductions of participants from each UTC (10-15 min.)
2. Presentation by speaker at the host university (30-40 min.)
3. Question and answer section with alternate questions from each UTC in a round-robin format (15-30 min)

Problems:

Technical.

- One of the participating UTCs had equipment that was not completely compatible with the Polycom systems used by the other ports. We had some initial problems getting successful connections with them.
- Microphones that were turned on at individual desks at one UTC location caused audio problems when audience participants were having independent discussions during a presentation.

Organizational.

- Semester vs. Quarter and Different Time Zones: Finding a class hour that was open for all locations at the same time was a challenge. The fact that it was a graduate seminar helped.
- Compatible subject area: TAMU's freight emphasis was logistics, which was not directly focused on the selected seminar topic. They could only offer to host one session. Unfortunately, as it turned out, the scheduled speaker for that session had to be replaced, but the TAMU students and faculty still participated that day's video session.
- Timely receipt of reading lists and PP slides: Some speakers were late in getting materials to UTC participants.

Advantages.

Technical.

- Video presentations: METRANS and TransNow were able to prepare copies of some of the video presentations that could be posted and shared publicly.

Organizational.

- Good speakers: We had a fairly large pool of excellent speakers and experts to draw from.
- Economies of scale: We had economies of scale with regard to individual faculty effort required and number of students reached, etc.
- Economies of scope: We reached a broader spectrum of freight-related regional issues.
- Interactive learning: The seminar provided a platform for interactive discussions among UTC participants and a chance for students to meet other students and professionals in the field.

Phase 3. Evaluation

A computer survey with 4 basic questions was sent to participants after each session. Most, but not all of the participants completed the survey.

Participant Survey Questions for Each Video Session

The following 4 questions were included in each survey:

1. Strengths. For Video Session #i, briefly identify 1-3 of the session's greatest strengths and the impact of each on the value/effectiveness of this entire video session.
2. Areas for Improvement. For the same video session, briefly identify 1-3 aspects that caused problems and why each was an important problem for the session's effectiveness and/or enjoyment.
3. Overall Session Rating. On a scale of 0-5, where a score of 5 represents a performance evaluation of "Truly Excellent" and 0 represents a rating of "Frustrating Waste of Time", how would you rate this Video Session?

4. (Optional) Please suggest any changes that could alleviate problems identified in Question 2, which you believe would be feasible for the host UTC and its facilitators to implement in future classes.

The results for the first three questions were analyzed and used as an evaluation tool for assessing the strengths, weaknesses, and overall success of each video session and the program as a whole. Comments received in response to the final, optional, question were reviewed during the course delivery and, when possible, suggested improvements, which could be implemented in time for subsequent classes, were made.

Questions 1 and 2: Cited Strengths and Areas for Improvement Analyzed by Category.

Session Category 1: Speaker Presentations and Materials

Citations that addressed areas that were part of the speaker's presentation and materials were given the Category 1 label, A. These included:

- A short list of reading materials and their sources for students to access at least one-week before the scheduled presentation.
- A copy of the presentation slides and/or visual aids sent to each UTC facilitator 24 hours before the scheduled presentation.
- The presentation itself and the speaker's performance during the Q&A interactions.

Session Category 2: Audience Participation and Interaction:

Citations that addressed the audience participation and interaction component of the session were given the Category 2 label, B. These included:

- Level of audience preparation.
- Level of audience attention and participation.
- Contributions and/or distractions created by the audience interaction.

Session Category 3: Video Conference Technology

Citations that addressed the video conference technology were given the Category 3 label, C. These included:

- Advantages that the use of this technology created that could not otherwise be realized.
- Technical problems that created distractions.

Session Category 4: Overall Class Format

Citations that addressed the overall class format were given the Category 4 label, D. These included:

- The choices made by each UTC with respect to how the core video classes were included in their individual curriculums.
- The mutually selected course topic.
- Class structure and organization of assigned tasks for speakers, UTC facilitators and students.
- The creation of back-up systems to facilitate the smooth delivery of the classes. These were part of the preliminary planning effort and included
    - a list of potential back-up speakers,
    - practice runs with the video connections, and
    - , at the TransNow location, a planned preparation time of 30 minutes, immediately before the class, to check the video connections and any other potential problems that might arise.

Question 3: Overall Session Ratings

The participants were asked to rate each completed session on a scale from 0 to 5, with 0 representing the most negative rating and 5 the most positive. This is the scale that most students and faculty are accustomed to using for class evaluations.

Chapter 4 . Survey Responses for Each Video Session

A description and analysis of survey results for the eight individual video sessions is given here. The information for each session is presented in three parts:

1. Results. Respondent answers to the standard survey questions are shown first and then graphically summarized in a 5- or 6-page figure.
2. Summary and Analysis. A summarized list of these results with corresponding qualitative analyses is presented next.
3. Bottom Line. A paragraph that identifies the most important point or lesson-learned from this session.

Video Session 1

Our speaker for Session 1 was Greg Shelton, Director Global Trade, Transportation & Logistics (GTTL) Studies at the University of Washington. His topic was "Global Transportation Trends and their Potential Impact on West Coast Port Competitiveness." The TransNow UTC at the University of Washington, Seattle was the session host.

Results

Figure 4-1, "Survey Results, Video Session 1" presents the survey results for this first video session.

Figure 4-1. Survey Results, Video Session 1 (6 pages)

Video Session 1 – Survey Responses from 19 Participants

(Participant Type: S=Student, O=Other[1])

Participant Answers		Question 1: Strengths. *For the first Video Session, "Global Transportation Trends and their Potential Impact on West Coast Port Competitiveness", by Greg Shelton, Director Global Trade, Transportation & Logistics (GTTL) Studies, briefly (in only one or two short sentences for each answer) identify 1-3 of the session's greatest strengths and the impact of each on the value/effectiveness of this video session. Examples: (1) The presenter was energetic and his/her enthusiasm inspired the audience to ask many questions. (2)Members of the audience were attentive and actively involved, which contributed to a lively and informative Q&A period.*	Source Category[2]		
Part. No.	Part. Type				
1	S	The presenter's knowledge on the topic made the presentation excellent.	A		
		Questions from the audience were well structured and helped to understand the topic on a deeper level.	B	D	
2	S	The slides were clear and easy to follow along with	A		
3	S	1-The presenter gave a good overall summary of international trade. He used very informative images.	A		
		2-Anna, from the port of Tacoma, expressed her ideas very clearly and provided interesting insights from a port authority perspective	B	D	
		3-The fact that different universities participate in the video conference helps to have questions from different angles	B	C	D
4	O	Excellent PPT, which helped drive home the points.	A		
		The woman from the Port of Tacama was particularly knowledgeable.	B	D	
5	S	I felt that Greg did a good job making sure to have the slides advance for the other schools so that they would know where he was without having to say next slide everytime.	A		
6	S	(1) The presenter kept the audience engaged by presenting the information in an interesting way, ie making jokes.	A		
		(2) Guest speaker from the Port of Tacoma really helped with the Q&A session.	B	D	
		(3) Transitions between slides were very smooth considering having to explain when to change slides to other UTC's.	A		
7	O	Presentation provided good overview of global shipping from a west coast perspective	A		
		The slides helped show the routes clearly	A		
8	S	In my mind, the greatest strength was the involvement of the different UTCs. It was really neat to have different perspectives from each different school, which made me think deeper in the subject than I would have if it was simply an on-site guest speaker with no other school involvement.	B	C	D
9	S	I believe we all got at least triple the value with everyone on board and participating together. The audience was active and asked solid questions for all to benefit.	B	C	D
10	S	(1) I thought that the instructor was able to obviously propose the idea of it so that the participants in the session who does not have enough back ground could understand it clearly.	A		
		(2) This is very good opportunities to get the variety of stand point of view for the student interested in the transportation policy and management by having the Q&A period.	B	D	
11	S	1. Greg was very informative with his presentation.	A		
		2. Having Ana there for the questions was a great help. Learned a lot.	B	D	
		3. Nice to have USC get their sound problem fixed. Had good questions.	B	C	

[1]Faculty, facilitators, speakers, guest professionals.
[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.
[3]Note: 2 of the 19 respondents cited no areas for improvement.

Figure 4-1, Continued- 1

12	S	Greg seemed to have a great grasp of the topic at hand and was able to illustrate his thoughts in a way that everyone could understand. I hope I will get the chance to hear more of what he has to say at some point in the future.	A		
13	O	Good questions, difficult answers. Nice to have an industry practitioner on-hand to give their perspective. Kind of hard to rate one's self.	B	C	D
14	S	The presenter offered a range of detail, which allowed the novice (like me) to orient myself to the topic and to subsequently note the complexity of the issues.	A		
15	S	1. Presenter did a good job laying out basics of the shipping industry and some of the contemporary issues at play.	A		
		2. Discussion of Seattle's green gateway initiative and findings surrounding it were very relevant to my current research	A	D	
16	O	Perspective from the Pacific northwest benefitted faculty and students here in LA. I liked the ability to hear the questions from the other sites. I also think the readings helped the students come prepared with good questions.	A	C	D
17	O	Presenter did a good job of giving us a global view of the issues that affect port competitiveness. Excellent presentation for those unfamiliar with the overall issues and tradeoffs involved. It gives them a good overview to start with.	A		
18	S	The topic was extremely pertinent in the current context, especially with the Panama canal capacity augmentation plans underway, possible improvements in rail-based freight movement infrastructure and changing dynamics of global consumption/manufacturing etc.	A	D	
		I think that the presenter was able to generate interest on further research in this area.	A		
19	O	The maps of north sea global trade corridors were interesting	A		
Participant Answers[3]		**Question 2:** Areas for Improvement *For the same video session, briefly identify 1-3 aspects that caused problems and why each was an important problem for the session's effectiveness and/or enjoyment. Examples: (1) The introduction was too long because much of it was secondary to the purpose of the presentation. This confused and distracted the audience. (2) The video equipment had some technical difficulties, which was very disruptive to the presentation and the collaborative interchanges between sites.*	**Source Category[2]**		
Part. No.	**Part. Type**				
1	S	Size of text on powerpoint presentation made it difficult to understand all slides.	A		
2	S	The question and answer session was stilted -- i think this is unfortunately inherent in a video conferencing format	B	C	
3	S	Ensure the equipment works properly during the session (both our and other universities' equipment)	C		
4	O	Had to use the backup PPT, which wasn't a big deal other than the presenter didn't always make in obvious which slide he was on, so we had to guess.	C	A	
5	S	It was hard to follow some of the locations that were presented.	A		
6	S	The inability to share the slides over the network to other UTC's made the flow of the presentation rather awkward.	C		
7	O	Some of the presenters inability to respond to questions surprised me.	A		
		I was impressed with the depth of most questions. (apply to Question 1)	B	D	
8	S	I think the main area for improvement would have been the audio-video issues. Having been involved in remote learning classes previously, I've known that there are always issues that arise when you have multiple broadcast sites.	C		
		Other than that, I really enjoyed the session and found it very informative. (apply to Question 1)	A	B	

[1]Faculty, facilitators, speakers, guest professionals.
[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.
[3]Note: 2 of the 19 respondents cited no areas for improvement.

Figure 4-1, Continued- 2

9	S	Too bad we could not hear one site right off the bat. Maybe seeing the powerpoint on the screen would be worth a try, but our wall sized backup worked just fine too. (apply to Question 1)	C	D	
10	S	It was somehow difficult for me to follow what the speaker said because of the technical difficulties. I think that the instructor intended to speak slowly in the presentation period. But, in the Q&A session it was hard to catch up with what every attendee discussed.	B	C	
11	S	UW-Madison's microphone and talking was distracting at times.	B	C	
12	S	I could not think of any one thing in particular that could be an area of improvement. I felt that the session was successful and I look forward to future presentations. The fact that we were not able to hear one of the others school's was distracting; however, it was understandable considering we are trying out this new technology	N/A		
13	O	normal tech stuff. Topic was overwhelmingly large to address sufficiently in 40 minutes...	C	A	
14	S	1. Coordination between the speech and the slides dropped off, and I (as a novice) became a little less oriented to the topic.	A		
		2. I had a hard time noting the transition from elemental aspects of the topic to some of the more complex ones.	A	C	
15	S	Minor technical difficulties slowed down the Q&A session. 2.	C		
		Would like to see a greater emphasis on how environmental and sustainability issues may affect longer-term shipping trends--not just whether Washington ports can use a slightly greener supply chain as a marketing tactic.	A		
16	O	I'm sorry the 4th campus site could not take part. It would be good to know what impediments there were so that all locations could benefit from the knowledge.	D	C	
17	O	The METRANS site did not have audio for a time, but could hear the speaker. They solved the problem in time for the question and answer session and their introductions.	C		
		The micro-phones from CFIRE and METRANS ports caused some disturbance during the session. Muting audience mikes when not directly participating would be a big help.	C	B	
18	S	None as such.	N/A		
19	O	The presentation lacked explanations and antidotes. I did not gain new understanding of global trends per se.	A		

Participant Answers		**Question 3:** Rating. *On a scale of 0-5, where a score of 5 represents a performance evaluation of "Truly Excellent" and 0 represents a rating of "Frustrating Waste of Time", how would you rate this Video Session?*
Part. No.	**Part. Type**	
1	S	4
2	S	1
3	S	4
4	O	3
5	S	5
6	S	4
7	O	4.5

[1]Faculty, facilitators, speakers, guest professionals.
[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.
[3]Note: 2 of the 19 respondents cited no areas for improvement.

Figure 4-1, Continued- 3

8	S	4	
9	S	4	
10	S	3.5	
11	S	4	
12	S	4	
13	O	3	
14	S	3	
15	S	3	
16	O	4	
17	O	4.5	
18	S	3	
19	O	3	

Participant Answers		**Question 4:** (Optional) *Please suggest any changes that could alleviate problems identified in Question 2, which you believe would be feasible for the host UTC and its facilitators to implement in future classes.*	
Part. No.	**Part. Type**		
1	S	It would be of great benefit to receive the presentation to review the information.	
2	S	No response	
3	S	I expect things to work fine the next time when we all are more familiar with this type of video conference	
4	O	No response	
5	S	It would be nice if there was a way for the person presenting to be able to point out features on maps in their slides. If you were not formiliar with some of the locations you spent a little time trying to find it.	
6	S	No response	
7	O	Perhaps encouraging more speakers to express their opinions even if the facts are not known	
8	S	I think by simply becoming more comfortable with the quirks of technology will go a long way. Plus, it might be good to find a program (like Adobe Connect or similar program) that will allow the powerpoint slides to be shown on a remote screen, so the presenter doesn't have to say "next slide" all of the time.	
9	S	No response	
10	S	I think that participates should talk more slowly and try to recognize the understanding of other participants.	
11	S	No response	
12	S	No response	
13	O	No response	
14	S	Obviously, the slide coordination, which I'm sure you're working on.	

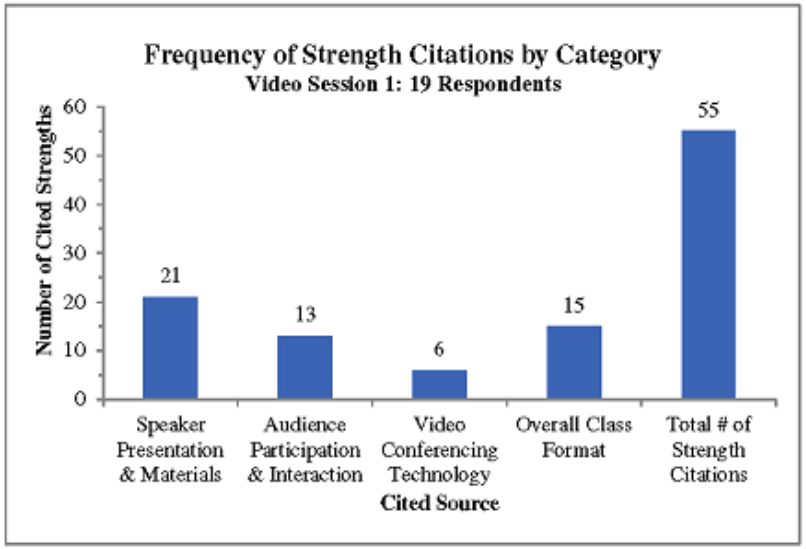
[1]Faculty, facilitators, speakers, guest professionals.
[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.
[3]Note: 2 of the 19 respondents cited no areas for improvement.

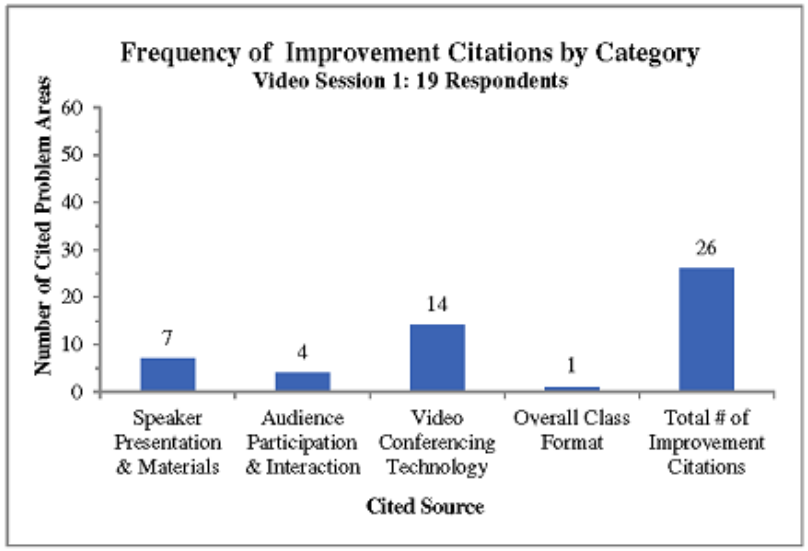
Figure 4-1, Continued- 4

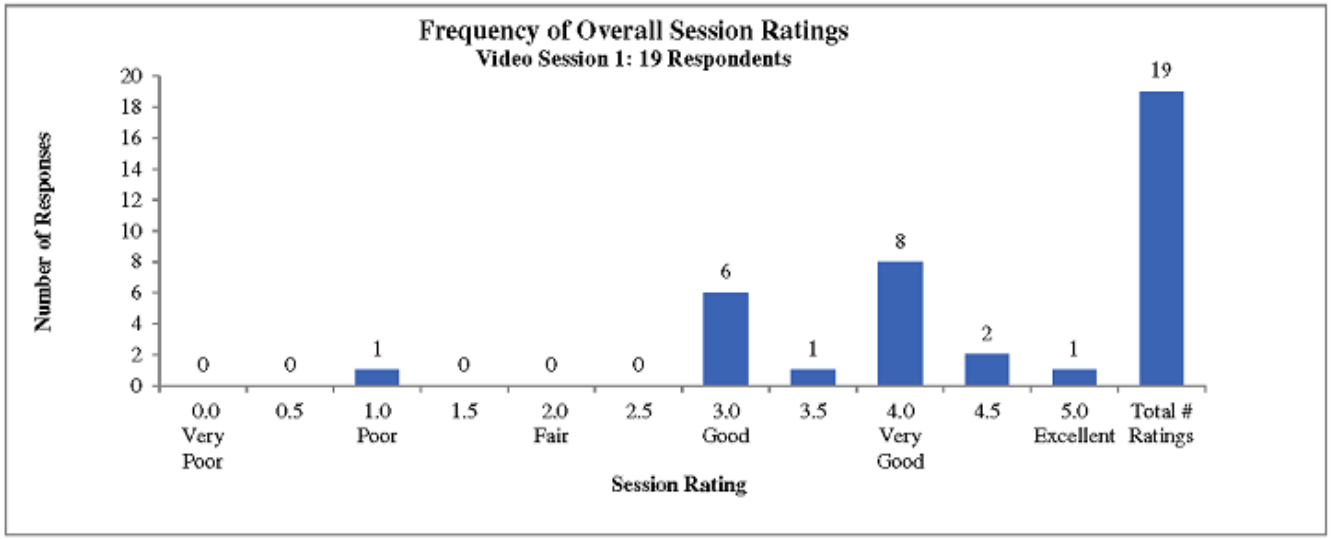
15	S	No response	
16	O	No response	
17	O	It would help our audio reception if everyone would mute their microphones when they are not introducing themselves or asking questions.	
18	S	No response	
19	O	Non-academic speaker may have done a better job. the port director answered most questions. I would have like to hear the presentation from her.	

[1]Faculty, facilitators, speakers, guest professionals.
[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.
[3]Note: 2 of the 19 respondents cited no areas for improvement.

Figure 4-1, Continued- 5







Mean	3.61
Std Dev	0.85

[1]Faculty, facilitators, speakers, guest professionals.
[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.
[3]Note: 2 of the 19 respondents cited no areas for improvement.

Summary and Analysis

The results for Session 1 and their general interpretations are summarized below.

- This first-ever session had the most technical problems, which negatively impacted survey responses from the 19 participants who responded to our survey. These included open microphones at two of the UTC's (METRANS and CFIRE); audience conversations picked up by these microphones were broadcast to all participating universities.

- This was the only session with one very low overall rating (1.0), and it also had the fewest very high ratings (5.0); see Figure 4-13: Session Ratings for All Eight Shared Multi-UTC Classes.

- Session 1 had the lowest mean overall rating (3.61) and also the second highest standard deviation (0.85), the result of low ratings from participants at universities which were most affected by technical problems and higher ratings from participants at universities that were less affected by technical problems.

- If we omit the one very low evaluation of the session (1.0), by far the lowest evaluation of any of the eight sessions, all ratings would have been 3.0 or better, including 4 participants who gave the session a 4.0 overall rating and 3 who gave the session even higher ratings. It is clear that this one very dissatisfied participant had a significant impact on statistical outcomes for Session 1.

- In their comments, participants mentioned the presenter and his materials as positive factors 21 times and there were 13 positive comments about audience participation and interaction. Participants made 15 favorable comments about the Multi-UTC Q&A format. The video conferencing technology was cited as strength 6 times and as an area needing improvement 14 times.

- The overall class format was cited as strength 15 times and as an area needing improvement only once; clearly the participants liked the idea of a Multi-UTC online seminar.

Bottom Line

We had two goals for each of our sessions: (1.) to educate our students, and (2.) to develop the concept of a Multi-UTC online seminar from an idea to a reality, and although flawed, Session 1 was a success both as an educational experience and as a Multi-UTC online seminar proof of concept; participants gave the presentation good ratings, technical glitches did not prevent the seminar delivery, and we learned from our mistakes.

Video Session 2

Our speaker for Session 2 was Michael Vanderbeek, the Manager of Strategic Planning, at the Port of Long Beach, CA. His topic was “Port-Related Sustainable Economic Development." The METRANS UTC at the University of Southern California was the session host.

Results

Figure 4-2, "Survey Results, Video Session 2" presents the survey results for this video session.

Figure 4-2. Survey Results, Video Session 2 (5 pages)

Video Session 2 – Survey Responses from 20 Participants

(Participant Type: S=Student, O=Other[1])

Participant Answers		Question 1: Strengths. *For the second Video Session, "Port-Related Sustainable Economic Development", by Michael Vanderbeek, Manager of Strategic Planning, Port of Long Beach, briefly (in only one or two short sentences for each answer) identify 1-3 of the session's greatest strengths and the impact of each on the value/effectiveness of this video session.*	Source Category[2]		
Part. No.	Part. Type				
1	S	The greatest strength of the presentation was how enthusiastic the presenter was in starting and continuing the green initiatives that the Port of Long Beach has been pursuing, which kept my attention during the entire presentation.	A		
2	S	Presenter made a convincing case for leveraging port access to use sustainability as a mechanism for economic development.	A		
		I also liked the questions asked by students, including drawing in discussion of the Panama Canal.	B		
3	S	The presenter was extremely well informed about the port operations at the PoLB, and very enthusiastic about presenting the sustainability initiatives of PoLB. Very informative session.	A		
4	S	the presenter was well prepared.	A		
5	S	Technical glitches at the beginning of the session are distracting, the rush the presenter an don't allow for adequate Q&A, which is especially unfortunate when a presentation as well organized and well delivered as was this one get short shrifted. (Apply red source category to Question 2)	C	A	
6	O	Lots of good info specific to Port of LB.	A	D	
7	O	1. Excellent overview of issues at Port of LB	A	D	
		2. I liked the sustainability and economic development tie in			
8	S	1-The presenter was very knowledgeable in the topic of sustainability in ports.	A	D	
		2-The powerpoint presentation was very easy to follow and had great information			
9	S	The technical abilities of the presentation were great. We seemed to handle the previous session's problems very well. It would be fantastic if we could continue to see previous video sessions online after the presentation as we did with this one.	C	D	
10	O	Industry perspective	D		
		Ability to compare PNW and Southern CA after the first two weeks of class	D		
11	S	The speaker was very informative about the Port of Long Beach. I really enjoyed hearing about the different things the port is doing to help make it more green.	A		
12	S	I believe that the speaker in this conference was very knowledgeable and was well prepared for the conference.	A		
13	S	The presenter was detailed in how exactly we can make our ports both economically and environmentally sustainable. Had specific proposals and their descriptions which was quite helpful to understand the action plan.	A		
14	S	- Got good, thorough answers to questions after presentation	A		
15	S	1) Speaker was knowledgeable and made presentation fluent. 2) Presentation slides weren't too busy.	A		

[1]Faculty, facilitators, speakers, guest professionals.
[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.
[3]Note: 2 of the 20 respondents cited no areas for improvement.

Figure 4-2, Continued- 1

16	S	The presentation order is very understandable. From the current situation to the connection between it and sustainability for port related projects.	A		
17	O	The speaker was good and had a broad knowledge of the port and related issues	A		
		The on-line Q and A worked well.	B		
		The student asked reasonable questions which indicated they were paying attention.	D		
18	S	No response.	N/A		
19	S	The presenter effectively conveyed the importance of the material.	A		
20	O	Excellent presentation and overview of the Port of Los Angeles. Very good speaker.	A		
Participant Answers[3]		**Question 2:** Areas for Improvement: *For the same video session, briefly identify 1-3 aspects that caused problems and why each was an important problem for the session's effectiveness and/or enjoyment.*	**Source Category[2]**		
Part. No.	**Part. Type**				
1	S	The presenter had too much content in his presentation, which made him have to rush through slides that I would have liked some elaboration.	A		
2	S	It appears that there are some problems with PowerPoints loading on the video screen, so backups are being used.	C	A	
3	S	The presentation sometimes seemed more of an advertisement of the sustainability initiatives of the PoLB. In my view, for this seminar topic to be included in an academic curriculum, a more critical (sometimes theoretical) approach is required.	A	D	
4	S	the video equipment had some technical difficulties, which was very disruptive to the presentation and the collaborative interchanges between sites.	C		
5	S	Technical glitches at the beginning of the session are distracting, the rush the presenter an don't allow for adequate Q&A, which is especially unfortunate when a presentation as well organized and well delivered as was this one get short shrifted.	C		
6	O	No problems.	N/A		
7	O	Still have trouble with the slides getting ready in time	A	C	
8	S	1-Make sure to email the presentation one day ahead of time	A	C	
		2-Remind the presenter of the session times, as, when to start, when to finish, how much time to Q&A to ensure covering all the presentation and questions	A	D	
9	S	The speaker took a long time to finish speaking.	A		
		His answers were not always on point. He seemed to be advertising the port, rather than giving us an educational perspective at times.	A		
10	O	Starting late because of the need to get slides to one of the sites limited the time for discussion	A	C	
11	S	The moving of the camera was very distracting. I had to stop watching for a portion of the feed because it was making me nauseous.	C		
12	S	Expectations of the speaker and audience should be presented upfront. i.e. we could tell the speaker ahead of time that questions should be at the end that way we don't have to interrupt and the speaker doesn't have to be interrupted during the presentation.	D		
13	S	The cameras could be placed more strategically, with focus on speakers.	C		
14	S	Starting late rushed the presentation--would be nice to get moving on time so presenters won't be as rushed.	C		

[1]Faculty, facilitators, speakers, guest professionals.
[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.
[3]Note: 2 of the 20 respondents cited no areas for improvement.

Figure 4-2, Continued- 2

15	S	Answers to questions were a tad too long.	A		
16	S	With the technical issues, the presentation speed was somehow fast, so it was hard to audit it.	A	C	
17	O	The technical issues at the start reduced the speaker time. I was sorry he was cut short because he was interesting. The speaker keep moving to the screen which was distracting.	C	A	
18	S	No Response	N/A		
19	S	It was sometimes difficult to hear questions and comments from other locations	C		
20	O	Speaker's presentation was too long. Not enough time for Q&A and multi-UTC interactions.	A		
		There were too many slides and they did not arrive in time for each UTC to display and follow along with the speaker.	A		

Participant Answers		**Question 3:** Rating. *On a scale of 0-5, where a score of 5 represents a performance evaluation of "Truly Excellent" and 0 represents a rating of "Frustrating Waste of Time", how would you rate this Video Session?*
Part. No.	**Part. Type**	
1	S	4
2	S	4
3	S	3
4	S	3
5	S	4
6	O	4
7	O	4
8	S	5
9	S	3
10	O	4
11	S	4
12	S	4
13	S	5
14	S	3
15	S	4
16	S	4
17	O	4
18	S	4
19	S	4
20	O	4

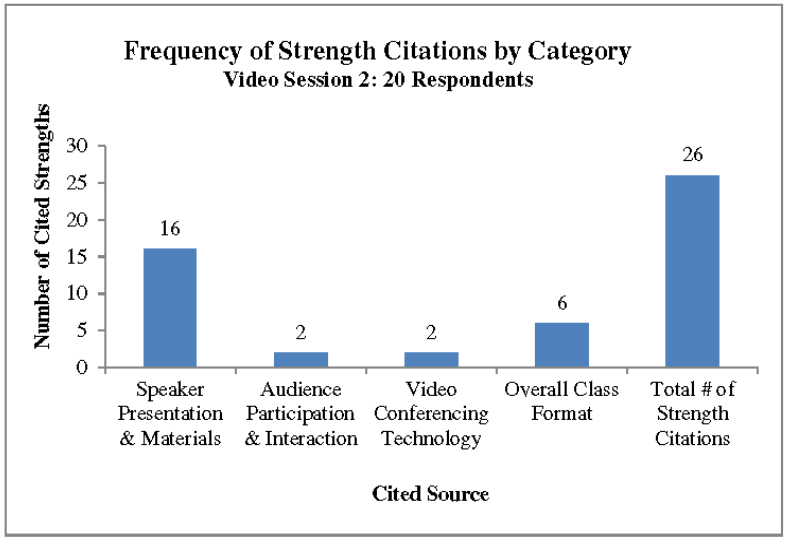
[1]Faculty, facilitators, speakers, guest professionals.
[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.
[3]Note: 2 of the 20 respondents cited no areas for improvement.

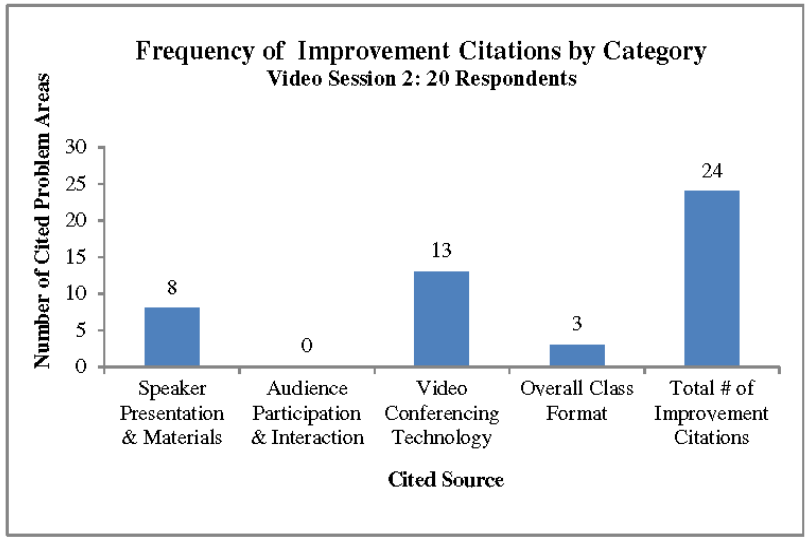
Figure 4-2, Continued- 3

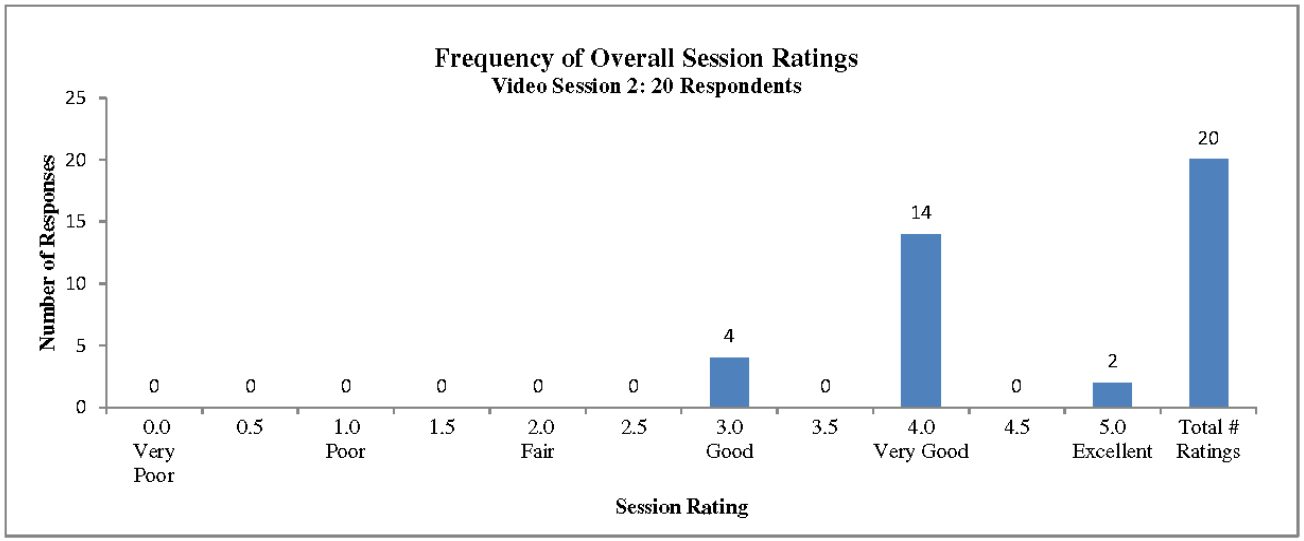
Participant Answers		**Question 4:** (Optional) *Please suggest any changes that could alleviate problems identified in Question 2, which you believe would be feasible for the host UTC and its facilitators to implement in future classes.*
Part. No.	**Part. Type**	
1	S	Make sure the presenters know to keep enough time at the end for 20-30 minutes of questions to allow more in-depth discussions.
2	S	No response
3	S	This session may be preceded by a theoretical overview (paradigms) of sustainable economic development strategies for ports in general. And then, PoLB would be a case study, for students to critically assess and raise questions, issues, concerns.
4	S	set up 20 minutes before class.
5	S	No response
6	O	No response
7	O	run a simultaneous GoTo Meeting or Adobe Connect
8	S	1-Email the presentation (or share link to download it) and confirm reception one day before the video conference. 2-It's part of the learning curve, but, start ideally the video conference on time to have enough time for the presentation and Q&A.
9	S	-Emphasize the need to be concise and on time (people are coming from many different backgrounds, so the simpler the explanation, the better!)
10	O	Investigate sharing slides via FTP site
11	S	If there is a presenter that likes to move around, the camera operator should not following them so closely. Instead, the camera operator could just zoom the camera out a little. I wider shot would be better than all the movement.
12	S	No response
13	S	No response
14	S	No response
15	S	No response
16	S	No response
17	O	Double check the files that are being sent work. The 1/2 hour setup time in advance was good.
18	S	The unfortunate technical miscues prevented the presenter from finishing his fantastic presentation and disallowing a decent Q/A afterwards.
19	S	The presenter could repeat questions before answering.
20	O	Limit the number of presentation slides and/or content on each. Allow extra slides to be posted for those who wish to review the entire presentation.

[1]Faculty, facilitators, speakers, guest professionals.
[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.
[3]Note: 2 of the 20 respondents cited no areas for improvement.

Figure 4-2, Continued- 4







Mean	3.90
Std Dev	0.54

[1]Faculty, facilitators, speakers, guest professionals.
[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.
[3]Note: 2 of the 20 respondents cited no areas for improvement.

Summary and Analysis

The results for Session 2 and their general interpretations are summarized below.

- There were fewer technical problems during Session 2, but there were still some, and one UTC (METRANS) continued to leave all its microphones open, so their casual conversations were broadcast to all the other universities, which was an unwanted distraction.
- Speaker presentation and materials were cited as strengths twice as often as they were cited as areas needing improvement. The speaker gave a very informative and professionally delivered presentation.
- The video technology was cited as an area needing improvement 13 times and as a strength only 2 times, reflecting the participants' dissatisfaction with continuing technical glitches, especially the consequences of the open microphones at one university (USC) and the lack of local access to the speaker's PowerPoint Slides.
- Overall ratings were: 3.0 (4 participants), 4.0 (14 participants), and 5.0 (2 participants), indicating a consensus among participants that the session was a success; 80% of the participants gave Session 2 overall ratings of 4.0 or better.
- Several of the cited areas of improvements, which respondents identified as technical problems were due to problems with the speaker's slides.
- There were too many slides in the original, extremely large, file the presenter tried to send out prior to his presentation.
- Each speaker was asked to send their slides and/or other visuals prior to their assigned video session so that each UTC could display these locally during the presentation, allowing them to coordinate with the speaker more easily. Unfortunately, the slides for this video session were not received in time to do this.
- Because of the time it took to edit the collection of slides down to a manageable size, the slides for Session 2 were not received at the universities in time for effective coordination between the speaker and those who controlled the slides at each university. Too often the result was a dis-synchronization between speaker and slide which confused the affected participants and so diminished the value of the visual aids in the overall presentation.
- Again, we see the value of enhanced professionalism in the technical side of the online seminar production, and also the importance of long lead times for busy speakers, as well as clear understandings between speakers and seminar producers re: speakers' time schedules.
- The second speaker spoke too long and so did not allow enough time for questions.
- Although the TransNow UTC Director advised the speaker of the time limit and its importance for a satisfactory multi-university Q&A session, and this was repeated well in advance of the video session, the speaker's presentation was still too long.
- The presentation was expected to last 30-40 minutes, but it ran 10 minutes over-time. As a result, each of the three participating UTC sites had only enough time to ask one question during the

Q&A session, and then the speaker's long answers used up the rest of the available time, so there was no possibility of follow-up or conversations among the universities.

- The session started three minutes late (due to minor technical problems at the METRANS site); however, the time for introductions from each UTC was cut to allow for that delay. Accordingly, the speaker started in time to meet the presentation-time requirement, but failed to do so until reminded twice.
- Consequently, Session 2 failed to realize the potential of a multi-university online seminar. It was mostly a webinar; the speaker spoke and the audience listened.
- Our experience in later sessions demonstrated the importance of facilitating conversation among participants at different universities, sharing their diverse information, experience, ideas, points of view, questions, and answers. This interaction is what makes an online seminar different from, and better than, a webinar.
- The most important lesson to be learned from our experience in Session 2 is that speakers must understand that their presentations have to stop at the scheduled time imposed by the students' class schedules, and there must be someone at the local end with the capability, including the authority, to remind the speaker that time is running out and, ultimately, that time is up. Otherwise, the seminar can implode into a speech by the speaker, with no opportunity to exploit the values of the two-way video connections among the participating universities.

Bottom Line

In spite of glitches, our students had a successful educational experience and we learned a valuable lesson regarding how to produce a multi-university online seminar: the importance of allowing a meaningful amount of time for the audience to participate.

Without ample time for this type of multi-UTC interaction, the "seminar" is just a webinar and so the participants do not receive the unique educational value of multi-university participation in real time.

Video Session 3

Our speaker for Session 3 was Eric Reinelt, Director, Port of Milwaukee, WI. His topic was "Port of Milwaukee and Great Lakes Shipping." The CFIRE UTC at the University of Wisconsin, Madison was the session host.

Results

Figure 4-3, "Survey Results, Video Session 3" presents the survey results for this video session.

Figure 4-3. Survey Results, Video Session 3 (5pages)

Video Session 3 – Survey Responses from 18 Participants
(Participant Type: S=Student, O=Other[1])

Participant Answers		*Question 1: Strengths. For the third Video Session, "Port of Milwaukee and Great Lakes Shipping", by Eric Reinelt, Director, Port of Milwaukee, WI, briefly (in only one or two short sentences for each answer) identify 1-3 of the session's greatest strengths and the impact of each on the value/effectiveness of this entire video session.*	Source Category[2]		
Part. No.	Part. Type				
1	S	1. Job position within Port of Milwaukee.	A		
		2. Presenter was familiar with the content of questions asked and provided objective answers.	A		
2	S	having a more open question and answer format	D	B	
3	S	Things started on time. Having people call in a little before 10 is helpful to try and work out any little issue that might happen	D	C	
4	S	Definitely struck a different balance in terms of presentation time vs. time for questions. More of a dialogue than a presentation, which is IMO a better use of time.	A	D	B
5	S	I appreciate the honesty from the speaker and I felt he was prepared for a majority of the questions that were asked.	A		
		It was a good learning experience to find out what is happening logistically for the great lakes and the Port of Milwaukee.	A	D	
6	S	Session brought out the value of the "4th Coast", and the market niches met by Port of Milwaukee I was unaware of the inland waterway connection to the south coast.	A	D	
		The growth opportunities involving movement of alternate fuels and energies was also enlightening.	A	D	
		There were many great questions offered by students. Overall a rating of 5 for this session.	B	D	
7	O	No PowerPoint, but the speaker's content was well organized.	A		
		Lots of stories. I liked the way the speaker reviewed historic trends and legislature culminating in the situation today.	A		
		Students got a real world perspective.	A	D	
8	S	The presenter carried a full depth of maritime shipping, not only for the Great Lakes, but understood the Great Lakes' context among the huge operations on the coasts.	A		
		The fact that the presenter effectively carried a complete and interesting discussion without the use of visual aids was a testament to his charge and mastery of the topic.	A		
9	S	1-Knowledgeable speaker. He covered different topics related to the port's operations and strategy in a very complete way.	A		
		2-The speaker was very clear and accurate in his answers. He provided a very clear picture on what the main port of Milwaukee's operational features, the geographical context where it is in, and what are the upcoming challenges.	A		
10	S	As a public officer, he discussed very realistic point, such as how to develop newcomers to the port, in terms of port management, rather than just ideal situation. I felt that this point is very vital.	A		
		Question session was very heated up. Thus, the class could obtain very wide range of knowledge.	B	D	C
11	O	Good conversational style. Lots of time for questions.	A	D	B
		Appropriate overview of inland water options to offset west coast.	D		

[1]Faculty, facilitators, speakers, guest professionals.
[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.
[3]Note: 5 of the 18 respondents cited no areas for improvement.
[4]Computer survey error, original answers lost. Half of the original survey respondents returned, as requested, to resubmit their answers.

Figure 4-3, Continued- 1

12	S	Was knowledgeable on the issues being the Director of the Port	A		
13	S	The presenter left a large amount of time for audience interaction, which allowed the class to impact the topics discussed. This led to an interesting discussion on financial management and labor issues.	A	B	
		The reading material was also very useful as a primer to the presentation.	A	D	
		The audience-driven discussion was far more captivating than the standard PowerPoint presenation. Oftentimes traditional slides inhibit dynamic thinking.	A	B	
14	O	Knowledgeable Speaker - Gave clear, short presentation of issues.	A		
		Topic involved a different type of port. Allowed us to see the similarities and differences between inland ports such as these and coastal ports.	D		
		Allowed plenty of time for questions.	A	B	D
15	O	More informal format led to good discussion	A	D	B
16	S	The speaker gave a good perspective (a business perspective) of the Port of Milwaukee. I am not used to understanding ports from the point of view of it being a business, so I am very glad we had an opportunity to listen to someone who deals with these issues on a daily basis.	A	D	
		This presentation allowed me to look outside of the environmental perspective of ports and understand how they operate as businesses and whom they have to answer to.	A	D	
17	S	Very informative, specially on details of research design. Very effective.	A		
18	S	Efficiency	A	C	
Participant Answers[3]		**Question 2:** Areas for Improvement: *For the same video session, briefly identify 1-3 aspects that caused problems and why each was an important problem for the session's effectiveness and/or enjoyment. Examples: (1) The introduction was too long because much of it was secondary to the purpose of the presentation. This confused and distracted the audience. (2) The video equipment had some technical difficulties, which was very disruptive to the presentation and the collaborative interchanges between sites.*	**Source Category[2]**		
Part. No.	**Part. Type**				
1	S	Providing visuals like a powerpoint would help keep listeners engaged.	A		
		The lack of visuals could be a pro or con, as their nonexistence created more of a discussion atmosphere that fostered good questions.	B		
2	S	No powerpoint or visual aids. Some of his talk would have been easier to understand with some sort of visual aid.	A		
3	S	It would have been nice to have some pictures of lakers and other ships that are used only in the Great Lakes to have a better idea of what was being discussed.	A		
		Also the question session was slightly too long	A	D	
4	S	Seemed more focused on administration and business development than infrastructure and policy side of things. Emphasis not always entirely as relevant to policy, planning, and engineering research as it might have been.	A	D	
5	S	Cannot think of any area at this time.	N/A		
6	S	Fine tune the use of equipment; perhaps a learning curve.	C		

[1]Faculty, facilitators, speakers, guest professionals.
[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.
[3]Note: 5 of the 18 respondents cited no areas for improvement.
[4]Computer survey error, original answers lost. Half of the original survey respondents returned, as requested, to resubmit their answers.

Figure 4-3, Continued- 2

7	O	I did not notice any problems.	N/A		
8	S	One overall visual aid that would have helped is a general geographic image of the Great Lakes waterway. Such a map would have helped, since not everyone in the audience has a great mental reference for the geography.	A		
9	S	CFIRE could control their camera more accurately because I think the erratic movements reduce concentration on the presentation	C		
10	S	Not Applicable in this time. This time, we could listen to the presentation in the same conference room where the presenter disccused. Technologically, I could understand much more easily what the presenter said.	N/A		
11		More organized discussion.	A	D	
	O	Slides are helpful in the distance format,	A		
12	S	Could have used powerpoint. I had trouble visualizing.	A		
13	S	Perhaps a few charts or displays would been useful as an aid to some of the discussion. Then again, the reading material provided a great deal of this information. The initial presentation of material might have been a bit more structured had it been anchored by charts.	A		
14	O	Session dragged a bit when some ran out of questions.	A	D	B
15	O	nothing to report	N/A		
16	S	It would have been helpful to have a slideshow presentation alongside the talk. A slideshow presentation would have allowed for visualization of numbers as well as logistics.	A		
17	S	No Response	N/A		
18	S	Capacity	D		

Participant Answers		**Question 3:** Rating. *On a scale of 0-5, where a score of 5 represents a performance evaluation of "Truly Excellent" and 0 represents a rating of "Frustrating Waste of Time", how would you rate this Video Session? (Please Note: Only 9 of the 18 original respondents' ratings were successfully recorded and saved for this survey.)* [4]			
Part. No.	**Part. Type**				
1	S				
2	S				
3	S				
4	S				
5	S	4			
6	S	5			
7	O				
8	S				
9	S	4			
10	S				
11	O				

[1]Faculty, facilitators, speakers, guest professionals.
[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.
[3]Note: 5 of the 18 respondents cited no areas for improvement.
[4]Computer survey error, original answers lost. Half of the original survey respondents returned, as requested, to resubmit their answers.

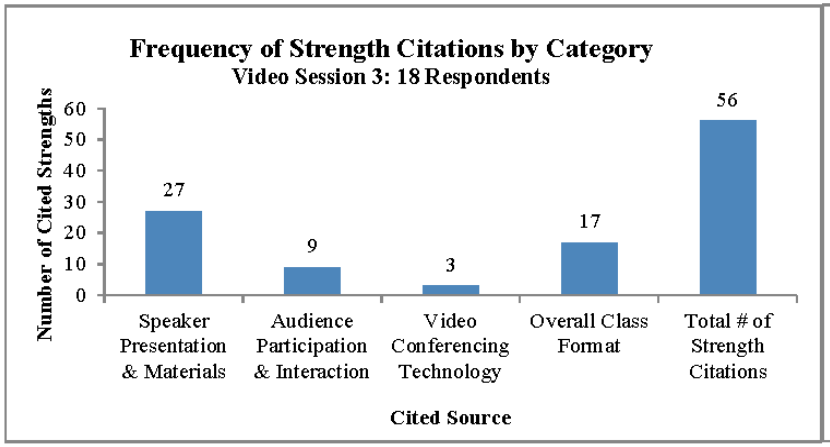
Figure 4.3, Continued- 1

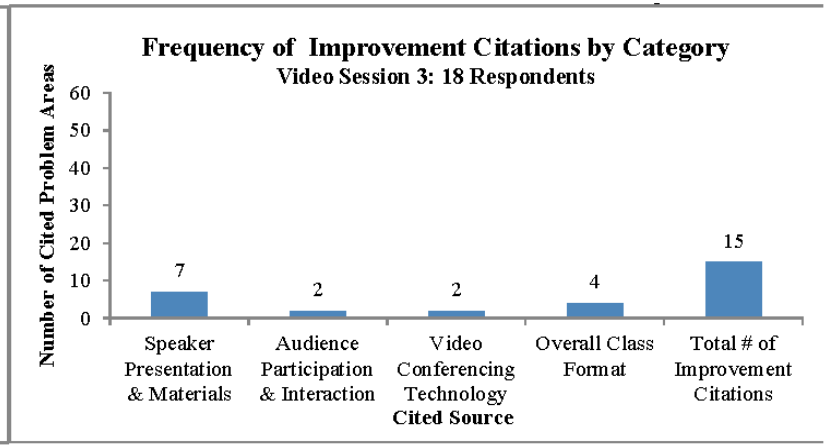
Figure 4-3, Continued- 3

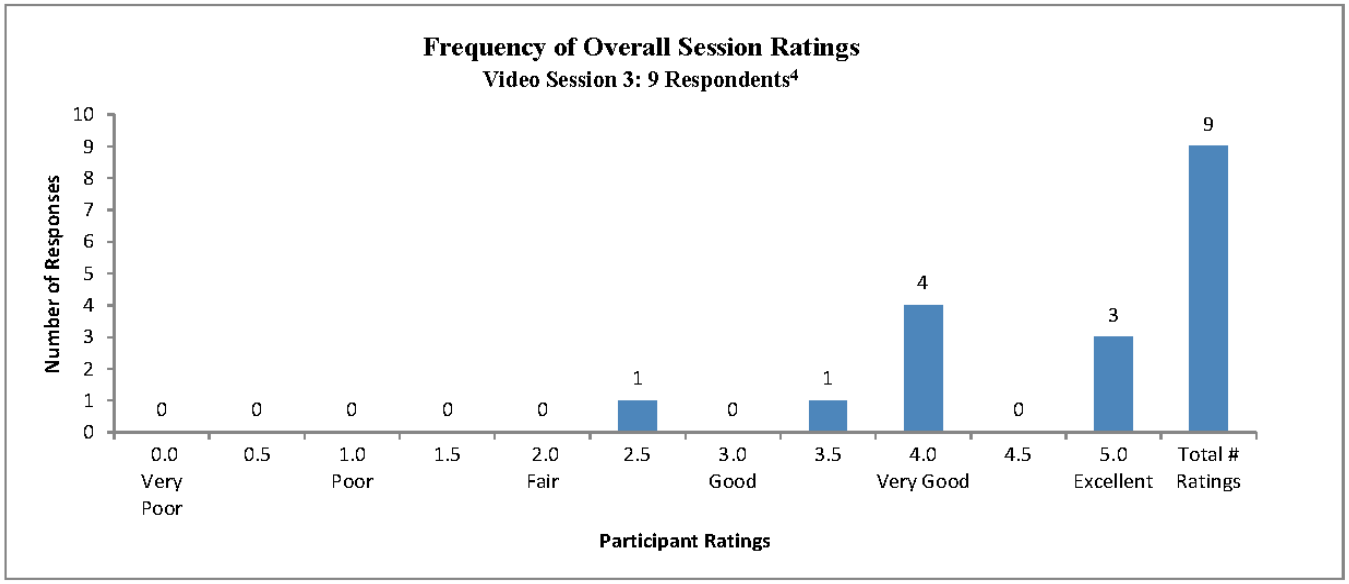
12	S				
13	S	5			
14	O	3.5			
15	O	4			
16	S	2.5			
17	S	5			
18	S	4			
Participant Answers		**Question 4:** (Optional) *Please suggest any changes that could alleviate problems identified in Question 2, which you believe would be feasible for the host UTC and its facilitators to implement in future classes.*			
Part. No.	**Part. Type**				
1	S	No Response			
2	S	No Response			
3	S	It would be nice to have more of a consistent length in how long each presenter speaks.			
4	S	No Response			
5	S	No Response			
6	S	No Response			
7	O	I should have taken notes.			
8	S	No Response			
9	S	Provide training to people using the equipment			
10	S	run a simultaneous GoTo Meeting or Adobe Connect			
11	O	No Response			
12	S	No Response			
13	S	No Response			
14	O	I would suggest the presenter bring a poster or two in lieu of a PowerPoint.			
15	O	Some visuals would have helped. A shorter Q&A session			
16	S	No Response			
17	S	Requiring slideshow presentations would be useful because it is easier for the student to review a presentation and be reminded of the topics discussed.			
18	S	No Response			

[1]Faculty, facilitators, speakers, guest professionals.
[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.
[3]Note: 5 of the 18 respondents cited no areas for improvement.
[4]Computer survey error, original answers lost. Half of the original survey respondents returned, as requested, to resubmit their answers.

Figure 4-3, Continued- 4







Mean	4.11
Std Dev	0.77

[1]Faculty, facilitators, speakers, guest professionals.
[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.
[3]Note: 5 of the 18 respondents cited no areas for improvement.
[4]Computer survey error, original answers lost. Half of the original survey respondents returned, as requested, to resubmit their answers.

Summary and Analysis

The results for Session 3 and their general interpretations are summarized below.

- As happened in Session 1, there was one outlier who gave us an Overall Session rating that was much lower than the ratings we received from any of the other participants: 2.5, compared to one 3.5 rating and seven ratings of 4.0 or better, including three perfect 5.0 ratings (8 total ratings).
- The speaker did not use visual aids and this was cited as an area needing improvement by 8 of the 16 respondents.
- As usual, speaker presentation and materials were the mostly frequently cited strength (27 of 56 total cites to strengths). It's clear that a good speaker is essential for a good online seminar.
- The second most frequently cited strength was the overall class format (17 cites).
- Audience and participation and interaction were cited 9 times.
- Video Conferencing Technology wasn't mentioned by most participants (only 3 strength cites and 2 area-for-improvement cites). By this point, we had made good progress technically, although we still had our problems, especially camerawork (focusing in too tightly on the speakers, and then moving the camera to stay centered on the speaker); some participants complained about this constant motion in their improvement cites. It's clear that time and money spent on professional audio-video is time and money well spent.

Bottom Line

There was more audience participation in Session 3, and many participants commented favorably about this. We think more research will confirm that the online seminar, with a lot of Q&A and free form conversations among participants, is a more effective teaching format that the webinar, because the students are more engaged when they can participate. We think one reason the students were more involved was because they felt more ownership of a process that they could actively participate in.

Parts of a multi-university online seminar can be video cuts between or among tight shots of the presenter and one or more people at other universities, talking informally among themselves.

A fact that may be obvious, but should be stated, is this: the students who actually asked questions got individualized instruction, one-on-one with the speaker, something that could never happen in a webinar.

Video Session 4

Our speaker for Session 4 was Assistant Professor Anne Goodchild, Department of Civil & Environmental Engineering, University of Washington.. Her topic was "Marine Terminal and Drayage Coordination (using GPS data)." The TransNow UTC at the University of Washington, Seattle was the session host.

Results

Figure 4-4, “Survey Results, Video Session 4" presents the survey results for this video session.

Figure 4-4: Survey Results, Video Session 4 (6 pages)

Video Session 4 – Survey Responses from 19 Participants
(Participant Type: S=Student, O=Other[1])

Participant Answers		Question 1: Strengths. *For the fourth Video Session, "Marine Terminal and Drayage Coordination (using GPS data)", by Assistant Professor Anne Goodchild, University of Washington, briefly (in only one or two short sentences for each answer) identify 1-3 of the session's greatest strengths and the impact of each on the value/effectiveness of this entire video session.*	Source Category[2]		
Part. No.	Part. Type				
1	S	The presenter's knowledge of the subject.	A		
		The presenter's ability to effectively answer the questions provided.	A		
2	S	I liked that Anne tried to get us to interact in the presentation so it wasn't just her talking about what her research was.	A	B	
3	S	Anne definitely had a good grasp of the topic she was presenting. I believe that the research that was presented can definitely help out with congestion if it is to be implemented.	A		
		The topic was interesting and because Anne was prepared, it was easier to pay attention and stay focused.	D	A	
4	S	No Response	N/A		
5	S	very detailed explanation of the research methods used. Very effective for students understanding	A		
6	O	Audience was prepared.	B	D	
		Audience was engaged	A	B	
		There was a great discussion afterwards	A	B	
7	S	Informative introduction to the details of moving containers from one mode to another. The model and its evaluation is quite compelling. It is quite evident that efficiencies can be increased and emissions reduced at major ports.	A		
8	S	Ann presented a very good introduction to the methods of her research and reasons for doing her research.	A		
		She was very eloquent and easy to follow in her presentation.	A		
		Ann's slides were clear and concise.	A		
		I felt I was able to learn a lot from this presentation because of the clearness of the presentation.	A		
9	O	Interesting to learn more details about container operations. It was also amazing to find out that optimizations of stacking was not already done.	A		
10	S	Knowledgeable speaker. She knew the topic very well and complemented her presentation with interesting experiences.	A		
		Very good figures and illustrations helped to visualize the concepts presented during the presentation	A		
		Novel research topic. It was very interesting to learn this new application of GPS in freight transportation.	A	D	
11	O	The content of the presentation. It was particularly valuable in my role on a TRB committee on terminal operations.	A	D	
12	S	The PowerPoint effectively used diagrams to convey the technical aspects of the presentation. The flow charts helped organize the processes involved with the deployment of the technology. The diagrams helped me understand how coordination might improve the Truck Queing Processes and re-handle time, a clear way to present findings, as opposed to bullet-point descriptions.	A		

[1]Faculty, facilitators, speakers, guest professionals.
[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.
[3]Note: 5 of the 19 respondents cited no areas for improvement.

Figure 4-4, Continued- 1

13	S	Interesting look at engineering research on a proposed policy solution--enlightening for those of us studying freight from a policy/planning POV.	A	D	
		Gave good details on methods used to estimate potential effectiveness of the program.	A		
14	S	I thought it was interesting that the GPS services will continue, and that service fees will be paid. Apparently the data being collected has value to the parties.	A		
15	O	Knowledgeable presentation. The speaker was interested in engaging the audience.	A		
		A good exchange between speaker and audience. Both sides were very complimentary	A	B	
16	O	Strong theoretical foundation.	A		
		Nice balance with the practitioners also presenting as part of this series.	D		
		Anne is an engaging presenter.	A		
17	S	Considering the scope, relation to other entities or the role of a port is so complexed that its breakdown and organization are tough tasks, However, the presenter broadly cover such issues, and then conclude the idea, which is very helpful to my project.	A		
18	S	Very interesting topic, and research can benefit ports greatly. This research shows that technology can play a large impact in port operations	A	D	
19	S	Anne supported her points incredibly well with her slides.	A		
		Content, while focusing mostly on operations in Seattle, had clear impacts on other ports. I assume that for the other UTC's it was very interesting because it provided some new outlook on their port operations.	A	C	D

Participant Answers[3]		**Question 2:** Areas for Improvement: *For the same video session, briefly identify 1-3 aspects that caused problems and why each was an important problem for the session's effectiveness and/or enjoyment.*	Source Category[2]		
Part. No.	**Part. Type**				
1	S	Areas for Improvement: None.	N/A		
2	S	Metrans had its microphones on during the presentation which made it hard to hear what Anne was saying even though she was in the same room as us.	C		
3	S	I think that the questions that are asked may be more powerful or at least more understandable if they are asked by the person who wrote the questions. It will take less time and the questions will be more effective if given the proper perspective	B		
4	S	No Response	N/A		
5	S	No Response	N/A		
6	O	Ask more questions of audience throughout. Ask more questions of audience in other locations.	A		
		Make connections to other presentations. Being more knowledgeable about the content of the other sessions, and the level of knowledge of the audience, would have allowed me to make this presentation more valuable to the class.	A	D	
7	S	The pre-reading did indeed make mention of the motivation for this research, but it wasn't clear that the presentation was going to be so model- specific. It seemed apparent that the audience was not prepared to discuss the details of the model, like Anne may have hoped. After all, she did say that ours were great questions and that our interest was apparent, but even she might concede that we were not sticking to the format of her specific research. (Apply red source category to Question 1.)	A	D	B

[1]Faculty, facilitators, speakers, guest professionals.
[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.
[3]Note: 5 of the 19 respondents cited no areas for improvement.

Figure 4-4, Continued- 2

8	S	Areas for Improvement: None found.	N/A		
9	O	I think the presentation could be improved if more details on how container data is managed and processed without the GPS. How do the terminal keep track of where each of the containers is located?	A		
		It seems that the problem could be solved without GPS data. No discussion of location error in GPS readings.	A		
		The speaker should introduce herself with enough information to lend credibility. What is her experience that makes her an expert on details of day-to-day port operations.	A		
		The readings were not related to the presentation. Some students in Madison attended the session based on the topic of the readings. The presentation did not build upon the readings.	A	D	
10	S	The readings provided prior to the class didn't directly relate to the presentation topic Students lost the opportunity to have more background information. -Questions prepared by students didn't relate to what it was presented. Students had to adapt the questions in the moment which affected the flow of the conversation.	A	D	B
11	O	technology- this was an issue on our end and we missed the last half of the presentation.	C		
12	S	Some of the terminiology used in the presentation could have been more clearly defined. Not being familiar with the subject matter or research methodology, the presenter should have spent more time explaining what makes a model static or dynamic. I understand how to interpret the results of each model, but I am not sure what each model actually is.	A		
		While the diagrams and resutls were clear, the models were not. This affected what I actually took away from the presentation, in that I can say how coordination might improve terminal operations but I can't go into detail about what type of coordination.	A		
13	S	Videoconference system still not reliable--Madison lost a significant portion of the presentation when the call dropped.	C		
14	S	It might be helpful to widen out the topic just a bit.	A		
15	O	Areas for Improvement: None	N/A		
16	O	I'm not sure I saw any associated readings with this topic which would have helped.	A	B	D
17	S	It is understandable to become the longer time presentation since it includes a wide range of aspect of a port, planning and policy. It might be more clear if the presentation is devided into several parts.	D	A	
18	S	Overall, it was a very good presentation! Some technical difficulties were present on the Wisconsin side, so we were not able to enjoy the entire presentation. (Apply red source category to Question 1.)	A	C	
19	S	More focus on the impacts of research on other ports would be have been nice. It would have stimulated more discussion and interaction with other UTC's	A		

Participant Answers		**Question 3:** Rating. *On a scale of 0-5, where a score of 5 represents a performance evaluation of "Truly Excellent" and 0 represents a rating of "Frustrating Waste of Time", how would you rate this Video Session?*
Part. No.	**Part. Type**	
1	S	5
2	S	4
3	S	4
4	S	5

[1]Faculty, facilitators, speakers, guest professionals.
[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.
[3]Note: 5 of the 19 respondents cited no areas for improvement.

Figure 4-4, Continued- 3

5	S	5	
6	O	4	
7	S	3	
8	S	4	
9	O	3	
10	S	5	
11	O	3	
12	S	3	
13	S	4	
14	S	3	
15	O	5	
16	O	5	
17	S	3	
18	S	4	
19	S	4	
Participant Answers		**Question 4:** (Optional) *Please suggest any changes that could alleviate problems identified in Question 2, which you believe would be feasible for the host UTC and its facilitators to implement in future classes.*	
Part. No.	**Part. Type**		
1	S	No Response	
2	S	I think that the reminder to turn off your mics until questions seems to help.	
3	S	No Response	
4	S	No Response	
5	S	No Response	
6	O	No Response	
7	S	No Response	
8	S	No Response	
9	O	suggestions are included in my response to question 2.	
10	S	-Advice speakers to send reading related to the presentation or indicate if they are only for background purpose. -Encourage students in the class to adapt the chosen questions to the presentation topic and not just read what was decided.	
11	O	hard to control the air waves. Ha	
12	S	The presenter could have spent more time explaining what makes a model static or dynamic. That said, it was a nice introduction to the importance and promise of coordination at terminals.	

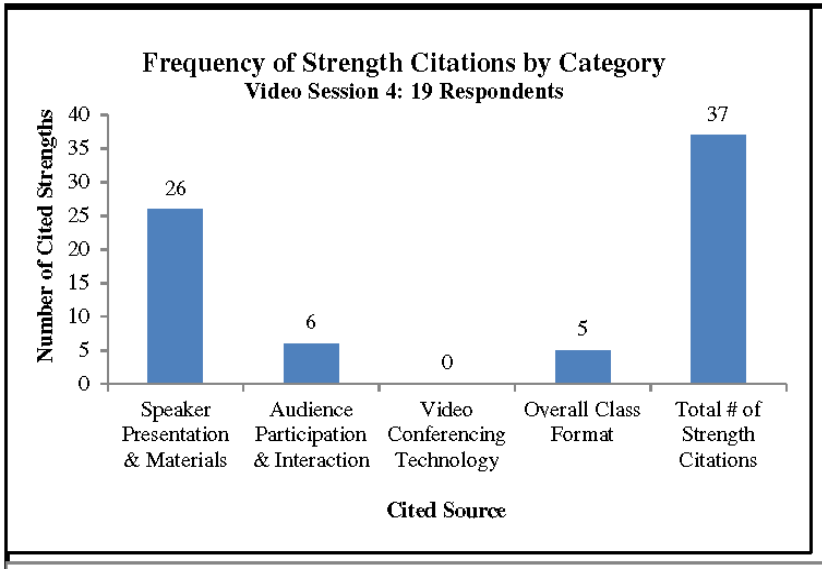
[1]Faculty, facilitators, speakers, guest professionals.
[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.
[3]Note: 5 of the 19 respondents cited no areas for improvement.

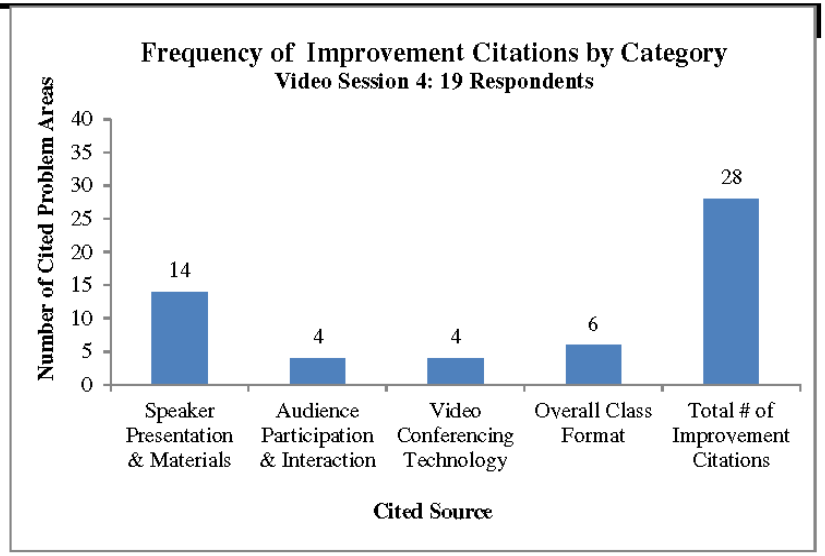
Figure 4-4, Continued- 4

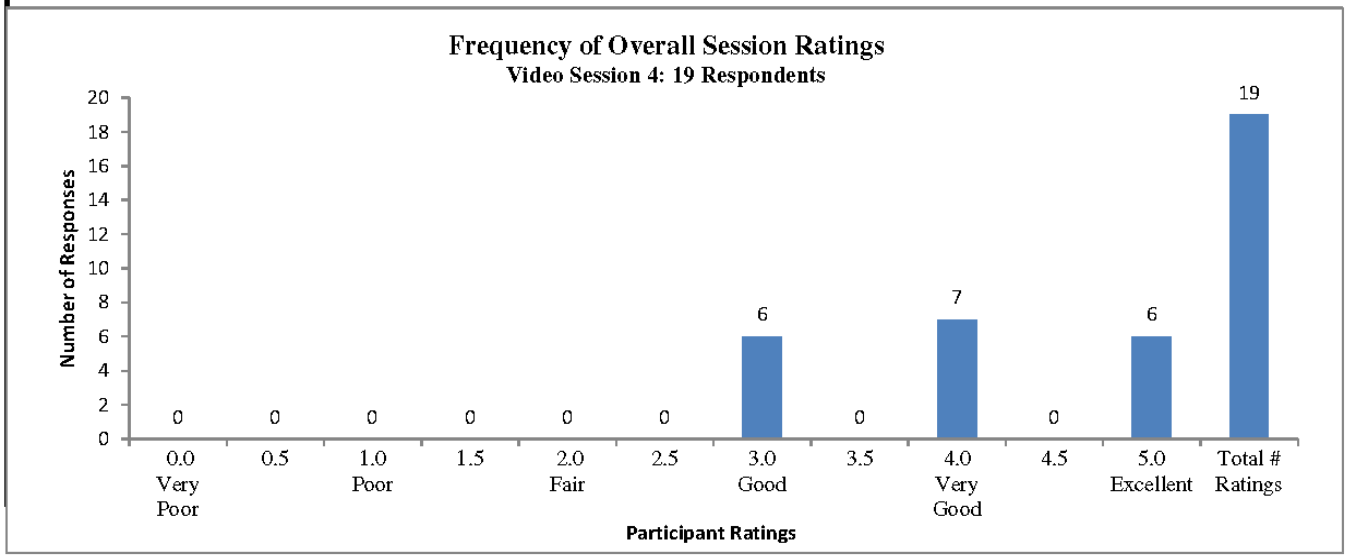
13	S	No Response	
14	S	No Response	
15	O	No Response	
16	O	No Response	
17	S	No Response	
18	S	No Response	
19	S	No Response	

[1]Faculty, facilitators, speakers, guest professionals.
[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.
[3]Note: 5 of the 19 respondents cited no areas for improvement.

Figure 4-4, Continued- 5







Mean	**4.00**
Std Dev	**0.79**

[1]Faculty, facilitators, speakers, guest professionals.
[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.
[3]Note: 5 of the 19 respondents cited no areas for improvement.

Summary and Analysis

The results for Session 4 and their general interpretations are summarized below.

- Our fourth speaker really established a personal connection with many of the participants; in their survey responses, many of them refer to her by her first name, instead of as "the presenter." For example, two of four strength citations by participant #8 use her name, "Ann[e]," as in, "Ann's slides were clear and concise." Participant 16 wrote: "Anne is an engaging presenter."
- Establishing this kind of personal connection with the students is clearly very important, and it's equally clear that many of our speakers were able to use their classroom skills effectively in the online seminar environment.
- Twenty-seven participants cited areas of strength in the speaker presentation and materials category (80% of all cites in this category), while only seven participants (20%), including the speaker herself, made improvement cites in this category.
- Over 80% of the audience participation and interaction cites were strengths (9 of 11).
- Regarding an area that still needed improvement, Participant 2 expressed the frustration that many participants shared with this comment: "METRANS had its microphones on during the presentation which made it hard to hear what Anne was saying even though she was in the same room as us." Fortunately, this was the last session with an open microphone problem.
- Unfortunately, one university (USC) lost its connection to the online seminar at the halfway point and was unable to reconnect. It's clear that reliable Internet connections are essential for successful online seminar production.
- Participant 17 (citing a strength) wrote: "very helpful to my project." This is an example of the role that personal relevance played in participant evaluation of presentations.
- Participant 17 also made a thoughtful suggestion: "Requiring sideshow presentations would be useful because it is easier for the student to review a presentation and be reminded of the topics discussed." We agree!

Bottom line

By our fourth session, we had progressed to the point where we could begin to realize the potential of the online seminar as a cost-effective way to simultaneously teach students at multiple universities.

The speaker demonstrated what she has absorbed about active and interactive learning during her work with Professor Nihan on another, concurrent, multi-UTC educational research project.[16] She established a personal connection with the audience participants at the very beginning of her talk, and continued to interact with them throughout the 80-minute session.

Video Session 5

Our speaker for Session 5 was Tom O'Brien, Associate Director, METRANS and Director of Research, Center for International Trade and Transportation, CSULB. His topic was “Institutional Issues and Port Mitigation Policies.” The METRANS UTC at the University of Southern California, Los Angeles was the session host.

Results

Figure 4-5, “Survey Results, Video Session 5" presents the survey results for this video session.

Figure 4-5. Survey Results, Video Session 5 (5 pages)

Video Session 5 – Survey Responses from 16 Participants (Participant Type: S=Student, O=Other[1])					
Participant Answers		**Question 1:** Strengths. *For the fifth Video Session, "Institutional Issues and Port Mitigation Policies", by Tom O'Brien, Assoc. Director, METRANS and Director of Res., Ctr. for Intern. Trade & Transportation, CSULB, briefly (in only one or two short sentences for each answer) identify 1-3 of the session's greatest strengths and the impact of each on the value/effectiveness of this entire video session.*	**Source Category[2]**		
Part. No.	**Part. Type**				
1	S	Very detailed, significant being the various factors that affect decisionmaking and policies.	A		
2	S	It was nice to hear from an Urban Planner to get a different point of view on port and freight issues.	D		
3	S	- knowledgeable speaker. Accurate answers	A		
		- It was very clear when to change the slides	A		
		- the presentation connected topics in transportation, politics, policies, and urban planning. It was very interesting to see so many topics interacting in the same problem. Consequently, we could understand the several interactions between agencies and parties in transportation projects and the increasing power of people's opinion which can even stop projects.	A	D	
4	O	Good overview presentation -- opening half was excellent. Dragged a bit in the second half.	A		
		A very good summary of the major planning/policy issues associated with the ports community.	A		
		I would have liked to see a bit more national analysis. Applies to Question 2, not counted here.	A		
5	S	Presenter energetically discuss the wide range of the project. Thus, the participants seemed to concentrate on the presentation.	A	B	
		There is the small number of researches that cover the overall port relation, such as policy, planning, economics and engineering. This presentation has a wide variety of topics that are applied to a port project. That point is interesting and valuable.	A	D	
6	S	Welcome departure from narrower previous engineering and business perspectives.Good to hear from the planning side on port issues.	A	D	
		Did a good job of outlining importance of conflicting and aligning interests of different groups in the supply chain, surrounding communities, and public sector.	A		
7	S	Very useful info regarding lulu's, and the actors involved in the political economy of freight.	A	D	
8	O	Tom has excellent knowledge of the topic area and does a good job of explaining through PPT.	A		
9	S	Speaker provided a strong knowledge of the information. It Allowed me to understand port mitigation from a private business' perspective and the issues they think of.	A		
10	S	Excellent comprehensive explanation of the tension between ports and the rest of society. It really put ports into a broad social and economic context.	A		
11	O	Well thought out presentation	A		
12	S	This presentation included a lot of information that helped me understand the overall scope of ports, and the issues that are apparent among many ports. This class section was extremely effective because it did not focus on the activities as simply one port, but took a look at an overall scope.	A	D	
		These strengths established a framework for considering some of the problems he outlined later in the presentation. Instead of simply thinking of a policy as good or bad, I had the tools to think about the implications of the policy for governance or for the market.	A	D	

[1]Faculty, facilitators, speakers, guest professionals.

[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.

[3]Note: 8 of the 16 respondents cited no areas for improvement.

Figure 4-5, Continued- 1

13	S	The presentation did an excellent job conceptualizing the evaluation criteria for good port policy and planning-- the process and outcome objectives were clearly stated and backed by example.	A		
		Additionally, the supply chain model effectively conveyed the political power dynamics at ports. These strengths established a framework for considering some of the problems he outlined later in the presentation. Instead of simply thinking of a policy as good or bad, I had the tools to think about the implications of the policy for governance or for the market.	A		
14	S	This presentation brought new insight to the maritime environment and I felt that this presentation brought new information to the discussion. The speaker was able to hold my attention and I didn't feel as though I had heard the information in prior presentations.	A	D	
15	S	The class session covered LULU issues. this is an extremely important class session in light of recent awareness of livability issues.	D		
		A particular strength is the review of past legislature to address various issues.	A		
		In addition recognition and awareness of the balance between economic activity and livability.	A	D	
16	O	Very good, comprehensive overview of local and regional issues.	A		
		Speaker was well-prepared and gave clear explanations.	A		

Participant Answers[3]		Question 2: Areas for Improvement: *For the same video session, briefly identify 1-3 aspects that caused problems and why each was an important problem for the session's effectiveness and/or enjoyment.*	Source Category[2]		
Part. No.	Part. Type				
1	S	No response.	N/A		
2	S	The camera could have been zoomed out again because the top of Tom's head was cut off.	C		
3	S	Things worked very smoothly. (Apply red source category to Question 1)	N/A	C	
4	O	National analysis would be helpful.	A	D	
5	S	Not applicable.	N/A		
6	S	No problems--strong presentation and no unreasonable technical issues. (Apply red source categories to Question 1)	N/A	A	C
7	S	Almost info overload.	A		
8	O	none	N/A		
9	S	Technical Issues	C		
10	S	None really.	N/A		
11	O	The presentation flowed with excellent continuity; I have no suggestions. Maybe it should be kind of a standard. (Apply to Q1)	N/A	A	
12	S	I think the presentation was very good, but it might have been nice to include some additional legislation that has impacted ports other thanLA/LB. This would have allowed an even broader scope to be discovered.	A	D	
13	S	The presentation was a bit text heavy at times. Some of the most effective parts were the power dynamics diagram and ad sequence against LA/Long Beach, but some of the least effective parts were long outlines of text. Sometimes it was difficult to both read the text and listen to the speaker. This was particularly true for the latter half of the presentation.	A		
14	S	The only area of improvement would be with the technology but as I've said before this is to no fault of any person. It was frustrating that the presentation was interrupted during the questions portion.	C		

[1]Faculty, facilitators, speakers, guest professionals.

[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.

[3]Note: 8 of the 16 respondents cited no areas for improvement.

Figure 4-5, Continued- 2

15	S	suggest adding time for "thinking outloud" discussion from the speaker. That is hearing more stories, trade offs, and differing perspectives on the issues.	A		
16	O	None needed	N/A		

Participant Answers		**Question 3:** Rating. *On a scale of 0-5, where a score of 5 represents a performance evaluation of "Truly Excellent" and 0 represents a rating of "Frustrating Waste of Time", how would you rate this Video Session?*
Part. No.	**Part. Type**	
1	S	5
2	S	4
3	S	5
4	O	4
5	S	3.5
6	S	5
7	S	4
8	O	4
9	S	4
10	S	3
11	O	3
12	S	4
13	S	4
14	S	4
15	S	5
16	O	4.5

Participant Answers		**Question 4:** (Optional) *Please suggest any changes that could alleviate problems identified in Question 2, which you believe would be feasible for the host UTC and its facilitators to implement in future classes.*
Prtc. No.	**Prtc. Type**	
1	S	No response
2	S	If the Metrans IT guy could move the camera out and not be so zoomed in on the speaker it would help with distractions.
3	S	No response.
4	O	None to offer at this time.
5	S	No response.

[1]Faculty, facilitators, speakers, guest professionals.

[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.

[3]Note: 8 of the 16 respondents cited no areas for improvement.

Figure 4-5, Continued- 3

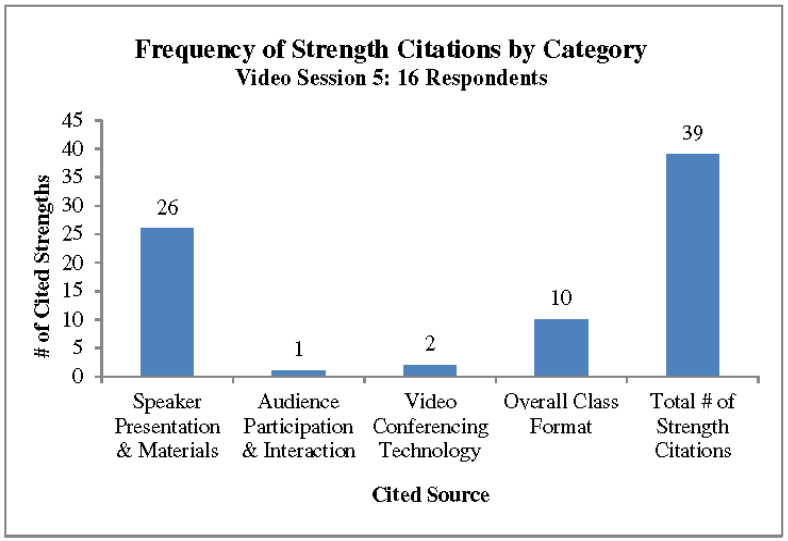
6	S	No response.	
7	S	No response.	
8	O	No response.	
9	S	No response.	
10	S	No response.	
11	O	No response.	
12	S	No response.	
13	S	Perhaps the conclusions page could be condensed a bit to include simply one bullet point for each major conclusion.	
14	S	No suggestions.	
15	S	I thought this was one of the best session we have had so far.	
16	O	No response.	

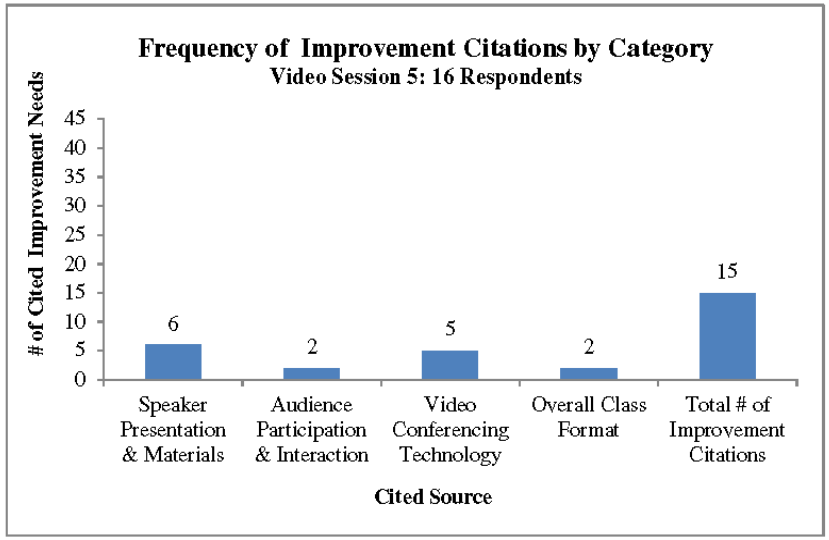
[1]Faculty, facilitators, speakers, guest professionals.

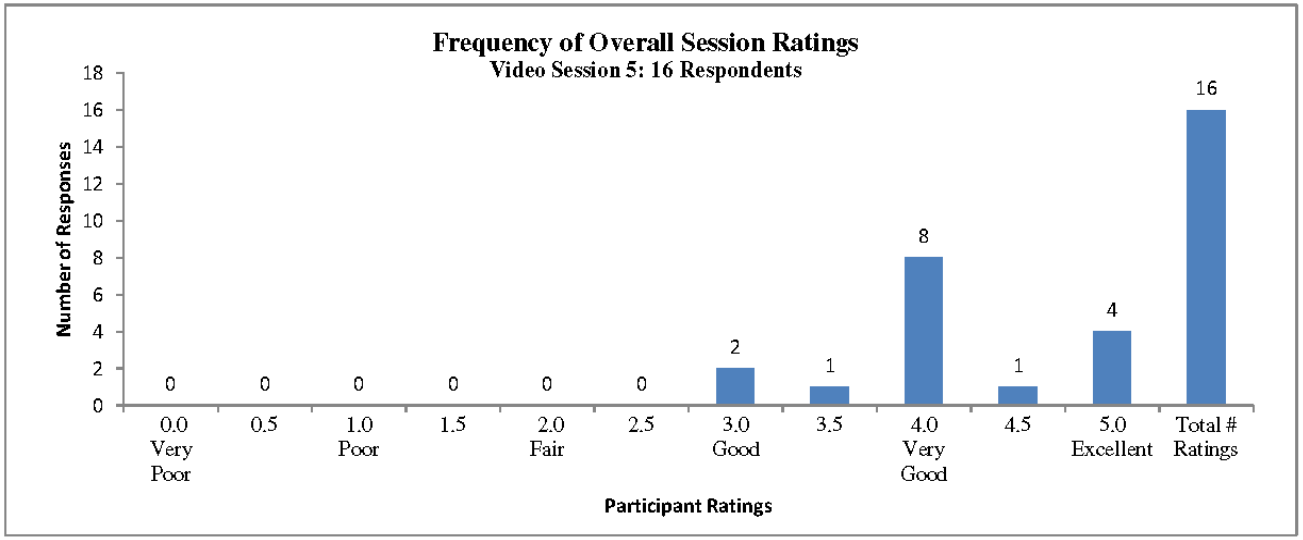
[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.

[3]Note: 8 of the 16 respondents cited no areas for improvement.

Figure 4-5, Continued- 4







Mean	**4.13**
Std Dev	**0.63**

[1]Faculty, facilitators, speakers, guest professionals.

[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.

[3]Note: 8 of the 16 respondents cited no areas for improvement.

Summary and Analysis

The results for Session 5 and their general interpretations are summarized below.

- Our fifth speaker, an urban planner, presented material on ports from a different perspective. His presentation was outstanding; Participant 11 wrote: "well thought out presentation," and Participant 15 commented: "I thought this was one of the best session[s] we have had so far," and we agree with both comments.
- A consistent finding across all eight sessions was the importance of the speaker to the success of the seminar.
- In their survey responses, 16 of the Session 5 participants made a total of 26 strength cites in the "speaker presentation and materials" category and there were only 6 areas of improvement cited re this session category, a favorable to unfavorable ratio of more than 4-to-1; so it is not surprising that the seminar itself received an overall rating of 4.13; 13 of 16 ratings were 4.0 or higher, including 4 perfect 5.0 ratings.
- Overall class format was cited favorably 10 times and unfavorably only 2 times.
- Audience participation and interaction was cited only 3 times, once as a strength and twice as an area for improvement. We think this small number of cites is due to the fact that by now, participants took audience participation for granted.
- In Session 5, for the first time, METRANS had their audience microphones turned off, and they stayed off for Sessions 6-8, but video conference technology was still cited as an area for improvement more times than it was cited as a strength: 5 to 2.
- It isn't logically consistent for participants to praise the opportunity to see and talk with people at other universities but not to cite video conferencing technology as a strength. We think few participants cited technology because when it works, we take it for granted.
- One negative citation is worth noting (Participant 2): "The camera could have been zoomed out again because the top of Tom's head was cut off." Again, we see a common problem with camera operators: they tend to zoom in too tight on the speaker's face and then pan and tilt too often, so as to stay with the speaker when he or she moves; this constant motion can make viewers seasick. Best practice is to zoom out to at least a medium shot, allowing the speaker to move around in the frame without having to pan or tilt to maintain the shot.

Bottom line

Session 5 was the best yet. We had an excellent speaker and few technical glitches; many participants wrote about how interesting and valuable the seminar was. By now, we were beginning to fulfill the potential of the online seminar to elevate education to a new dimension, with enhanced value for the students.

Video Session 6

Our speaker for Session 6 was Pat Ries, Commercial Manager for Consolidated Grain and Barge. His topic was "Grain Movements on the Inland Waterway Network.". The CFIRE UTC at the University of Wisconsin, Madison was the session host.

Results

Figure 4-6, “Survey Results, Video Session 6" presents the survey results for this video session.

Figure 4-6. Survey Results, Video Session 6 (5 pages)

Video Session 6 – Survey Responses from 14 Participants (Participant Type: S=Student, O=Other[1])					
Participant Answers		**Question 1:** Strengths. *For the sixth Video Session, "Grain Movements on the Inland Waterway Network", by Pat Ries, Commercial Manager for Consolidated Grain and Barge, briefly (in only one or two short sentences for each answer) identify 1-3 of the session's greatest strengths and the impact of each on the value/effectiveness of this entire video session.*	**Source Category[2]**		
Part. No.	**Part. Type**				
1	S	nice powerpoint	A		
2	S	The information he provided was very insightful for me. Very valuable, and his talk made me want to ask more questions than I did for any of the other sessions so far.	A		
		Also, since I am from the Midwest, I was able to put things in perspective better than I have when the discussion has been about ports on the coast.	A	D	
		Also the PowerPoint presentation was very effective.	A		
3	O	Great volume of information. Terrific knowledge of the industry.	A		
		Good amount of time for Q&A	D		
4	S	He knew a lot about business side of the grain movement.	A		
5	S	Did a good job providing an overview of an important freight mode that's received little coverage so far.	A	D	
6	S	I for one am completely grateful for the diversity of topics offered in this class. These are great slices of instruction.	D	C	
		Kudos to those that remembered that which could otherwise be boring (it wasn't) yet is as important as barge traffic on our rivers.	D		
		The presenter was able to demonstrate a linear progression through the topic.	A		
7	S	Presentation was well organized and informative	A		
		Helpful in understanding the Inland Water Way network.	A	D	
8	S	The presenter clearly and concisely covered the major issues facing inland waterways, such as dock reconstruction and capital replacement.	A		
		His interactive style, in which he broke up slides with questions to the audience, was very engaging.	A		
		The presentation was especially effective for those unfamiliar to inland water ways, as he did a fine job explaining the basic movements and issues with those movements.	A	D	
		He also did a great job holding my attenton.	A		
9	S	I believe that the speaker was knowledgeable about the subject and he was prepared for most of the questions that were asked.	A		
10	S	Pat provided a clear picture of how bulk cargo moves by barge.	A		
		Pat outlined the challenges and benefits very clearly.	A		
11	S	Knowledgable about the private sector	A		
		Provide insight from non-academic/non-public sector. Another side to the picture of freight	D		

[1]Faculty, facilitators, speakers, guest professionals.

[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.

[3]Note: 3 of the 14 respondents cited no areas for improvement.

Figure 4-6, Continued- 1

12	S	The presentation skill is the best one in the workshop. He proceed the presentation, explicitly emphasizing the most significant points.	A		
13	S	-Detailed graphs	A		
		-Good explanations to link activities with demand for transportation	A		
		-Valuable lecture. I didn't know much about this water system. I learnt a lot about it and the type of products moved along it.	A	D	
14	O	The ability to use this type of technology to learn about a marine freight topic that is often overlooked.	C	D	
		Knowledgable speaker with a different background from previous speakers. Encourages inclusion and improved understanding of diverse viewpoints.	A	D	
Participant Answers[3]		**Question 2:** Areas for Improvement: *For the same video session, briefly identify 1-3 aspects that caused problems and why each was an important problem for the session's effectiveness and/or enjoyment.*	**Source Category[2]**		
Part. No.	**Part. Type**				
1	S	i left the session without a good understanding of what his company actually did within the shipping process.	A		
2	S	Since I was at Wisconsin, I didn't have the technical difficulties that others did, but other than that I can't think of anything else that I would improve	C		
3	O	Some slides were a little bit busy. The information was hard to take in in its entirety	A		
4	S	The slides were small and hard to read.	A		
5	S	As the representative of a single company, seemed to have limited familiarity with some of the big-picture issues we were interested.	A	D	
6	S	As linearly informative as the presentation was, the slides should have been simplified. It was hard to discern the wheat from the chaff (pun intended) for what the main elements of the presentation were.	A		
7	S	none	N/A		
8	S	I wish he presented a little more detail on federal funding sources, especially relevant since he emphasized the need for dock reconstruction.	A		
		While the presenter did a great job showing aggregate grain data, more aggregate funding data would have supported some of his points as well. (Apply red source category to Question 1.)	A	A	
9	S	Could have been a little more prepared for the questions.	A		
10	S	There was little provided on environmental issues; unclear whether invasive species proliferation is an issue or not.	A		
11	S	No response.	N/A		
12	S	Not Applicable	N/A		
13	S	Graphs and table showed to much information. Either simply them or clearly highlight where to focus our attention. This turns more critical in video-conference where people not in the same room can not see the laser pointer.	A		
14	O	Too much information.	A		
		Not enough focus.	A		

[1]Faculty, facilitators, speakers, guest professionals.

[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.

[3]Note: 3 of the 14 respondents cited no areas for improvement.

Figure 4-6, Continued- 2

Participant Part. No.	Participant Part. Type	Question 3: Rating. *On a scale of 0-5, where a score of 5 represents a performance evaluation of "Truly Excellent" and 0 represents a rating of "Frustrating Waste of Time", how would you rate this Video Session?*
1	S	3
2	S	5
3	O	4
4	S	3
5	S	4
6	S	4
7	S	4
8	S	5
9	S	4
10	S	4
11	S	4
12	S	5
13	S	4
14	O	3

Participant Answers Prtc. No.	Prtc.Type	Question 4: (Optional) *Please suggest any changes that could alleviate problems identified in Question 2, which you believe would be feasible for the host UTC and its facilitators to implement in future classes.*
1	S	No Response
2	S	Work out the IT problems! I understand that technology will always have hiccups, but it is unfortunate that we have to stop a presenter in the middle of their speech due to the lost connection.
3	O	No Response
4	S	Make sure if they are going to go over figures on slide, make them large enough to read.
5	S	No Response
6	S	No Response
7	S	No Response
8	S	Fewer technical issues would enable more participation from remote locations.
9	S	No Response
10	S	No Response

[1]Faculty, facilitators, speakers, guest professionals.

[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.

[3]Note: 3 of the 14 respondents cited no areas for improvement.

Figure 4-6, Continued- 3

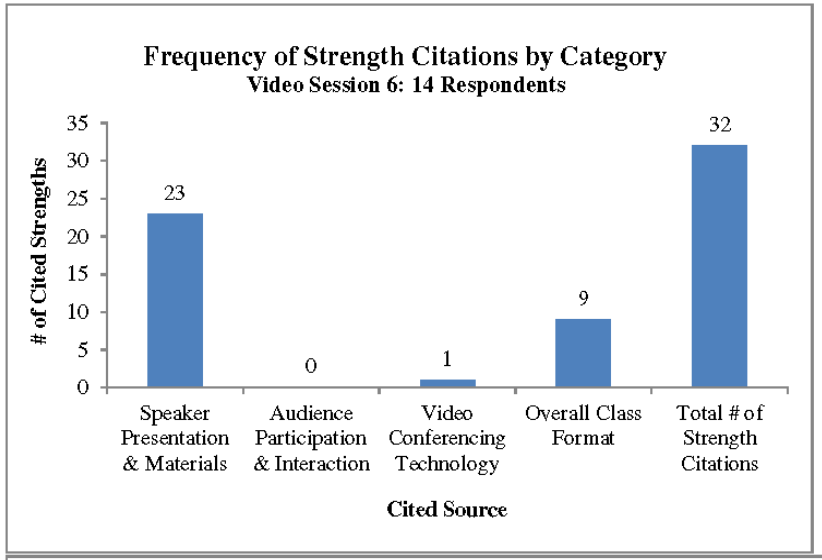
11	S	No Response	
12	S	No Response	
13	S	No Response	
14	O	No Response	

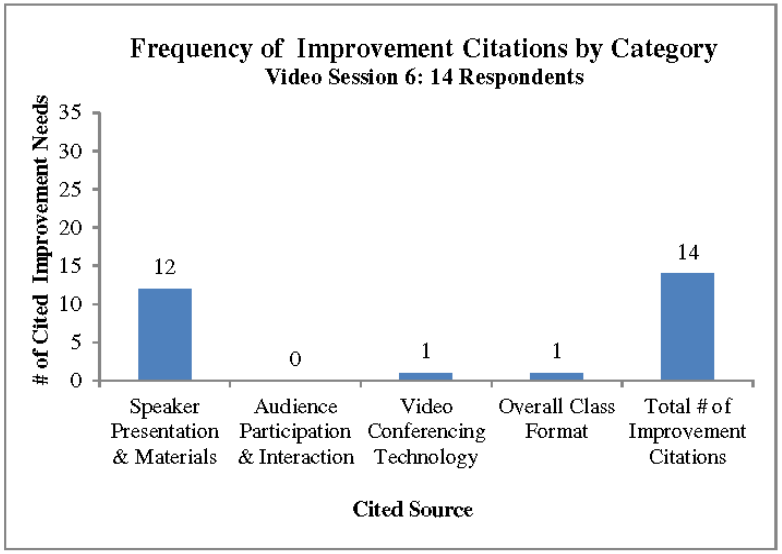
[1]Faculty, facilitators, speakers, guest professionals.

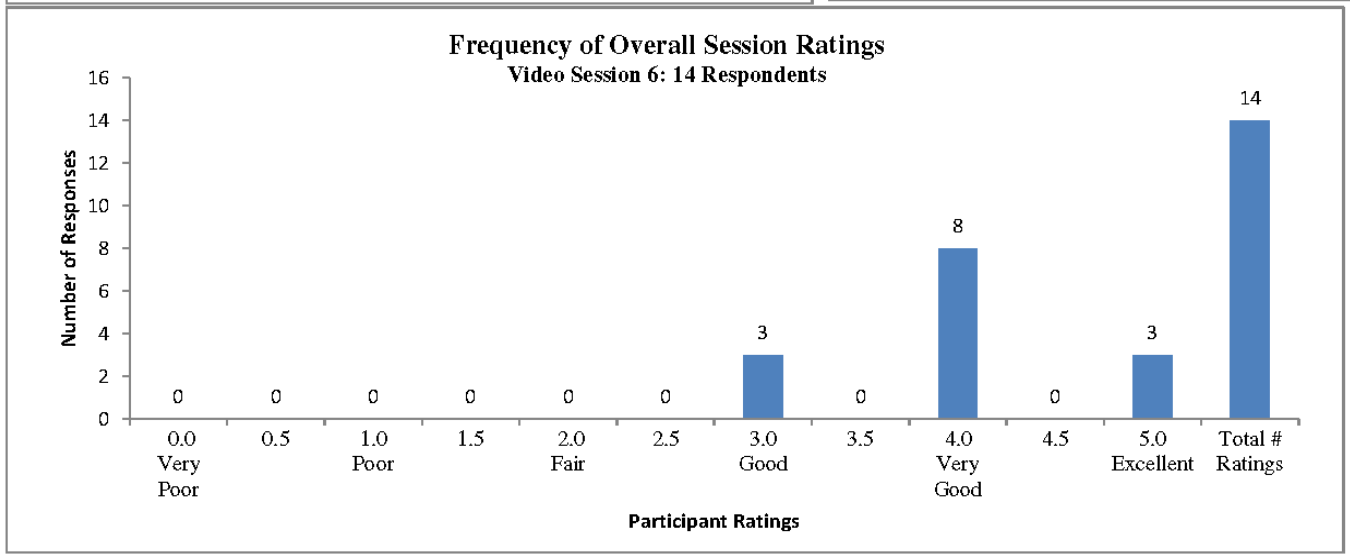
[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.

[3]Note: 3 of the 14 respondents cited no areas for improvement.

Figure 4-6, Continued- 4







Mean	4.00
Std Dev	0.65

[1]Faculty, facilitators, speakers, guest professionals.

[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.

[3]Note: 3 of the 14 respondents cited no areas for improvement.

Summary and Analysis

The results for Session 6 and their general interpretations are summarized below.

- Session 6 was another excellent session, according to participant feedback. Every overall rating was 3.0 or better; 11 of 14 participants rated the session 4.0 or better, including 3 perfect 5.0 ratings.
- There were 32 cited strengths (23 of these were in the speaker presentation and materials category), compared to only 14 cites for areas needing improvement, 12 of which were in the speaker presentation and materials category. Only two participants cited video conference technology, one as a strength and the other as an area needing improvement. Overall class format was cited as a strength 9 times and as an area needing improvement only once; audience participation and interaction wasn't cited at all.
- Our conclusion is that by now participants were basically taking the online seminar format for granted and focused their comments on the presentation itself, and this is a good thing; ideally, delivery technology would be transparent, a glitch-free experience centered on content and interaction, and not on the technology itself.
- It is important to remember that we had two completely different goals for our multi-UTC online freight seminar: one was to experiment with mult-site online teaching in real time, and the other was to give our students an overview of freight mobility as a process, from different perspectives.
- Both of our goals were achieved. Despite the kind of technical glitches anyone would expect in a first-time proof of concept experiment, we showed that a multi-university seminar can be done and can be a valuable learning experience that is also a cost-effective use of speakers' time. We also gave our students a unique and valuable view of freight mobility as a system.
- Participants consistently praised this diversity of teachers and students. In Video Session 6, Participant 11 wrote: "[the Session provided] insight from the non-academic/non-public sector. Another side of the picture of freight," and Participant 6 wrote: "I for one am completely grateful for the diversity of topics offered in this class. These were great slices of instruction." Participant 14 cited as a strength: "The ability to use this type of technology to learn about a freight topic that is often overlooked."
- And once again, the crucial role that reliable video technology plays in the success of a multi-university online seminar was underscored by the technical glitches that continued to be problems for our experiment. Participant 2 wrote: "Work out the IT problems! I understand that technology will always have hiccups, but it is unfortunate that we have to stop a presenter in the middle of their speech due to the lost [video] connection." It is even more unfortunate when video connections are lost and cannot be restored; one lesson we learned the hard way was that reliable connections are essential for successful real-time interaction among universities.

Bottom line

By Session 6, our participants were usually able to focus attention on the seminar itself without being distracted by problems with the delivery technology, and so our students were able to benefit fully from the presentation and the interaction among participants.

Video Session 7

Our speaker for Session 7 was Research Assistant Professor Ed McCormack, Department of Civil & Environmental Engineering, University of Washington. His topic was "Freight Security: Borders/Customs/Technology". The TransNow UTC at the University of Washington, Seattle was the session host.

Results

Figure 4-7, “Survey Results, Video Session 7" presents the survey results for this video session.

Figure 4-7. Survey Results, Video Session 7 (6 pages)

Video Session 7 – Survey Responses from 21 Participants (Participant Type: S=Student, O=Other[1])					
Participant Answers		**Question 1:** Strengths. *For Video Session7, "Freight Security: Borders/Customs/Technology", by University of Washington Research Assistant Professor Ed McCormack, briefly (in only one or two short sentences for each answer) identify 1-3 of the session's greatest strengths and the impact of each on the value/effectiveness of this entire video session.*	**Source Category[2]**		
Part. No.	**Part. Type**				
1	O	This is a very important and interesting topic, and the speaker covered it very well. It held my interest throughout the presentation and the Q and A session.	A	D	B
2	S	The presentation was very informative and covered a perfect amount of depth.The presenters knowledge was obvious and he did not pretend to know things that he did not.	A		
		Learned a good amount about a lot of topics.	A	D	
		Got honest answers about very significant questions.	A		
3	O	Broadness; timeliness; relevancy.	A	D	C
		It touched on an important aspect of freight transportation that relates to both technology and policy.	D		
4	S	The topic of this freight security video session is interesting and the presentation contents are well organized.	A	D	
		The interesting topic has great impact on effectiveness of this class session, which makes participants get involved in the presentation and discussions actively.	D	B	C
		The way of communication with speaker through video is nice. And participants are all very active in discussions.	C	B	
		The way of nice communication with speaker also help participants clarify some questions and confusions on time thus make this class session quite helpful.	C	D	
5	S	It showed the current setting of our equipment and resources used in the area of Freight Security. The speech came with a lot real world examples, which are hard to get outside the textbook.	A	D	
		Also, since our presenter is actively working in this area, the information we get is proved to be the updated and newest, which is great.	A		
		It helped us get outside the text book and seriously begin considering what's going on in the real world. Whoever is interested in real world application would absolutely come to the next video session again, in order to obtain other valuable information.	A	D	
6	S	He had a lot of different views on what should be looked at in freight security.	A		
7	S	This session covers a lot of knowledge. It broad my horizon.	A	D	
8	S	We could learn from various professionals in different universities. It broadens our perspectives of freight security and gives the explanation to some of our concerns.	C	D	
9	S	I thought the discussion was very informative and I learned a lot about the security of our borders. Ed seems to be very informed on the subject and it was clear that this is an interest for him. Made the conversation easy to listen to and participate in. This made it one of the better conference sessions.	A	B	

[1]Faculty, facilitators, speakers, guest professionals.

[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.

[3]Note: 6 of the 21 respondents cited no areas for improvement.

Figure 4-7, Continued- 1

10	S	Ed provided good information on tracking the supply chain, and on technologies for zeroing in on higher risk traffic.	A		
		Layered security was well explained.	A		
11	S	Clear and animated through presentation.	A		
12	S	The presentation is very well-organized. The security is the most important point but sometimes omitted. This workshop is very helpful to me to understand the people with standing and benefits.	A	D	
13	S	-Explanation of several technologies and methods to address security.The presentation covered the relationships existing betweens security, trade, and policies. I feel I have a good base to start conversations in any topic related to security.	A	D	
		-Good combination of text and images.	A		
14	S	The presentation had many good facts that were not easily accessible through the reading. This allowed me to learn much more about the topic of freight security.	A		
15	S	introduce the new technologies used for the port security	A	D	
		help students understand the importance of the port security	A	D	
16	O	-Interesting to learn about some of the security technologies. Security is an important issue for both domestic and international freight trade.	D		
17	S	No response.	N/A		
18	O	Good overview of the issues at the borders. Added the connection to the port and intermodal. Provided a good grounding for the issues related to import and export safety	A	D	
19	O	Simple, straightforward content. Makes it easy to understand and digest.	A		
20	S	Excellent comprehensive explanation and review.	A		
		Technical problems of our sessions have been well resolved now for a good while... Thank you.	C		
		After the Fall 2011 terrorist attacks, port security was scrutinized in the press, but I had not heard much beyond. This was an excellent review of measures taken since then, and this review of those well described some of the operational details of container shipping.	A	D	
21	S	Provided a thorough overview of the regulatory structure and technology of freight security.	A		

Participant Answers[3]		**Question 2:** Areas for Improvement: *For the same video session, briefly identify 1-3 aspects that caused problems and why each was an important problem for the session's effectiveness and/or enjoyment.*	Source Category[2]		
Part. No.	**Part. Type**				
1	O	Announce slide changes. Importance: Don't know, we were in the UW session that saw the changes as they were made.	A		
2	S	None, great presentation. (Apply red source category to Question 1.)	N/A	A	
3	O	None	N/A		
4	S	Some examples are not well illustrated,(some people are outside this research area, therefore they may require a little bit specific information to get the idea there). This directly affects the understanding of listeners.	A		
5	S	Maybe some in-depth discussion on one of the aspects would be good to challenge thinking. An in-depth coverage of a topic would make it more suitable to graduate studies.	D		

[1]Faculty, facilitators, speakers, guest professionals.

[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.

[3]Note: 6 of the 21 respondents cited no areas for improvement.

Figure 4-7, Continued- 2

6	S	It would be better if speaker could explain some general things more detailed and specified. The presentation time seems a little tight for such a lot of things to explain.	A		
		Some technical details should be added as well with general introduction of things. The participants would understand better and more if some interesting things are explained more specified. The technical details would help us gain more insight into the addressed problems, which would make this session more effective and enjoyable.	A		
7	S	If the speaker can provide some videos, it would be great.	A		
		The length of time is appropriate. . (Apply to Question 1.)	D		
8	S	Would have like to hear more about his research	A	D	
9	S	It's a little bit long.	A	D	
10	S	Where does the funding (for the port security) come from?	A	B	
11	S	I cannot think of any improvements for this session.	N/A		
12	S	Only 2-4% of containers are inspected as presented; the level of public risk could have been further discussed.	A		
13	S	Number of slides and having to say next slide each time.	A	C	
14	S	Nothing special	N/A		
15	S	-Presenter a little more energetic. He is very knowledgeable so it is valid to think in this tiny little to have a perfect presentation.	A		
		-Presenter should remember to mention when he changes to the next slide (only applicable in video conferences)	A		
16	O	More stories that emphasize and illustrate the issues. The stories and examples are interesting learning tools for this type of information.	A		
17	S	No response.	N/A		
18	O	Tighter connection to the course theme of maritime transportation would have been good.	A		
		Slides were well-done. (Apply to Question 1.)	A		
19	O	None did an excellent job stepping in. (Apply red source category to Question 1.)	N/A	A	
20	S	Honestly, I don't know how this could have been improved. Maybe the pre-reading; it seemed a bit too esoteric for the details that Ed ultimately discussed. (Apply red source category to Question 1.)	A	A	
		With regard to the pre-reading, I was preparing myself for a dull presentation of security theory, when in fact, the presentation was very hands-on. (Apply to Question 1.)	A		
21	S	Spent quite a bit of time on technical details of particular systems--didn't get much out of these areas. In the context of Japan's current disaster, would have liked to have heard more on natural disaster preparedness in addition to terrorism and smuggling concerns.	A	D	

Participant Answers		**Question 3:** Rating. *On a scale of 0-5, where a score of 5 represents a performance evaluation of "Truly Excellent" and 0 represents a rating of "Frustrating Waste of Time", how would you rate this Video Session?*
Part. No.	**Part. Type**	
1	O	5
2	S	5

[1]Faculty, facilitators, speakers, guest professionals.

[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.

[3]Note: 6 of the 21 respondents cited no areas for improvement.

Figure 4-7, Continued- 3

3	O	4	
4	S	4	
5	S	4	
6	S	4.5	
7	S	5	
8	S	4	
9	S	5	
10	S	4	
11	S	4	
12	S	4	
13	S	5	
14	S	3	
15	S	4	
16	O	3	
17	S	2	
18	O	3	
19	O	4	
20	S	3	
21	S	2	
Participant Answers		**Question 4:** (Optional) *Please suggest any changes that could alleviate problems identified in Question 2, which you believe would be feasible for the host UTC and its facilitators to implement in future classes.*	
Prtc. No.	**Prtc.Type**		
1	O	No response.	
2	S	No response.	
3	O	Maybe to disseminate some relevant papers with rigorous discussions.	
4	S	No response.	
5	S	No response.	
6	S	No response.	
7	S	No response.	
8	S	No response.	
9	S	No response.	

[1]Faculty, facilitators, speakers, guest professionals.

[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.

[3]Note: 6 of the 21 respondents cited no areas for improvement.

Figure 4-7, Continued- 4

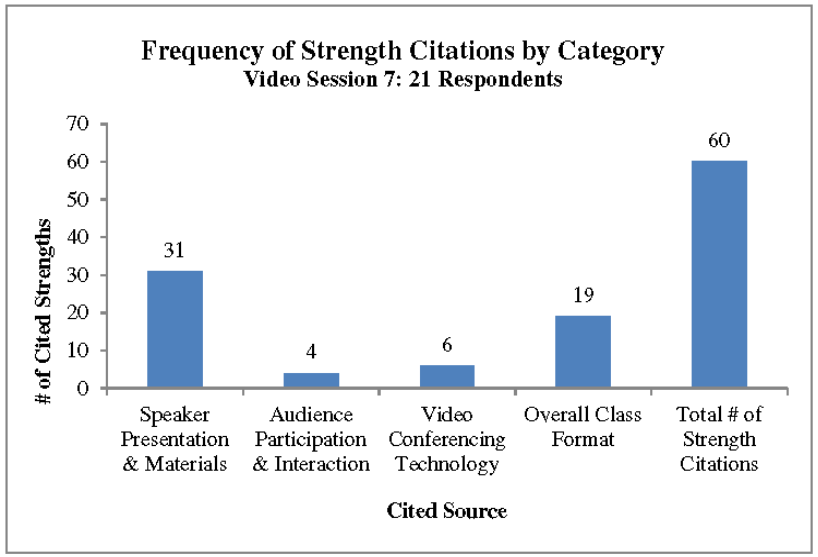
10	S	No response.	
11	S	No response.	
12	S	No response.	
13	S	No response.	
14	S	No response.	
15	S	No response.	
16	O	see question 2.	
17	S	No response.	
18	O	No response.	
19	O	No response.	
20	S	No response.	
21	S	No response.	

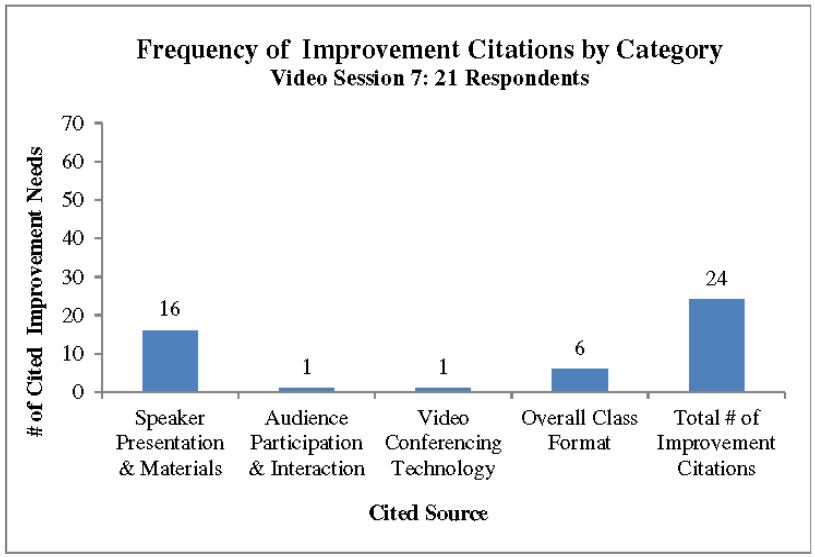
[1]Faculty, facilitators, speakers, guest professionals.

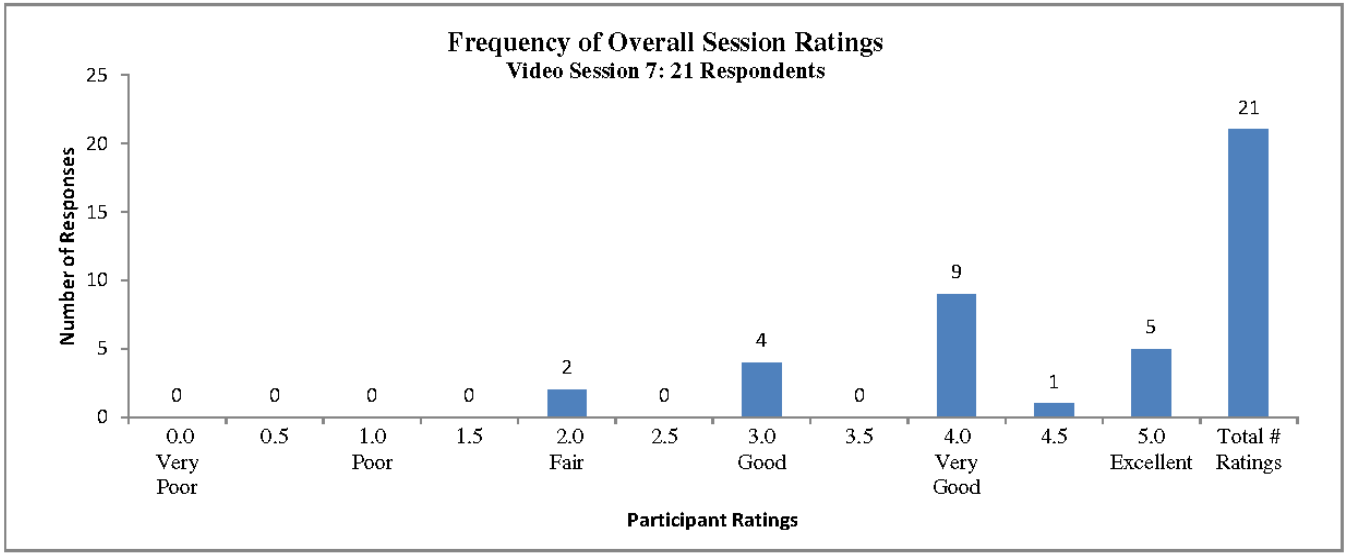
[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.

[3]Note: 6 of the 21 respondents cited no areas for improvement.

Figure 4-7, Continued- 5







Mean	3.88
Std Dev	0.90

[1]Faculty, facilitators, speakers, guest professionals.

[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.

[3]Note: 6 of the 21 respondents cited no areas for improvement.

Summary and Analysis

The results for Session 7 and their general interpretations are summarized below.

- Through Sessions 1-6, we had many glitches, and not every participant was able to see every minute of every online seminar, but we never experienced a problem so big it threatened to cancel the session. Our luck ran out at Video Session 7; the scheduled speaker became unavailable at the last minute.
- We knew, at the start, that a last-minute emergency backup speaker might be needed for some session, and we had one ready: Assistant. Prof. Ed McCormack (UWA) was ready to step in at the last minute, and he did splendidly. Under areas for improvement, Participant 2 wrote: "None, great presentation," and we agree. Ed even had materials ready. Our emergency backup contingency plan worked exactly as planned.
- As usual, the distribution of Overall Session ratings was skewed to the right, with 2 "fair" ratings (both 2.0), 4 "good" ratings (all 3.0), 9 "very good" ratings (all 4.0), another rating at 4.5. and five perfect 5.0 "excellent" ratings (almost 25% of all 21 ratings).
- The Overall Rating mean was 3.88 and the standard deviation was 0.90, so the mean was a statistically insignificant less than 5% of a standard deviation below an "A" grade, 4.0.
- One conclusion we can draw is giving participants a choice of 11 different Overall Session ratings (from 0. 0 up to 5.0 by half points of 0.5) may offer more choices than are needed; most participants reported integer ratings (2.0 through 5.0). so it might make sense to offer ratings on a 1 to 5 point scale (six total choices).
- There were 60 strength cites and only 24 cites for areas for improvement.
- Over 50% of all favorable cites (31 of 60) were in the "Speaker Presentation and Materials" category, confirming our opinion that the back-up speaker made a fine presentation, and also yet another data point demonstrating that the speaker is the single most important factor in the success of a particular session.
- Video Conference Technology got 6 strength cites and was cited only once as an area for improvement; this represents quite a turnaround from the early sessions, when, too often, Internet connection problems seriously compromised some universities' ability to participate 100% of the time.
- At this point, we think Participant 20, wrote what we all were thinking: "Technical problems of our sessions have been well resolved now for a good while . . . Thank you." was speaking for all of us,
- By now, the online seminar format was popular with the participants, cited as a strength 19 times and as an area for improvement only 6 times (more than 75% favorable).
- Audience participation was cited as a strength only 4 times, compared to 1 improvement area citation, so the headline could be, depending on your point of view, "strength cites outnumber improvement areas 4-to-1" or "only 3 more strength cites than cites for areas for improvement." We think the real story is: "by now all but a few of the participants took the basic online seminar audience participation format for granted and no longer felt the need to comment on it."

- We can file these cites from Areas for Improvement under "you can't please everybody."
- Participant 8 wrote: "Would have like to hear more about his research."
- Participant 9 wrote: "It's a little bit long."
- Participant 7 wrote: "The length of time is appropriate." (We agree with Participant 7.)

The lesson to be learned from Session 7 is that multi-university online seminars should always have a backup speaker (with materials) available, should one be needed at the last minute. In fact, we had other backup speakers available, so we were well prepared for this emergency.

And from all of us at Session 7 -- kudos and thank-you's to Ed McCormack, who was ready when called on as emergency speaker.

Bottom line

Always have an emergency backup speaker (with materials) ready, in case a scheduled speaker becomes unavailable at the last minute.

Video Session 8

Our speaker for Session 8 was Craig Middlebrook, Deputy Administrator of the United States Saint Lawrence Seaway Development Corporation. His topic was "St. Lawrence Seaway Development Corporation Operations and Overview". The CFIRE UTC at the University of Wisconsin, Madison was the session host.

Results

Figure 4-8, “Survey Results, Video Session 8" presents the survey results for this eighth and last video.

Figure 4-8. Survey Results, Video Session 8 (6 pages)

Video Session 8 – Survey Responses from 17 Participants
(Participant Type: S=Student, O=Other[1])

Participant Answers		Question 1: Strengths. *For Video Session 8, "St. Lawrence Seaway Development Corporation Operations and Overview", by Craig Middlebrook, Deputy Administrator of the United States Saint Lawrence Seaway Development Corporation, briefly (in only one or two short sentences for each answer) identify 1-3 of the session's greatest strengths and the impact of each on the value/effectiveness of this entire video session.*	Source Category[2]		
Part. No.	Part. Type				
1	S	States Saint Lawrence Seaway Development Corporation, briefly (in only one or two short sentences for each	A	D	C
2	S	He knew his topic well.	A		
3	S	Yet again, another super informative session. Interesting discussion of bi-nationality; Canada and U.S. working together. Almost seems overwhelming to try to capture the next 50% capacity.	A	B	D
		Really illustrates how the low-value inland bulk cargo (working cargo, if you will) just doesn't get the attention of all that flashy high-value finished goods cargo.	A	D	
		Great opportunity to see the differences between international coastal cargo and inland waterway cargo.	C	D	
4	S	-Ideas were expressed very clearly	A		
		-Combined technical explanation with political background	A		
		We got a very complete picture of the process to build, maintain, and upgrade the infrastructure in the seaway.	A	D	
5	S	The presenter definitely had enough knowledge of the subject to do the presentation. He was well spoken, and spoke at an understandable level.	A		
6	O	learned a lot about a maritime agency I knew very little about.	D	A	
7	S	Craig provided a clear picture of SL Seaway operations, challeges, and opportunities;	A		
		he demonstrated a commanding level of knowledge; his delivery was articulate; and the slides were superior.	A	A	A
		Craig conveyed a high degree of historic and operationally useful information including environmental impacts and efforts (ex. ballast water management)	A	D	
8	S	very engaging and interesting speaker. Did a good job of emphasizing uniqueness and politically charged context of Seaway administration.	A		
9	O	Very detailed and informative session about a US maritime sector that is normally overlooked in industry literature and classes.	A	D	
		Provided a good perspective on the challenges of co-managing a trade route along a common border.	A	D	
10	S	Knowledgable about the subject	A		
11	S	The presenter was extremely well-prepared and clearly explained the issues facing the seaway. He was particularly strong on jurisdictional issues with Canada and on the legislative history of seaway.	A	D	
		It was very valuable to hear the legal side of freight.	D		

[1]Faculty, facilitators, speakers, guest professionals.

[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.

[3]Note: 5 of the 17 respondents cited no areas for improvement.

Figure 4-8, Continued- 1

12	S	Very informative presentation, and the presenter was very detailed about many of the apsects behind the St. Lawrence seaway. This was my favorite presentation of the semester. The detailed nature of the presentation helped me understand the workings of the seaway in a way that I've never had before	A	A	
13	O	The speaker was extremely excited and well spoken. He provided detailed background on the SLSDC. He stressed a few key points and told us the minimum take away. In my opinion, this was the best of our collaborative session.	A		
14	S	This presentation is very helpful to understand the system and mechanism of inland waterway. The presentar discussed them, by clearly organizing the presentation. It is a very good opportunity for us to be familiar with the inland waterway system.	A	D	
15	S	Vast knowledge and passion for the subject. He provided insights that would not be known to anyone with less interest.	A		
16	S	Great presentation!	A		
17	O	Good talk, lots of information about an area of freight shipping that is not as familiar to us.	A	D	
		The chance to use this video communication technology to share classes allowed our students to learn about an important aspect of transportation that we do not offer in our current curriculum.	C		
Participan		**Question 2:** Areas for Improvement: *For the same video session, briefly identify 1-3 aspects that caused problems and why each was an important problem for the session's effectiveness and/or enjoyment.*	**Source Category[2]**		
Part. No.	**Part. Type**				
1	S	None. Session was effective and well presented	N/A		
2	S	advancing slides.	A		
		He also was very long winded on all his explanations.	A		
3	S	basics. Just to maybe catch my breath, so that I could actually consider what to ask.	A		
4	S	Make sure the presentation only last 40 min. He has many interesting things to say and I would have heard him for more time but the presentation was supposed to last for 40 min. No major impact on the presentation but on the available time for questions.	A		
		-Mention when slides are changed	A		
5	S	The speaker did not ask to advance the slides and I felt he was kind of self-adsorbed.			
		I also felt that he moved his hands quite a bit more than was necessary.	A		
		It was hard to fully understand where the conversation was going all of the time and his hands were distracting.	A		
6	O	I don't really like these strength/area for improvement questions. I feel like I give the same response all the time. Perhaps more questions like 3, then you also get more quantifiable responses. Then you can add one space at the end for essay.	D		
7	S	None	N/A		
8	S	No issues.	N/A		
9	O	were some very cool photos. (Apply red source category to Question 1.)	A	A	
10	S	Tell other UTCs when to change slides	A		
		Provide concise answers	A		

[1]Faculty, facilitators, speakers, guest professionals.

[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.

[3]Note: 5 of the 17 respondents cited no areas for improvement.

Figure 4-8, Continued- 2

11	S	Sometimes the presenter came off as a bit of a lobbyist, and I felt apprehensive about taking his information at face value. That said, it was helpful that he submitted an article critical of the seaway in the readings. His bias was unavoidable given his position, and it did not take away from my enjoyment of the session. It was just something that I was forced to note when considering his information.	A		
12	S	Sometimes there was almost a little TOO much detail. I got lost a few times within the presentation, but I was able to recover	A		
13	S	speakers. Not sure if we could tease statistical evidence from the survey data. It was my observations. The explanation could be a "home team advantage" for the speaker. Or students might be more interested because they are more familiar with the local issues and	B	D	
		another reason could be the video conference technology layer is a limited substitute for having the speaker in person ... the technology not able to fully connect the students and speaker.	C		
14	O	I think that the presentation was the best organized, and the content was the most clearly delivered. Nothing to say im terms of improvement area. (Apply red source category to Question 1.)	N/A	A	
15	S	Slides were useless, too cluttered	A		
		and we didn't know which one he was on. It was difficult to follow the presenters lecture.	A	C	
16	S	None as such.	N/A		
17	O	More time should be spent interacting with the students and visitors during the presentation and the Q&A discussion period.	A		

Participant Answers		**Question 3:** Rating. *On a scale of 0-5, where a score of 5 represents a performance evaluation of "Truly Excellent" and 0 represents a rating of "Frustrating Waste of Time", how would you rate this Video Session?*
Part. No.	**Part. Type**	
1	S	3
2	S	2
3	S	3
4	S	5
5	S	4
6	O	4
7	S	5
8	S	5
9	O	4
10	S	3
11	S	5

[1]Faculty, facilitators, speakers, guest professionals.

[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.

[3]Note: 5 of the 17 respondents cited no areas for improvement.

Figure 4-8, Continued- 3

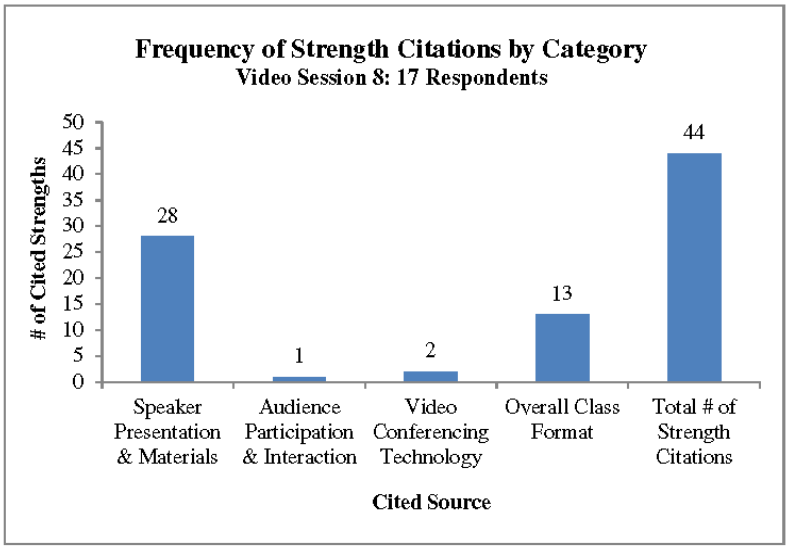
12	S	5	
13	S	5	
14	O	4.5	
15	S	2	
16	S	4	
17	O	3.5	
Participant Answers		**Question 4:** (Optional) *Please suggest any changes that could alleviate problems identified in Question 2, which you believe would be feasible for the host UTC and its facilitators to implement in future classes.*	
Prtc. No.	**Prtc.Type**		
1	S	None.	
2	S	The host ETC should do a better job reminding the speaker to let the rest of the people know they are advancing their slides.	
3	S	No response.	
4	S	No response.	
5	S	No response.	
6	O	No response.	
7	S	No response.	
8	S	No response.	
9	O	No response.	
10	S	No response.	
11	S	Continue to make sure there is an opposing viewpoint in the readings for presentations like this.	
12	S	No response.	
13	S	see question 2.	
14	O	No response.	
15	S	No response.	
16	S	No response.	
17	O	No response.	

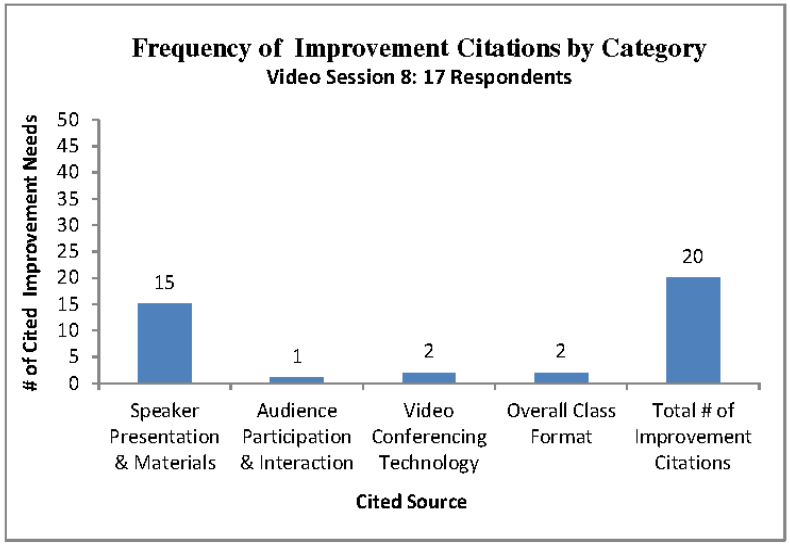
[1]Faculty, facilitators, speakers, guest professionals.

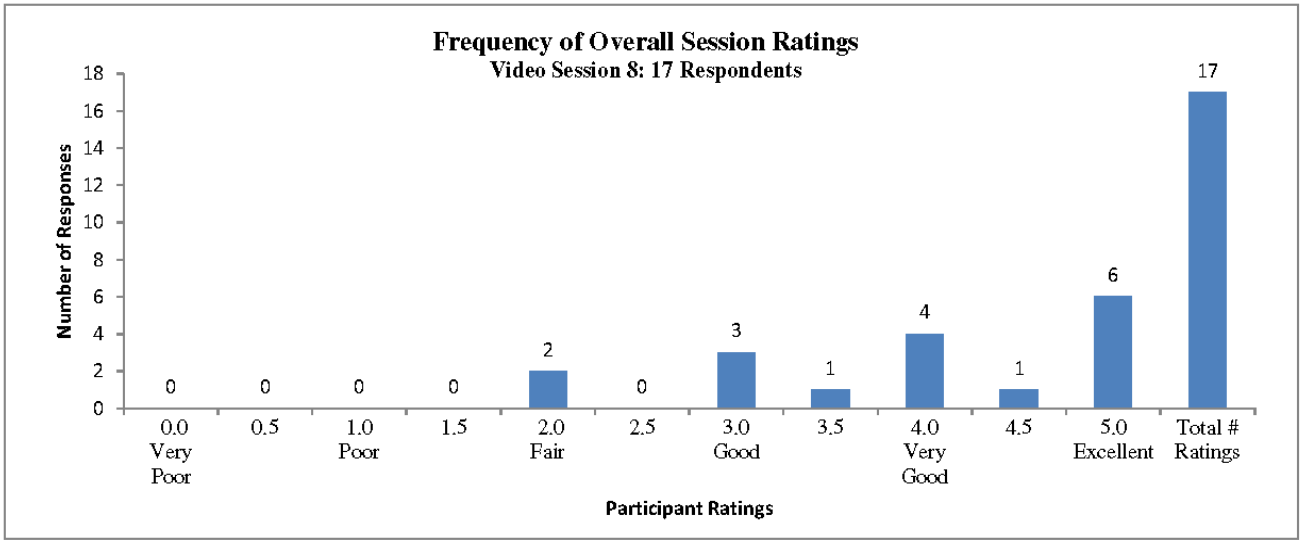
[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.

[3]Note: 5 of the 17 respondents cited no areas for improvement.

Figure 4-8, Continued- 4







Mean	3.94
Std Dev	1.01

[1]Faculty, facilitators, speakers, guest professionals.

[2]Session component responsible for cited attribute: A-Speaker, B-Audience, C-Video Technology, D-Course Format.

[3]Note: 5 of the 17 respondents cited no areas for improvement.

Summary and Analysis

The results for Session 8 and their general interpretations are summarized below.

- As usual, the Overall Session Ratings had outliers; two participants gave the session a rating much lower than the ratings given by all the other participants: 2.0, compared to the other 14 ratings, all 3.0 or higher, with 11 grades of 4.0 or higher, including a record high 6 perfect 5.0 ratings. The mean rating was 3.94, less than 5% of a standard deviation below 4.0. Without the two outliers, the mean Overall Session rating would have been 4.2.
- There were 44 cited strengths, more than double the number of cites to improvement areas (20).
- As usual, Speaker Presentation & Materials was the category with the most cited strength (28), about 65% of all strength cites. Overall Class Format received 13 of the other 16 strength cites; Audience Participation and Interaction got one and Video Conferencing Technology got the other two.
- One of the best things about the multi-university online freight seminar was the opportunity to learn about many different parts of the freight chain from the perspectives of people who work in those areas.
- The eighth speaker was an attorney for the St. Lawrence Seaway.
- The importance of the speaker to the participants is clear from the number of ratings and comments about the presenter (mostly background and teaching style) and about the presentation itself (especially materials); this category always received by far the highest number of cites -- both positive <u>and</u> negative. This was a consistent finding across all eight sessions.
- Fifteen of the twenty areas for improvement in Session 8 were in the Speaker Presentation & Materials category; the other five were split among the other three categories.
- Two different participants (12 and 13) both thought this was the best of the eight presentations.
- There were still technical glitches, especially the operation of the slide-show; slides were advanced independently at each of the four participating universities, so there were chronic problems synchronizing slides and speaker. PowerPoint presentations should be controlled at the production site and sent to the universities via a separate Internet feed.
- One of the cited areas for improvement was the format of the evaluation form itself.
- The speaker's speaking style was cited as an area for improvement by several participants.
- Participant 12 wrote, "Sometimes there was almost a little TOO much detail."
- Possibly influenced by the knowledge that the speaker was a lawyer, Participant 11 wrote: "Sometimes the presenter came off as a bit of a lobbyist, and I felt apprehensive about taking his information at face value. That said, it was helpful that he submitted an article critical of the seaway in the readings."
- Participant 2 wrote: "He also was very long winded on all his explanations."
- Participant 4 complained that the speaker's presentation ran past the 40 minute mark, leaving less time for Q&A. These conversations among people at different universities are one of the most

important extra values that can be realized by an effective multi-university online seminar compared to a webinar. When hosting a session, each participating university needs someone to cut off a speaker who is running overtime and move the seminar along to Q&A.

- Our multi-university online seminar realized both economies of scale and economies of scope.
- Most people are familiar with the meaning of "economies of scale;" in our experiment, we used the Internet to lower unit costs of teaching by reaching more students.
- We also achieved economies of scope -- we were able to offer a wide variety of speakers, all connected to some aspect of the freight system, giving the students an enhanced educational experience, well beyond what any of them could have received without the pooling of teaching talent.
- Our speakers not only taught from a wide variety of perspectives, they taught well, and some of them were able to exploit the online technology to encourage conversations among people at different universities. Many participants cited this synergy as one of the best things about the online seminar.
- We finished on a high note; the 8th session was a success, technically and as 80-minutes per week in a course about freight as a system.
- By the time we produced the final session, our technical expertise had reached its highest level, and we were realizing the benefits of the multi-university one-line seminar format, with economies of both scale and scope. The students got a great freight course -- much better than any one university could have delivered -- and we proved the value of the multi-university online seminar.
- Participant 17 wrote a thoughtful strength cite: "The chance to use this video communication technology to share classes allowed our students to learn about an important aspect of transportation that we do not offer in our current curriculum."
- All four universities benefited from the synergy that results when you combine diversity and communication.
- We were a good fit in terms of focus and expertise; our combined resources enabled us to deliver a video course with an all-star line-up of speakers, who did such a good job that the students consistently gave the teachers 4 point grades.
- The presenters and their materials were consistently the category with the most strength cites; it is clear that a successful multi-university online seminar needs an interesting and talented group of speakers, all of whom are experts in their fields, experts who can effectively communicate their field of expertise to students.

Bottom Line

Session 8 was a good end to the experiment, which was a success both as a course on freight as a system and as a proof of concept, demonstrating how a multi-university online seminar can work.
There can be no doubt there will more multi-university online seminars, and we look forward to the future of this exciting fusion of teaching and technology.

Chapter 5 . Summary of Survey Responses for All Eight Video Sessions

The results and general interpretations for all eight video sessions are summarized by session category and by overall session rating in the following sections.

Cited Strengths and Cited Areas for Improvement by Session Category

Cited strengths (responses to Survey Question #1) can be interpreted as a measure of audience satisfaction with a session, and cited areas for improvement (responses to Survey Question #2) can be interpreted as a measure of audience dissatisfaction. The citations for each session were classified by four session categories. As previously described in Chapter 3, Page 21, the selected categories were:

- Session Category 1: Speaker Presentations and Materials
- Session Category 2: Audience Participation and Interaction:
- Session Category 3 : Video Conference Technology
- Session Category 4: Overall Class Format
-

Results

The citations for strength and area for improvement for all eight sessions are shown by session category in Figures 4-9 through 4-12.

Figure 5-1. Cited Strengths and Areas for Improvement for All Sessions: Category 1

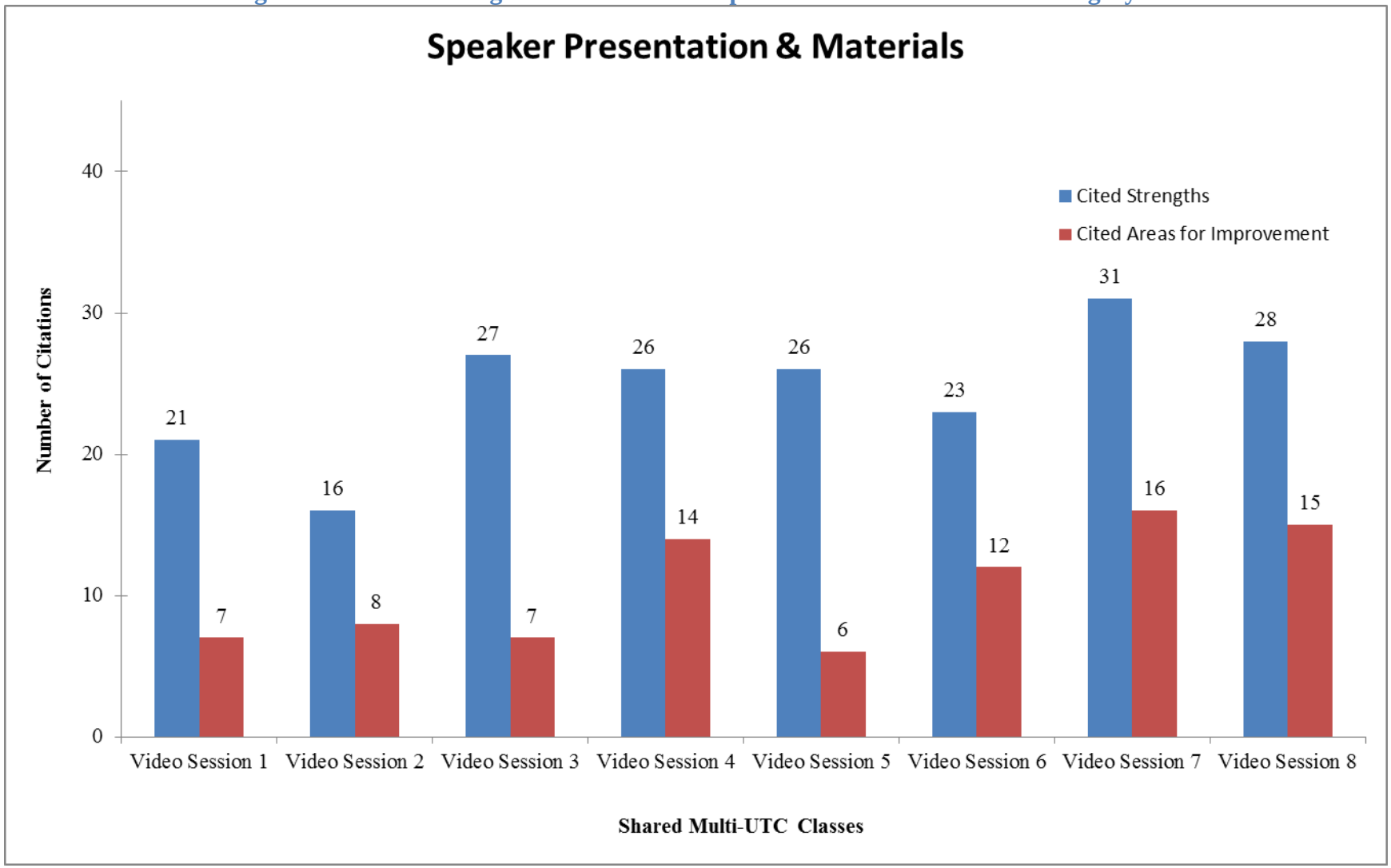


Figure 5-2. Cited Strengths and Areas for Improvement for All Sessions: Category 2

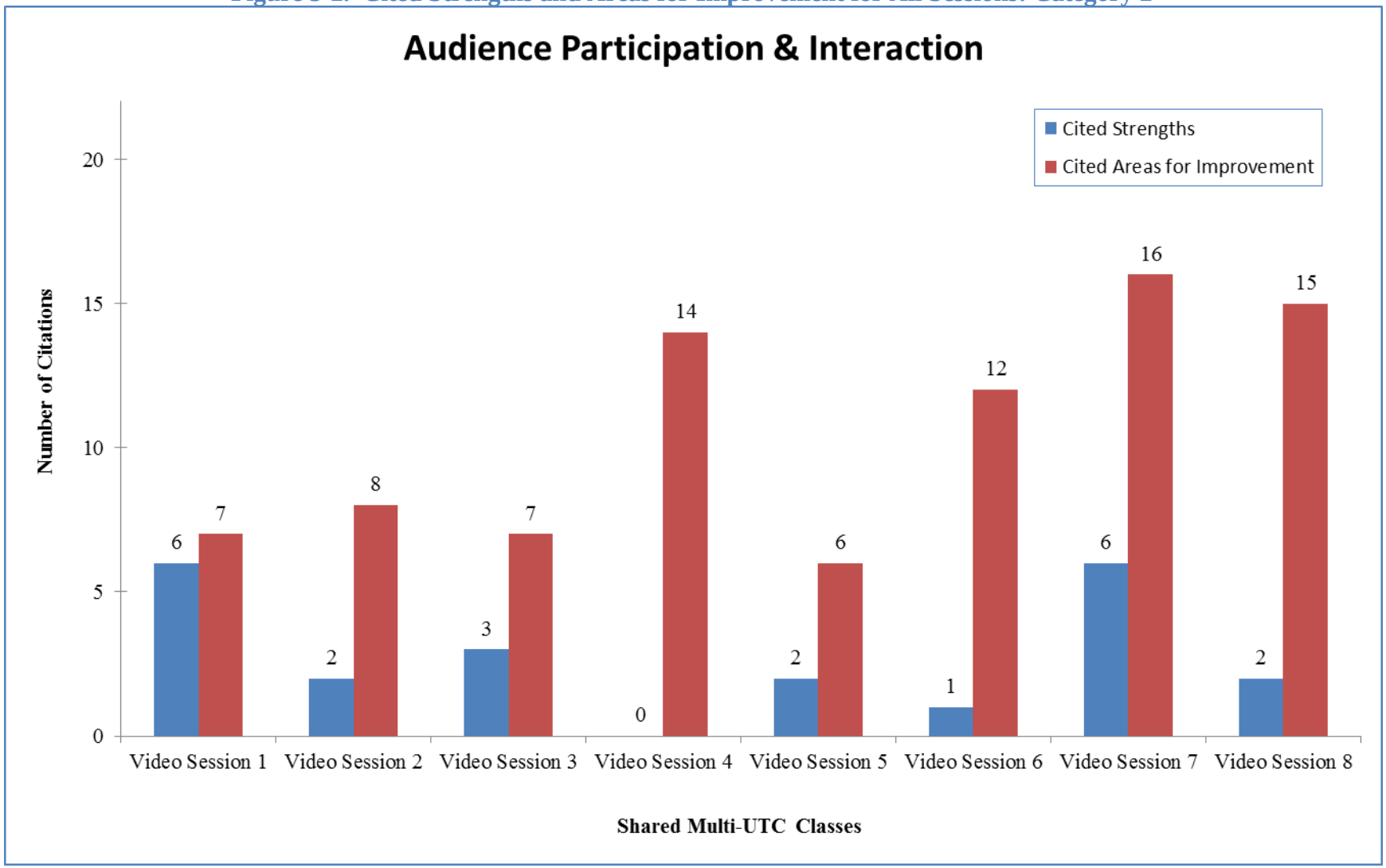


Figure 5-3. Cited Strengths and Areas for Improvement for All Sessions: Category 3

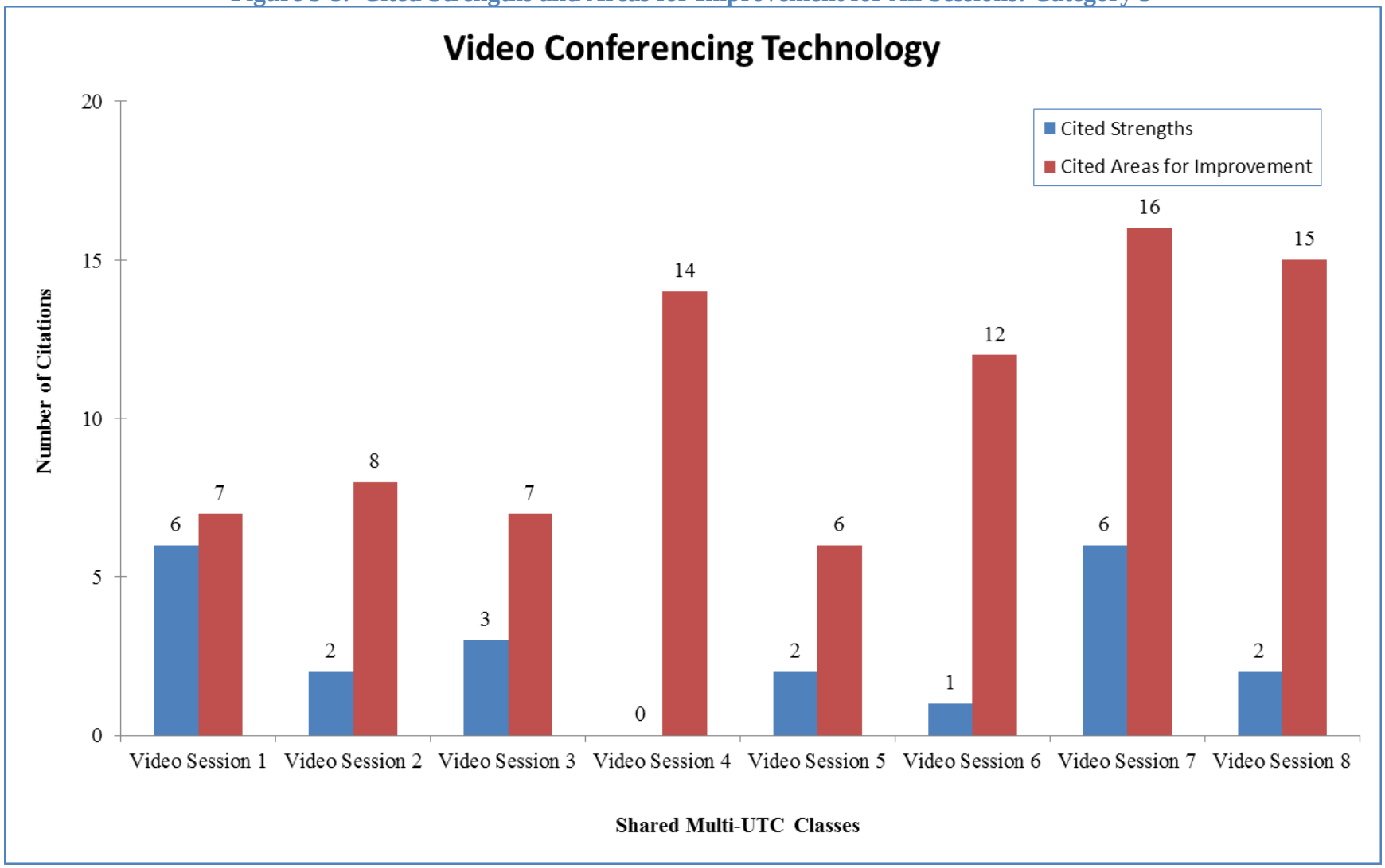
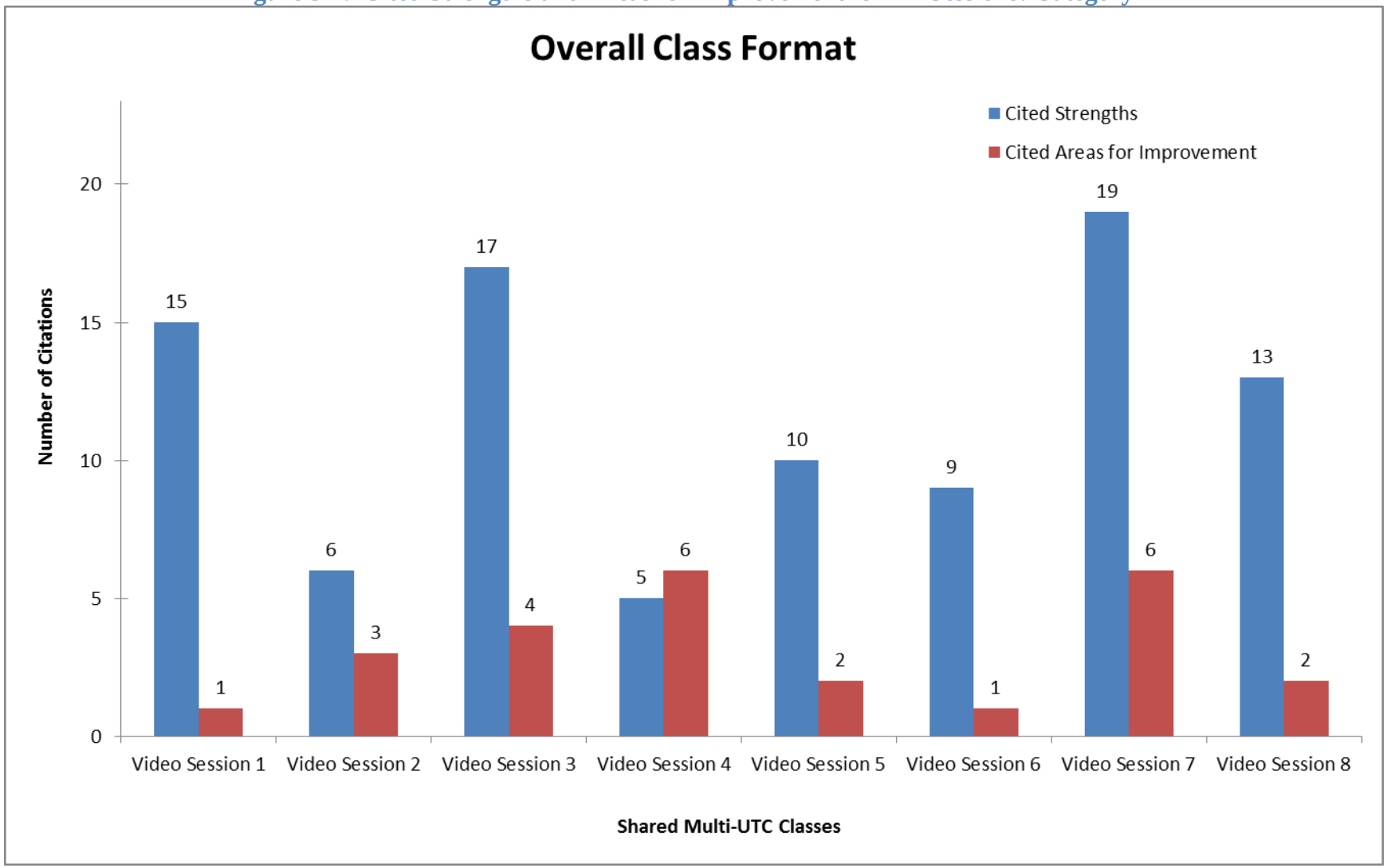


Figure 5-4. Cited Strengths and Areas for Improvement for All Sessions: Category 4



Summary and Analysis

The session-category results for all eight sessions and their general interpretations are summarized below.

- The number of cited areas of strength was about double the number of cited areas for improvement for each of the eight sessions, indicating that participants believe the multi-UTC Internet seminar experiment was a success.
- The first half of the experiment was negatively impacted by continuing technical problems, including the following:
- There were open desk microphones at METRANS and CFIRE during session 1, broadcasting their audience conversations to the other three universities. Although CFIRE was able to fix this problem after that first video class, this was a distraction that continued, on and off, for four sessions before METRANS finally figured out how to effectively turn its desk microphones off while others were speaking.
- There were also complaints about camera shots that were too tight on the speaker, and then too jerky when the speaker moved.
- There were times when participants at some universities were unable to see and/or hear the presentations.
- The number of cited areas of strength had a strong upward trend over time, as technical problems were resolved. We learned by doing and got better at producing online seminars.
- The number of cites, positive or negative, about the video technology, and also about the seminar format, declined over time as our productions became more professional, and as the participants became accustomed to the online seminar concept and basically stopped commenting about it.
- Many thoughtful comments were made about the speakers and their materials, but many stated areas for improvement, in the speaker and materials category, concerned technical problems with their slides, which, in several cases were really organizational problems due to late arrival of the slide file from the speaker.
- Some speakers did not make other materials, such as an abstract and reading list, available, which of course was a negative factor in evaluation of their materials.
- One clear conclusion is that speakers need to be recruited well ahead of their presentation dates, so they will have adequate time to prepare and distribute materials to all participating universities, and another is the need to have last-minute backup speakers on standby, who have materials ready and are well prepared to speak on short notice.
- PowerPoint presentations were presented independently at each of the four universities, so the timing of slide advancement was a problem; sometimes the speaker and the slide were out of synch. My recommendation is that PowerPoint presentations and other visual aids should be controlled at the originating site and sent to other participating universities for display via a second Internet connection.
- Many participants complained that some slides were unreadable because fonts were too small; this is a lesson to be learned.

- There was a last minute substitution of speakers for Video Session 7, but this session had the highest number of cited strengths of all eight sessions, which can be understood as a tribute to the heroic performance by the substitute, Assistant Professor Ed McCormack of the University of Washington -- but could also be an indicator of the effectiveness of our back-up plan.
- The eight speakers were an eclectic mix of professionals, and many participants cited this diversity of speakers, and audience participants, favorably. Some of the best moments of the online seminar happened during free-form conversations among the universities, a synergy that was praised in many comments.

Bottom Line

The students were well taught by all eight speakers. Although there were technical glitches which at times prevented full two-way audio-visual participation at some universities, we learned by doing and got better at production.

We also proved that a multi-university online seminar can be produced and be a valuable educational experience, realizing both economies of scale and economies of scope.

We're looking forward to seeing the future of this exciting new technology.

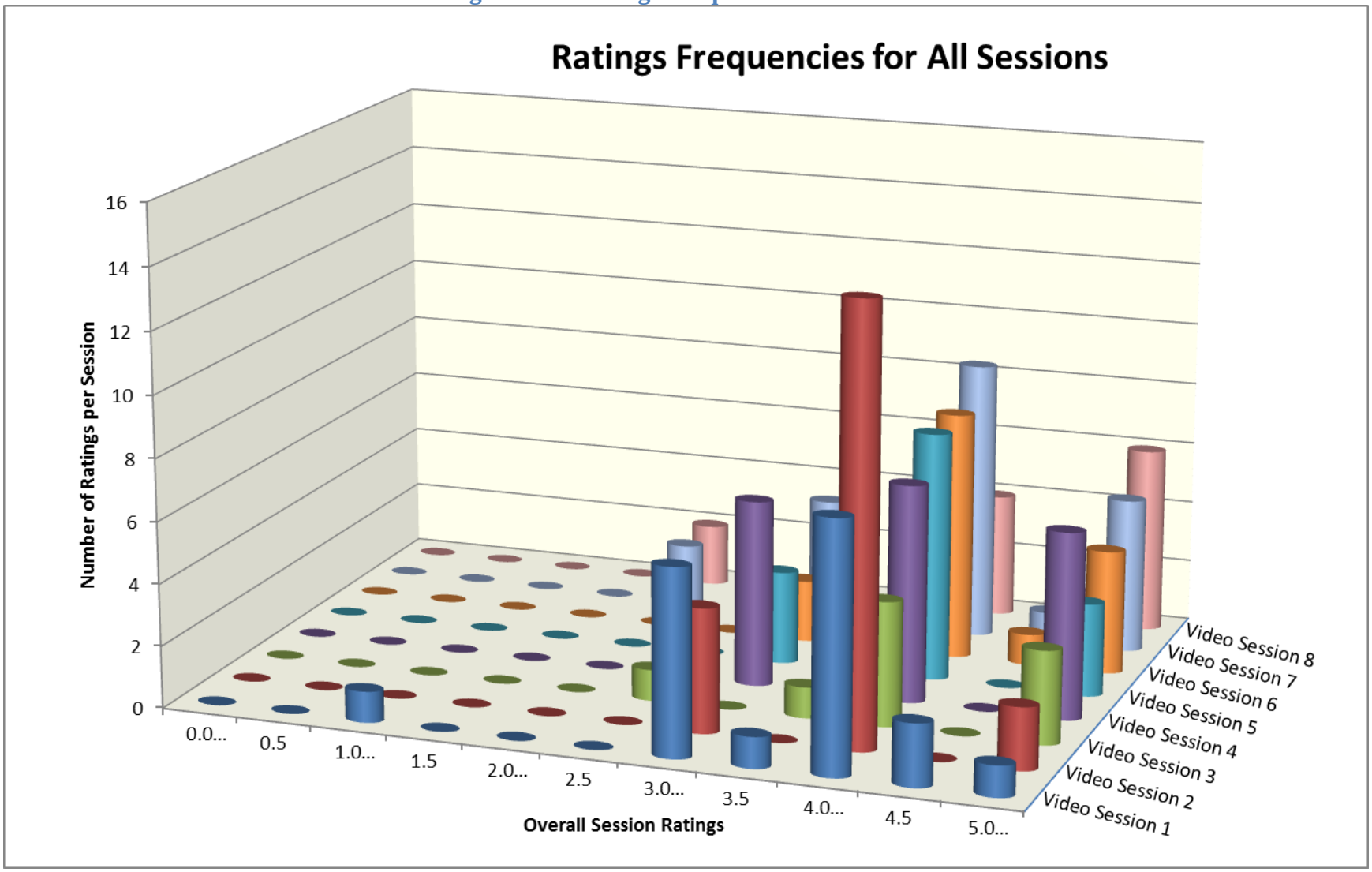
Overall Session Ratings

Results

Participants were asked to rate each overall session on a 0 to 5 point scale, with 5, the highest possible rating, to be used only when the item being rated was truly outstanding. Students who are usually graded on a 4-point scale probably associated a "4" rating with an "A" grade.

The session-rating results for all eight sessions are shown in Figure 5-5. Session Ratings for All Eight Video Sessions and Table 5-1. Rating Statistics for Each Overall Session.

Figure 5-5. Ratings Frequencies for All Sessions



Summary and Analysis

The session-rating results for all eight sessions and their general interpretations are summarized below.

- Success of our multi-UTC series of freight seminars is indicated by the mean and standard deviations of ratings (Table 5-1).
- All eight sessions had mean ratings of 4, plus or minus 1/2 of a standard deviation, including two that were exactly 4.0 and one that was only 5% of a standard deviation below 4.0; the students gave their teachers straight A's.
- The lowest rated session was the first, which had the worst technical problems, but it still had a mean rating of 3.61.
- The other 7 sessions were all rated 3.88 or higher, including 4 sessions rated 4.00 or higher.
-

Table 5-1. Statistics for Each Overall Session

Video Session	Mean	St Dev	N
1	3.61	0.85	19
2	3.90	0.54	20
3	4.11	0.77	9
4	4.00	0.79	19
5	4.13	0.63	14
6	4.00	0.65	16
7	3.88	0.90	21
8	3.94	1.01	17

Bottom Line

These high ratings prove that the multi-university online seminar is an exciting new way to exploit economies of scope and scale to achieve improved, and cost-effective educational experiences for students.

Summation

Final Analysis

The major findings in the final analysis of our Multi-UTC shared core of eight video classes are listed below.

1. Our multi-UTC Internet freight seminar was a success two different ways:
    a. as a course examining all phases of freight movement as a system, and
    b. as a real world demonstration of a multi-university Internet seminar with real-time video and audio from four different universities, including both the speaker and the audiences at the four universities (mostly students) and simultaneous visual aids (PowerPoint presentations).
2. Our seminar was not a one-way webinar (speaker talks, students look and listen); it was a simultaneous interaction among three or four universities, so that all those participating could see and talk directly to each other in real time. This synergy was praised by participants.
3. Audience participants were surveyed re: each session's strengths and areas for improvement. Overall seminar evaluation by the participants were highly favorable, the equivalent of "A" grades.
4. The factors most often cited favorably by survey responders were:
    a. the presenter, all of whom received high ratings from their audiences,
    b. the presentation's value to the responder, usually interest in its topic,
    c. the synergy of simultaneous video and audio interaction among different types of participants at different universities, contributing their perspectives, experiences, and ideas, and so learning from each other, and
    d. materials were praised, especially when they were made available in advance.
5. The most frequent unfavorable factors cited by survey responders were:
    a. technical problems with video and/or audio,
    b. lack of value to the responder, usually lack of interest in the topic, and
    c. no materials or materials which were of limited value because they were not made available in advance.
6. Practice makes less imperfect; we learned from our mistakes and got better at producing online seminars.
7. The most important elements a successful online seminar must have are:
    a. a topic that is valuable to the participants,
    b. presenters who know their areas and are good teachers,
    c. well-prepared materials available for download far enough before the seminar so participants have time to study them, and

d. --- and this is fundamental for success -- thoroughly tested technology operated by experienced operators who have reliable backup systems, including reliable connections at all ports, reliable cameras operated by experienced operators who understand the unique requirements of video, and reliable sound equipment operated by experienced operators who have a sophisticated technical understanding of the online seminar environment -- best practice would be to mix together the speaker and those participants who are actually talking to the group (at designated microphones controlled by someone who has both authority and understanding of the online seminar process), with no other sounds (especially no open microphones broadcasting private conversations to all participants).

8. Production should combine both:

    a. traditional, one-way audio-video teaching (top-down, from the speaker to the audience, with no simultaneous feedback from the audience to the speaker), i.e., an actual webinar presented prior to the interactive on-line session, and also

    b. questions and comments from participants, who can also talk to participants at other universities in real time, resulting in a synergy that received many favorable comments.

9. High audio-visual quality requires best quality equipment, expert operators, excellent lighting, and good acoustics at all locations. A director should choose among available audio-video feeds, and, ideally, could give real-time feedback and direction to camera and microphone operators. In other words -- an online seminar is like a live TV show (with one primary speaker and audiences in multiple locations), and the seminar should be produced accordingly.

10. Bad luck happens; one of our speakers had to be replaced at the last minute. We were prepared for this emergency and our last-minute backup speaker gave an excellent presentation. Backup speakers (with materials already prepared) should always be available.

Bottom Line

Combine reliable technology, good teachers, interested audiences who have valuable information to share, synergy among diverse participants and you will have a good multi-university online seminar.

Chapter 6 . Conclusions and Recommendations

The Online Multi-UTC Seminar: Pros and Cons

What were the online seminar's pros and cons, compared to more traditional methods of education?

Pros

Economies of Scale

The term "economies of scale" means lowering unit costs by increasing output, so fixed costs are spread over more units. University classes already exploit economies of scale, especially classes with large numbers of students. By increasing the number of students who can participate in a learning experience -- from those at just one school, to include more students at other schools – the per-student teaching costs are lowered.

Economies of Scope

No one university could have offered such a comprehensive course on freight movement, but by pooling our resources, we did it together, and all of our students benefited. The multi-university online seminar makes it possible for schools to offer courses together that would otherwise be very difficult, if not impossible, to offer individually.

The online seminar also makes it possible for participants at different universities to talk to each other in real time. This communication among diverse participants leads to a synergy; participants learn from each other, and they are empowered to think outside the box by hearing different perspectives -- these are educational benefits that simply cannot be achieved by other methods of teaching.

Best Preparation for Real World Jobs

There is reason to believe the participation of industry professionals was an important advantage for our online seminar. Dr. Shane Brown, Assistant Professor of Engineering Education at Washington State University, commented: "Some educational theorists would suggest that learning from experts in the field (who practice) is an essential component to prepare students for the field."

The online seminar allowed students to hear from, and even talk to, non-academics actually working in freight fields. Many students commented about the value of this interaction; there can be no doubt it is one of the advantages of this method of teaching.

Cons

The cons are easy to state: technical and organizational problems.

Different University Schedules and Spring Breaks

First, we had to schedule the online seminars at times when classes were in session at all participating universities. This would have been easier if all participating universities had been on either the semester system, or the quarter system, but not both.

Equipment CompatibilityChallenges

Next, some universities had problems connecting (and staying connected) to the audio-video feed over the Internet. No Internet connection means no online seminar, so obviously a top priority has to be given to ensuring reliable Internet connections, including redundant systems.

There were also other technical glitches, especially sound problems and excessive camera movement.

Last-Minute Schedule Change

One of our speakers had to cancel at the last minute, but we were prepared for this eventuality. We had backup speakers (with materials) ready to pinch hit on short notice, and Ed McCormack did a great job as substitute speaker.

Speaker Time Requirements Not Always Met

Speakers did not always make materials available far enough in advance so that participants could read them before the presentation. Although many student evaluations thanked speakers for well-prepared materials, which could be studied after the seminar, the importance of reference materials, especially those made available well in advance, is clear from participant evaluations. The lesson is clear that the online seminar should insist on such materials, and far enough ahead of time so participants can study them before the seminar. If a scheduled speaker fails to deliver materials by the deadline, one of the emergency backup speakers should present instead.

We also had a problem with a few speakers who did not stay within the time schedule.

Each seminar had to end at its scheduled time, so, when speakers ran overtime, the difference had to be made up by cutting into the time available for simultaneous interaction among all participants.

This discussion among people at different universities can result in an exchange of ideas and perspectives, creating a synergy that was praised by many participants in their evaluations. This synergy from diversity is one of the main advantages of the online seminar, so cutting into this time to accommodate speakers who run overtime should be avoided.

Someone at the originating university should be designated to remind speakers when their time is running out (we did this), and then to cut them off if they run overtime (we did this, too, but we should have done it sooner). Otherwise, participants will not receive the full benefit of online real time conversation among diverse participants, because there won't be enough time left in the class.

Conclusions

- Collaborative education among universities in real time on the Internet can be an effective tool for education.

- Multi-university consortia, pooling complementary resources, can enhance students' educations.
- Multi-university consortia can produce cost-effective learning experiences.
- Simultaneous distance learning can be a cost-effective use of speakers' time.
- The video record of a class session can be a valuable educational tool.
- Students who are used to simultaneous social interaction on the Internet are ready for simultaneous Internet education.
- Simultaneous participation by faculty and students at different universities can stimulate valuable discussion and education.
- Universities producing multi-site real-time interactive seminars will experience unexpected technical problems, especially at first.
- There should always be a backup speaker available with materials.
- There should be redundant hardware components and systems, including video/internet connections.
- IT people at the universities need to communicate effectively to prevent problems when possible and to solve problems quickly when necessary.
- Best practice is to upload course materials and have visual aids in place well before classes, but speaker compliance has been a problem; last-minute course materials and visual aids were the rule, not the exception, in our pilot program.
- A good format might be an hour of webinar first, followed by interactive Q&A sessions.
- The best thing about our Multi-UTC course was the interaction among students and faculty at different universities.
- Our Multi-UTC course on freight mobility as a system was a successful educational experiment and we recommend more collaborative distance learning among universities.

Recommendations for Future Research

Further Analyses of Educational Benefits.

We asked participants to identify areas where we did well and areas where we needed improvement. Their ratings and written comments are the data examined in this paper.

Further research should attempt to quantify the benefits of our online seminar versus more traditional methods of teaching. One way to do this might be to analyze the data generated by this scheme: a core course (with its own course no. and for so many units of credit), and also to offer a companion online seminar as a separate course for separate credit -- students can take one course, or the other, or both.

If it is not possible to compare a test group of students (who participated in the seminar) to a control group (who did not participate in the seminar), then maybe a time series analysis could demonstrate a statistically significant improvement in quantitative measures of student learning after the online seminar was added to the curriculum.

Test an Improved Course Delivery Procedure

Another possible area for future research would be to conduct a second multi-university seminar on another topic, and with a different, more sophisticated, procedure.

- Rearrange the session components so that the presentation comes before the multi-university introductions.
- Require the host organization to create a 30-40 minute video presentation by the chosen speaker ahead of time, so that participants at each UTC can view the presentation at their respective class locations before interacting with the speaker and other UTC participants.

  Doing this accomplishes several objectives:
  - It guarantees that the presentation will remain within the allotted time frame.
  - It reduces the time and costs of using the video-conferencing equipment, leaving more time that can be used for Q&A and interactive discussions.
- Follow the presentation with a multi-UTC video-conference which includes:
  - Introductions of the speaker and the other participants at the host UTC,
  - Introductions of the participants at the other UTCs,
  - An interactive Q&A and discussion session with all participants.

Summation

Our multi-university online seminar was a success in three different ways:

1. We had a very successful course on all aspects of maritime freight movement.
2. We proved the feasibility and the value of a multi-university online seminar. In particular, we proved the value of discussion in real time among participants at different universities; this interaction among people with different backgrounds and perspectives created a synergy of creative energy and new understandings that benefited all of us.
3. We achieved economies of scale, by increasing the number of students who could participate, and we also realized economies of scope, by presenting a series of speakers from different universities, something no one university could have done.

We look forward to further multi-university educational collaboration, exploiting the Internet's capability to facilitate simultaneous conversations among participants at different universities.

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