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## Faculty attitudes toward distance education in Utah public colleges and universities

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**FACULTY ATTITUDES TOWARD DISTANCE EDUCATION  
IN UTAH PUBLIC COLLEGES AND UNIVERSITIES**

by

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**A dissertation submitted in partial fulfillment  
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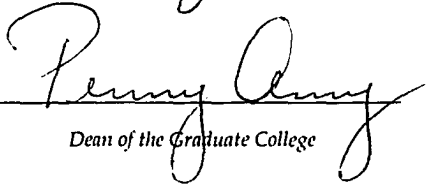
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## ABSTRACT

The purpose of this study was to obtain faculty attitude information toward distance education at the Utah public colleges and universities. Faculty attitudes were deemed important with more and more money being allocated in Utah to the development of distance education.

A survey of Utah public higher education faculty was conducted in the fall of 1997. The survey achieved a 66% return rate, a total of 421 faculty members.

The survey found that 95% of the Utah faculty was familiar with distance education and that a high number would be willing to teach distance courses, even if they hadn't already done so. Communication, Education and Business were the most willing academic areas and the most willing group was the comprehensive university group of Southern Utah University and Weber State University.

The faculty believed distance education was an effective educational method and they were supportive of their institutions being involved in distance education delivery.

They were slightly positive toward using distance education in their academic areas, but held slightly negative attitudes toward the use of distance education in their own courses. They were most familiar with correspondence study, but favored the use of two-way video and two way audio methods.

Nonverbal communication skills were important to faculty, but they did not agree that nonverbal skills could be as effective in the distance classrooms. Accessibility issues were



important to faculty to increase education opportunities and availability in rural areas.

The faculty stressed the need students have for face-to-face interaction with professors and with their peers, but weren't sure distance education methods could deliver the needed interaction.

The study concluded that administrators and organizers of distance education in Utah should continue to move ahead with distance education programs based on the willingness of the Utah faculty to teach distance education courses. The study also determined that the Utah faculty needs to be furnished with information concerning the effectiveness and quality of distance education.

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## CHAPTER 1

### Introduction

Utah Higher Education has been using Tele-communications technology in distance education since the 1980's. In the last several years, developing interactive video technology has allowed teacher-student interaction in distance education to become a reality. Through the Utah Education Network (EDNET) system, educational television courses have been taught successfully for many years. The recently completed fiber-optics network in Utah now allows interactive courses to be taught to students at distance sites. Instructors can interact immediately with students in distance classrooms using interactive video with full two-way video and audio.

This recent technological improvement presents to educators the opportunity to instruct students located in distance classrooms nearly face to face, creating interaction and feedback possibilities the lack of which in the past many educators have viewed as a flaw in distance education. Although many still don't believe the interaction is effective, interactive video distance courses have the potential to recreate the immediate interaction between student and teacher which is possible in face-to-face teaching situations.

Peters (1994) quotes Keegan (1983, p. 83) saying that "two-way communication became the catch-phrase in distance education in the 1980's." Peters wrote that those

using this catch-phrase wanted to show “that the separation of student and teacher does not mean that communication between them is cut off altogether, that there are many tricks of the trade” which allow for two-way communication. Peters said that these advocates have been attempting to show that two-way video technology is “much more similar to face-to-face education than, for instance, televised instruction” (p. 215). The second motive has been “the desire to show and mark the way in which much of the current distance education practice should and could be improved considerably” (p. 215).

Garrison (1985, 1989) has outlined three perspectives that focus on the advancement of technologies in distance education. The three are correspondence, teleconferencing, and computer-based learning. Interactive video technology, or what Garrison would call teleconferencing, gives instructors the ability to interact with students, and to receive nearly immediate feedback in classroom sessions, despite the distance that separates them.

The possibilities this technology offers have come to the attention of Utah education and government leaders who are searching for ways to expand opportunities for Utah's students while at the same time cutting the cost of new facilities on Utah's college campuses.

Utah Governor Michael Leavitt, re-elected to a four-year term in November 1996, along with the Utah Legislature, has voiced the desire to use technology delivered courses to limit new building on the state's higher education campuses. Leavitt (1995) projects the growth on Utah's campuses to increase from 80,000 to 150,000 in 15 years. He worried that to build buildings to accommodate all of these students would cost \$2 billion. He indicated that the state will build new buildings but “clearly, we must do other things to

provide access to higher education beyond just constructing buildings” (p. 4).

Our vision of technology-delivered education is not about eliminating the campus experience. It is about choice, variety, and flexibility. It's about accessibility and making some classes, those that fit the proper criteria, available anytime, anywhere. It's about using the incredible advances in ... telecommunications to enrich courses and curriculum....Clearly, the campus experience will not be lost. But it will be enriched, and we will use our campuses more effectively and efficiently (Leavitt, 1995, p. 4).

The Commissioner and Chief Executive Officer of the Utah State Board of Regents, in a memorandum dated January 13, 1995, outlined the importance being placed on distance learning by the current Utah administration. "Distance learning is one way to give students access to the resources of the Utah System of Higher Education" who might otherwise not have access to the system (Foxley, 1995). The plan is to expand course offerings especially in the general education courses and allow students to have a number of courses completed before they step on Utah's campuses.

Walsh and Reese (1995), who have called "distance learning...a core educational strategy in the 1990's," have written, that as the cost becomes more manageable, schools will utilize the new technologies to reach more students without the need to add new faculty or to build new facilities (p. 58).

Leavitt, who is also at the forefront of the Virtual University, now called the Western Governors' University, planned for 13 western states, has continually discussed using technology to educate Utah's students. The Governor is hoping that non-traditional

educational delivery systems will save the state money (1995). With EDNET already in place and advancing video technology available to the state system, the state will move forward with more distance teaching using interactive video. The Utah Education Network has provided educational programming and course work using Utah's public broadcasting channel, KUED-7, and KULC-9 the state's learning channel. The network also has made use of UtahLINK and EDNET the educational interactive satellite and fiber optic network. The Utah Education Network was founded by the Utah State Legislature "in an effort to bring the latest in educational technology to the students of Utah" (Hess, Brown, Esplin, & Andrews-O'Hara, 1995, p. 22).

A closer look at the attitudes held towards distance education by Utah's higher education faculty is necessary to determine the expected level of faculty cooperation this approach in the education of Utah's students will bring. Director of Instructional Telecommunications at North Carolina State University, Thomas L. Russell (1995) said that "distance education systems" need the participation and support of faculty if they were to be successful. Russell used a quote from Robert L. Jacobson in the *Chronicle of Higher Education* to illustrate the importance of faculty involvement in technology "...two problems of the past decade will continue to inhibit the spread of technology [in higher education]: high cost and limited participation by many faculty members" (1994, p. A27). Russell emphasized the importance of faculty involvement in distance education, "the cost aspect, while being critical, pales in comparison to the importance of the faculty aspect primarily because the faculty are essentially taken for granted. We often seem to adopt the 'Studio of Dreams' posture-'If we build it, they will come'" (p. 31).

What did faculty know about distance education? Were faculty willing to accept change in how some courses are delivered? Were faculty willing to work to incorporate distance education more firmly in the curriculum, in their own academic areas and to use it in their own classes? Did they believe distance education, in all of its forms, should be a part of the offerings of the university. Did Utah faculty like distance education and if so what did they like about it? Answers to these questions were needed.

The Chief Academic Officers of the Utah System of Higher Education have produced a document titled "Creating the Vision: A Planning and Policy Statement." The document makes it clear that the Board of Regents, Utah's governing board at the college and university level, recognized the "imperatives of access, efficiency, quality and reduced costs" distance education had for the state higher education system. According to the document, technology will deliver education to Utah's rural students. (1995, p. 2)

With two-way interactive video technology and other methods of delivery now being used, distance teaching in the institutions of higher education in Utah can continue to grow and develop. Work will need to be continued to prepare instructors to deliver distance education over the current EDNET system and to move into the virtual university arena made possible by educational consortiums such as the Western Governors University. As distance education delivery continues to develop in the state, more information from Utah's faculty at all institutions of higher learning is necessary, regarding distance education attitudes and especially as it relates to these new interactive video courses taught for college credit.

In 1995-96, concurrent enrollment in Utah grew 25 percent over the previous year.



Concurrent enrollment defined is college-credit courses offered to high school students through distance learning. The concurrent enrollment in the state in 1995-96 represented 2,400 full time students or the same as the full-time enrollment at Snow College in Utah. The EDNET system offered 120 public education and concurrent enrollment courses during 1997-98.

Additionally, with this emphasis on technology came the need to prepare instructors to adapt to the teaching environment it created. It is face-to-face teaching, but the technology changes the way the teaching is delivered. Verbal and nonverbal communication skills take on heightened importance. The instructors need to communicate in this new video interactive classroom as well as he or she had in the traditional classroom. The distance instructor will need to be in command of above average public speaking skills which include interpersonal verbal and nonverbal skills, as well as teaching techniques which accomplish desired interaction using the available technology. Technological consciousness will be necessary in order to be effective in the new interactive arena offered by video conferencing and other methods of delivery.

### **Statement of the Problem**

The purpose of this study was to obtain and analyze faculty attitudes concerning distance education at Utah's institutions of higher learning toward college-credit distance education. The willingness of faculty to incorporate distance education courses into the curriculum is crucial if Utah is to continue to offer more and more courses for college-credit through distance education using the Utah Education Network.

In order to determine attitudes toward distance education in Utah, a statewide survey of Utah's public institutions of higher education was conducted in October and November of 1997. The survey attempted to gather information concerning distance education attitudes by institution type and faculty subgroups concerning the offering and teaching of distance education courses. The survey asked professors if they would be willing to teach distance education if they hadn't already done so, and attempted to find out the importance they attached to interpersonal nonverbal communication skills in the classroom. It also asked the faculty to judge the regard they held for immediate interaction and feedback between teacher and student in the classroom, and what methods of distance education they knew the most about and which methods they considered effective.

### **Research Questions**

The Research questions were originally patterned after a national faculty attitude study conducted by Thomas Allen Clark at Southern Illinois University. Clark (1992) studied public higher education faculty in research, comprehensive and junior colleges across the United States. This study looked only at the state of Utah and the attitudes of faculty toward distance education technology in Utah higher education. Permission was granted by Dr. Clark allowing the 1992 survey to be used for this study in Utah. Changes in the research questions and the resulting survey instrument are those of the researcher and were not connected to or influenced by Dr. Clark. The permission form is found in appendix A. The research questions follow:

1. Were Utah faculty familiar with distance education/distance teaching and how did

the faculty at public institutions of higher education in Utah view their own perceived attitudes toward the concept of distance education, and their perceptions of whether distance education should or should not be used at their own institutions? Were they willing to teach distance education courses if they hadn't already taught distance education courses?

2. Did faculty have positive or negative attitudes regarding distance education as an effective method of education and positive or negative attitudes regarding the teaching of college-credit courses as part of college or university academic programs and were attitudes positive or negative regarding distance education in their academic areas, disciplines and in their own courses?

3. What distance methods did the faculty know the most about, which did they prefer and which methods do they view as effective?

4. How did the attitudes of Utah public higher education faculty toward college-credit distance education vary comparing their professional characteristics?

5. Did faculty believe that interaction between students and teachers can be adequately recreated in the video distance education classroom and did they believe that nonverbal communication between teacher and student is important in the conventional or traditional classroom? Did they believe that nonverbal communication between teachers and students can be as effective in the distance classroom using the new technologies and does the technological ability to have immediate interaction and immediate feedback between student and teacher make distance education more feasible as an alternative educational practice? Were the Utah faculty more willing to instruct distance education courses using

full motion two-way video and audio than they would be using other methods?

6. Did public higher education faculty in Utah have positive or negative attitudes toward distance education? Did they like the concept of distance education? What barriers or fears did they see preventing faculty from accepting distance education methods as an effective form of university instruction?

### **Definition of Terms**

Definitions necessary to the study were discussed in this section.

#### Two-way audio and two-way video

Two-way audio and two-way full video, at times called videoconferencing, provides for the simultaneous sending and receiving of messages by students and professors. Teleconferencing is a term also used to describe this interactive ability. There were many systems at the time of this writing available across America using fiber optic networks or satellite systems to deliver immediate feedback and interaction. An application called, digital compressed video, widely used in distance education is a form of two-way video, but the technology had a time lapse factor making the picture blurry and the reception slow, as if the participants were in slow motion. Full two-way video and audio provided simultaneous viewing as television viewers are used to seeing on over-the air television, in one-way formats. This full video-audio technology was transactional because messages were sent and returned simultaneously between sites. The instructor spoke to the students in the homesite classroom and to the students located at a distance site through the use of television cameras and monitors. The distance sites used the same technology. Pucell

(1995) explained that the teacher and the student could see and hear one another creating an immediate interaction. Collis (1995) named these communication technologies “tele-learning.” She discussed the use of “communication channels” which established “connections among persons or resources...that involve transmissions of signals through the air or through some combination of wires, cable or fiber-optic networks or through some combination of all of these” (p.10). Collis also predicted continuing progress in technology beyond the possibilities we now know.

### Distance Education

Distance education is usually defined as a separation of the learner and the instructor by time and space. Moore (1989), Rumble (1986) Keegan (1993) as well as others defined distance education in this way. Moore discussed interaction methods in distance teaching and the improvement was also discussed by Azarsma (1993). In two-way video and audio instruction, the student and faculty member were separated by distance, but the technology allowed for immediate interaction and feedback. See Chapter Two for a complete review of distance education definitions.

### Utah's Education Network

The Utah Education Network (EDNET) has a network of television studios equipped to electronically connect classrooms throughout the state. (Gren, 1995) People using the sites could see and hear others at distance EDNET sites. There were, of course, other methods of distance education in use in the state, but EDNET was using the two-way video and audio delivery method made possible by the fiber optic network which includes

locations from St. George and Cedar City in the south, to Logan in the northern portion of the state. The following described the Utah EDNET system:

*EDNET, a Utah Education Network service, is an interactive video, audio, and data network that offers a full menu of educational services for both higher and public education. These services include degree programs, for-credit courses, inservice training and development, library resources, and databases. The EDNET system is made up of specially equipped studios and classrooms throughout Utah (Hollands, 1995, p. 5).*

The closed-circuit microwave television system that connected cities throughout the state of Utah began operation in 1987 as the Utah Education Network. The Utah system has shown great versatility of use. It has been used for a number of activities including teleconferencing of important meetings in the state.

### Verbal Communication

The analysis of teacher to student communication interaction, involves verbal communication, or the spoken word. Verbal communication is thus defined as any audible message using a verbal code that the receiver receives and understands from the sender. A number of methods have been devised to monitor and study verbal interaction between student and teacher. Interaction in the classroom has been studied by education researchers such as Amidon and Flanders (1967). Amidon and Flanders studied teacher talk and student verbal behavior as part of their interaction analysis. Feedback is a large part of the teacher's analysis of his/her behavior in the classroom. Within the context of

verbal communication, feedback is a necessary part of the loop if communication is to take place. Feedback defined, in its pure form, is the sender's ability to determine that the message was understood as intended, by the intended receiver.

### Nonverbal Communication

Nonverbal messages are those transmitted without the use of words. These nonverbal signals are sent by body movements, facial expressions including eye contact and eye gaze, vocal tone and paralanguage. Clothing and accessories worn by the instructor and props are also used to convey nonverbal messages. Proxemics, the study of the use of space is also nonverbal and directly relates to instruction by interactive video. Nonverbal is becoming more and more recognized in communication studies as carrying much of the content from sender to receiver and this applies to the classroom in all its forms. Amidon studied nonverbal classroom behavior and the impact it has on students and the reception of the intended message in class settings. (Amidon, 1971)

### Communication Feedback

Another variable of concern to faculty in using interactive video is feedback. As previously discussed, immediate feedback to the instructor is delivered through the new technology and the process becomes a simultaneous sharing event as in the traditional classroom. The barriers instructors were faced with in distance education included the difficulty of feedback and interaction with the various classrooms or multiple classrooms receiving distance education instruction. Distance educators had also relied on delayed feedback messages through other means such as mail, E-mail, or FAX and they still do.

Feedback, relied on heavily in the traditional classroom, has been more difficult to obtain using technology methods because of the nature of the interactive classroom setting.

### Technology and Interactive Video Instruction

A moderating variable which will affect the communication process between the instructor and learner in interactive video instruction was the technology itself. The unique characteristics of the interactive technology have forced it into the equation. The use of the technology will continue to affect the verbal and nonverbal methods used by the instructors, as well as the instructors overall effectiveness. The failure of technology can affect the delivery of messages and the ability to interact with students. Learning to work effectively with the technology was considered a must if the instructor is to be able to focus on teaching the student without having to worry about the technology.

### **Methodology**

The survey population in this study was the faculty at Utah's nine public institutions of higher education. The 635 faculty receiving surveys were selected randomly from the approximate 3700 current professors in the Utah system. Random selection of participants meant that among the respondents were instructors new to distance teaching, those with very little knowledge or experience and those who had already participated in distance teaching. Those who had taught distance courses were identified.

The nine institutions of public higher education in the state were: The University of Utah, and Utah State University, the state's two research universities; Southern Utah and Weber State Universities, the state's comprehensive four year institutions; and the state's



two-year community colleges. This group included the College of Eastern Utah, Dixie, Salt Lake Community College, Snow College and Utah Valley State College. Utah Valley State College in Provo was developing several four year programs but continued to focus on the associate degree.

Participants were chosen from the most current faculty lists published by the individual schools. Using a proportional cluster sample, the survey was sent to approximately 200 faculty members in each of three divisions: the two research universities; the two comprehensive four-year schools; and the five community colleges. This yielded a possible pool of 600 total responses from the faculty population estimated at 3700. Of the 635 surveys mailed to the faculty throughout the state, 421 surveys were returned and were useable for data analysis, a return percentage of over sixty-six percent.

Each participant was asked to identify his/her gender, academic area, academic rank, age bracket, tenure, distance teaching experience if any, and to rank preferred faculty duties. Frequency tabulations were used to compile responses from the survey group. The attitudes of the subgroups were analyzed and the groups compared. Likert scales were used in several categories of questions. There were also three questions designed to allow the respondents to openly respond. A content analysis of the open ended responses was provided in the analysis chapter. For a more complete explanation of the methodology see Chapter 3.

### **Data Collection**

The survey was mailed directly to the faculty selected to participate from the faculty

lists of each public college and university in the state. The survey was sent during October and an October 27<sup>th</sup> deadline was included in the letter of transmittal. The total of surveys sent was 635 and a breakdown of how many were sent to each campus is included in the methodology chapter. The first mailing yielded 336 returns. A follow-up mailing sent beginning on the 12<sup>th</sup> of November brought the total to 421 useable surveys, which increased the statistical strength of the survey results. The selected faculty included department chairs, deans, full-professors, associate and assistant professors, those who are tenured, on a tenure track or working as lecturers/instructors. Attitude comparisons between the different ranks of the faculty were made using the data collected from the returned surveys. At the junior college level, tenure was not always an issue.

Group comparisons were made between the three groups of institutions and demographic comparisons were made using the responses from the faculty.

### **Conceptual Rational**

With the directive to Utah's institutions of higher learning from the Governor and the board of regents, it was clear that distance education with the various technologies would continue to be used to educate many of Utah's students. A number of general education courses taken in the first several years of college were being offered through distance education technology.

With the directive to seek means to educate students through distance learning technology, the Utah State Board of Regents has recognized the need to study the effectiveness of distance learning. The technology document, discussed earlier, posed

questions the board needed answers to. However, these questions don't focus on the instructor and his or her attitudes toward distance education and the ability to interact with the students using interactive video and audio technology.

This survey focused on faculty attitudes which are crucial to innovation or change in the state and the movement by higher education leaders to use distance education to increase student access to university courses through technology. The faculty has been called on to adjust to the increasing use of distance education in various forms. The attitudes of faculty were important to this change to the use of an alternative form of education delivery.

Those who teach using the EDNET system will need to be willing to adjust to the use of technological methods and to focus on appropriate interaction with the classes they teach in the various distance education classrooms including the interactive video distance classroom. The survey data indicated that the new technology offered enough improvement to increase the positive feelings that faculty have for distance teaching through the use of interactive video technology. Clark (1992) found that interactive video methods were likely to increase faculty acceptance of distance education:

video media, which may be considered the closest in their attributes to the face-to-face classroom experience, are likely to be considered more readily for adoption by most higher education faculty than methods such as audioconferencing and correspondence study, with receptivity to computer-based DE teaching methods such as computer conferencing and audiographics falling somewhere in-between. The preference for immediate interactivity of many university faculty respondents

may help explain moderately negative attitudes toward correspondence study in the present study, but the finding that audioconferencing was the least liked media and the support of two-year faculty for telecourses suggests that having a visual component to learning was more important to many respondents than interactivity (p. 145).

The video methods of distance education delivery were those preferred and found most effective by the Utah faculty that responded to the survey.

### **Significance of the Study**

Knowledge of faculty attitudes is crucial with the importance being placed on distance teaching by the current political administration in the state. Distance education methods were varied, but teaching in the interactive video format eliminated some of the negative attitudes of faculty regarding distance education. Everyone teaching on the collegiate level in Utah won't be involved, but as changes occur more and more will be involved. The argument that education can be best offered only in the traditional classroom was still strong, but it varied among faculty and from group to group. Clark's study indicated that most faculty were favorable concerning distance education for college-credit courses nationwide, as did this study in the state of Utah. (1992)

Discussing the use of interactive video instruction in distance education, Pucel, (1995) a teacher who has worked with interactive video, wrote that "teaching on interactive television is not for everyone. Just as not all people are cut out to be teachers, not every teacher can teach using two-way television" (p. 52). She said that teachers can't just

expect to begin teaching interactive television courses the way they do in the traditional classroom. Pucel has outlined several methods that teachers needed to address to be successful in interactive video teaching. Several of her ideas supported the need for this survey of Utah faculty. Pucel said that future improvements in distance teaching, using interactive video, must focus on the teacher being flexible, being interactive and being seen and heard. Adjustments will be necessary as faculty learn to operate in the distance education classroom. (p. 52)

This study contributed to the knowledge needed in higher education to improve and expand the innovation of distance education instruction in higher education. While there were many faculty that resist change, there were those who recognized the need for educators to offer learning not only in the traditional classroom, but in new interactive distance education classrooms.

As Kanter advised "individuals who will succeed and flourish will also be masters of change: adept at reorienting their own and others' directions in untried directions to bring about higher levels of achievement" (1993, p. 65). In Utah, as in other states, distance education has been the only alternative for many non-traditional students who can't come to the university physically to have the opportunity to complete their education. This access to education issue was found to be the most agreed upon reason Utah faculty said distance education was necessary.

### **Delimitations of the Study**

Clark (1992) commented that "Many of the studies on faculty attitudes toward college-

credit distance education or related topics found in the literature are not generalizable, because they are based on research conducted at no more than a few institutions of higher education" (p. 6). The results of this survey are not applicable outside of the state of Utah since these attitudes reflected only the attitudes of faculty members in Utah. However, using this instrument or a similar instrument, with necessary adaptations, similar results could be expected among higher education faculty of other states. These results are valid in the state of Utah because of the random sample and the percentage of survey participants responding.

## CHAPTER 2

### Review of the Literature

#### Introduction

The purpose of this chapter is twofold. First the conceptual base was discussed concerning change as it related to the faculty. Secondly, the review the of literature was presented regarding distance education and faculty attitudes toward distance education.

#### Conceptual Base: Change as it Relates to the Faculty.

Distance education today presents new technological methods that make it necessary for faculty to adapt teaching techniques in order to use alternative instructional methods. Faculty attitudes toward this alternative instructional approach will be important to distance education and the gradual acceptance of this innovation will be an interesting process. Alreck and Settle (1985) have written that attitudes, or "relatively durable, psychological predispositions" contained three main components. The three were knowledge or "cognition," feelings, and tendencies toward action or "conation" (p. 404). Knowledge deals with the cognitive understanding or belief concerning "an object, person, place, idea or symbol." Attitudes based on values, generated by knowledge concerning an idea, construct the "feeling component" (Clark 1992, p. 9). Action was the result of embracing an innovation, based on knowledge and feeling, which then could result in

change from previous patterns of behavior. Rogers (1995) called innovation, “an idea, practice, or object that is perceived as new by an individual or other unit of adoption” (p. 11). He named five characteristics that seem to allow for adoption of an innovation. Taken from Moskal, Martin and Foshee (1997) these characteristics were listed as: (1) “high relative advantage over previous practices” as the adopting group must see the innovation as superior to current procedure or use; (2) “compatible with the values, past experiences, and needs” of the organization or institution; (3) an innovation that had “trialability” or an opportunity for the adopters to test it in practice; and (4) a view of the success of the innovation that was “visible” by groups other than the adopters. (p. 7)

Havelock (1979) cited Rogers five stage adoption model as part of a “social interaction perspective.” Havelock called the steps: (1) Awareness, (the individual is aware of the innovation, but is not yet motivated to seek further information); (2) Interest (a step which involves “information-seeking about the innovation”); (3) Evaluation (the actual decision to incorporate the new idea); (4) Trial (in this step, the new user applies “the new idea in the individual’s own situation and determine its usefulness for possible complete adoption); (5) Adoption, (the final step, defined by Rogers as “continued use of the innovation in the future” (pp. 10-32 and 10-33).

Hersey and Blanchard (1977) discussed the difficulty of embracing an innovation and accepting change. “Changes in knowledge are the easiest to make, followed by changes in attitudes. Attitude structures differ from knowledge structures in that they are emotionally charged in a positive or a negative way. Changes in behavior are significantly more difficult” to make (p. 2).



Duning (1993) addressed the unwillingness of leaders in higher education to introduce change. She wrote that administrators appeared uninterested in adjusting or changing their approach. Focusing on videoconferencing and teleconferencing, Duning contended that, although changes were coming very rapidly in the field of distance education, institutions of higher learning were not the initiators of the use of video methods in distance education. Dillon (1989) commented that "Instructional telecommunications require changes in the practices and attitudes of faculty in an environment that is still suspicious of and threatened by the nontraditional. Only the system which effectively rewards it will succeed at change" (p. 35). Malinconico (1983) determined that participation in planning and implementing a change related directly to the acceptance of the change by those involved.

It might be possible to predict attitudes toward an innovation based on assessing the knowledge level and the attitude toward the innovation the group or community holds. Although, Henerson, Morris & Fitz-Gibbon (1987) indicated that it is difficult to measure attitudes. They wrote that "the task of measuring attitudes is not a simple one...attitude change is very difficult to judge" (p. 11). They suggested that attitudes were based on the knowledge or information toward a concept that individuals in a group have. By seeking attitude information through survey research, the knowledge and feelings of a group toward an innovation allowed a researcher to at least make some predictions about future attitudes and behavior toward an innovation, in this case distance education and the use of new distance methods of delivering education (1987). One area of difficulty in introducing innovation in the university was and is faculty isolation; the universal protection of faculty

members to teach and administer their classes the way they desire. Moskal, Martin, & Foshee (1997) stressed the need to show advantages of distance education as an innovation to educators. "Institutions encouraging the adoption of an innovation such as technology-based distance education need to be able to demonstrate the relative advantage of the innovation; its compatibility with existing values, past experiences, needs, and attitudes; and its ease of use" (p. 7).

The study of change in educational organizations seems to have begun with Paul Mort's studies of the dissemination process in Pennsylvania schools well over 50 years ago. Mort and Cornell (1941) focused on the natural diffusion of an innovation, documenting, for one thing, the time frame of change. Mort determined that it "took fifty years for a newly invented educational practice to be generally diffused and accepted in schools throughout the country" (Owens, 1995, p. 209). This study of natural diffusion included attempts to identify variables at work in the educational process such as personal, social, organizational, political, economic and socio-cultural that either helped or impeded the process of change.

Early attempts at change followed empirical, rational views of the change process which included the agricultural model (the county agency) that was found to disseminate information rapidly through the American farm system. The research and development model was used by educators and those studying it and was included in the "major federal initiative" to change schools in the "War on poverty" --the Elementary and Secondary Education Act of 1965. (Owens 1995, p. 212)

A power-coercive strategy was at the heart of federal programs. Those needing funding either changed or the money wasn't allocated. Those holding power controlled change. (Owens pp. 216-17) Reeducative strategies surfaced because of what those studying educational change considered the limited success of the rational model of change. Reeducative strategies have included teacher empowerment in education settings.

Owens looked at innovation in regard to social change. "One of the dominant concepts related to change that has emerged in the twentieth century was that of planned, controlled and directed social change. Today, it is universally believed that "societies need not be confined to adaptive reaction to changing values and events as they unfold, but that they can consciously direct the forces of change to suit predetermined goals and social values" (1995, p. 206). According to Owens, a strong and vibrant society will rely on a well-developed and strong educational system to support the social structure. (p. 206)

"Early in the century, prevailing views emphasized social change as flowing from economic and technological transformations" (Owens, 1995, p. 206). Since the 1950's, change process research has centered on the importance of social and cultural values in effecting change. In the second half of the twentieth century, education has come to be viewed as a key to equality and equity in society. Educational organizations were expected not only to lead social change, they were expected to transmit traditional values to younger members of society and to prepare them to deal with a changing world. Owens (1995) discussed strategy for innovation and change in organizations under the umbrella of Organizational Development. He called it a part of the normative-reeducative strategy for change in organizations mostly directed at enhancing its overall performance. (p. 222)

For Organizational Development to lead to renewal, as in the acceptance of the faculty toward distance education, there were characteristics that needed to be in place in the organization. Owens stated that these two characteristics were a culture that supported adaptability and responsiveness to change and secondly that the organization must possess clear cut, explicit, and well-known procedures through which participants could engage in the orderly processes of systematic, collaborative problem solving. (p. 222) One problem higher education today has been facing is reaching more nontraditional students and doing it effectively. Distance education was seen by many as a solution to this problem, while not replacing instruction for those who can come to campus for traditional classes.

When focusing on innovation in organizations themselves, Griffiths (1964) questioned “the ability of organizations to effect significant change on their own.” He said that, “since the tendency of organizations is to maintain a steady state, the major impetus for change comes from outside rather than inside an organization. Since organizations are open systems, they have a self-regulating characteristic which causes them to revert to the original state following a minor change made to meet demands of the supra-system” (p. 431).

Clark (1992) cited Paul (1977) and Ging (1986) in presenting “four models or primary cases of innovation: (1) the problem-solving model; (2) the research-development-diffusion (dissemination) model; (3) the social-interaction (communication) model; and the linkage model” (p. 10) some of which have been previously addressed. Chin (1967) outlined three main approaches of effecting “planned and managed organizational change” that have been discussed namely: (1) Empirical-rational strategies; (2) power-coercive

strategies; and (3) normative-reeducative strategies. Pelz & Munson (1982) cited in Clark (1992) described the problem-solving model, as one that “focuses on the adopter of an innovation, as it involves a search for solutions to problems diagnosed by the potential user, who then undertakes trial implementation and decides to adopt or reject the innovation in question” (p. 10).

The research-development-dissemination model centered on those who develop and spread innovations. Cited in Clark, Ging (1986) described this model as “inventor-driven” (p. 25). Clark wrote that “proponents” of this model “assume that there is a rational sequence of invention and diffusion, from basic through applied research and then through adoption and implementation” (1992, p. 10). Change was thus embraced by change agents who recognized the value in the innovation and have moved to adopt the change. “The improvement of educational practice through dissemination of new products and methods to a wide audience has been a central goal for many advocates of this model” (p. 10-11). Clark and Guba, (1965) and Havelock (1979) have discussed the same concepts. Clark and Guba outlined the four areas involved in this perspective as “research, development, diffusion and adoption” (p. 100). They called this the R&D Model, although they stated that the linear, sequential pattern of the model does not mean that change in a real setting works in a linear, sequential fashion. This provided a way to proceed with the introduction and implementation of an innovation in an organized and planned fashion.

The social interaction or communication model centers on the innovator, “the user of the innovation” (Clark p. 11) and is first discussed by Rogers (1962) and Rogers &

Shoemaker (1971) and Rogers (1983). These studies looked at how diffusion occurred and its nature as it related to adoption of an innovation.

Clark's discussion of the linkage model as a combination of the other three was drawn from Havelock (1979), Lindquist, (1974) Ging, (1986) and Waugh and Punch (1987). Waugh and Punch drew on all three models in describing a linkage model from problem statements (the problem solving model) to concepts that address the problem (the RDD model) and on to the relationship of "creators/distributors" of an innovation "and the potential users of the innovation" illustrating the social-interaction or communication model (p. 11). Clark (1992) also discussed methodological concerns and innovation models in the work of Ging (1986), Downs and Mohr (1976) and Damanpour (1988). Damanpour discovered "considerable agreement in the research literature on innovation process when studies were grouped on the basis of innovation type, innovation radicalness, and stages of adoption" (Clark, p. 12). Berman and McLaughlin (1975) cited in Clark, felt that "implementation of change is in the hands of the 'targets' of the change and not the hands of those seeking the change. Consequently, "the innovation will go through stages of adaptation as well as adoption and will lose fidelity to the progenitor while gaining support with users" (1992, p. 12). Katz and Kahn (1966) concerned themselves with the idea of the need to distinguish between "organizational level" and "individual level" targets in the change process. In addressing change processes, Katz and Kahn believed in changing the organization and the individual at the same time and stressed providing a focus for the individual within the organizational system.

In an interesting study of teacher education at a distance in Zimbabwe, Zvacek (1989) cited in Clark (1992) combined the four aspects of adoption and diffusion found in Rogers discussion “with four fundamental questions asked in curriculum development and three models from systems theory to create what she termed the Triad Perspective Model of Distance Education.” (p. 12). Zvacek took the three models and developed a model with “four horizontal levels,” to study “teacher education at a distance in Zimbabwe” (p.12). Clark drew on this model in the conceptual view of his 1992 national faculty attitudes study.

#### Organizational Development and Distance Education

Organizational Development (OD) is the principal process for increasing the self-renewal capability of organizations. According to Owens (1991) OD “is defined in many ways because it is difficult to capture the full essence of such a complex approach to improving organizational performance” (p. 222). The problem with many OD efforts has been that they don't work to the completion of the desired change in many cases and have fallen short of the change goals sought for by the organization. Dillon and Walsh (1992) have written that distance education implied “nothing less than a massive restructuring of the organization of education. The needs of a learning society require that our educational system transfer the ownership of learning from the hands of educators to the hands of learners” (p.18). Wagner (1995) agreed with Dillon and Walsh concerning distance education and organizational change. “Regardless of the reasons for getting involved in

distance education enterprises, using telecommunications to deliver interactive instruction inevitably serves as a catalyst for organizational change" (p. 18).

Beckhard (1969) defined OD as a planned change effort, that involved a total system, managed from the top (the top must have commitment to change) to increase organization effectiveness and health. Beckhard named ten areas that identified a healthy and effective organization including "communication that goes laterally and vertically, where feedback is present and the organization sees itself interacting with the larger environment and an organization that achieves its goals through planned interventions using behavioral-science knowledge" (p. 9-13). Schein (1965) regarded a successful organization as one "that can effectively adapt and cope with the changes in its environment" which was called the "adaptive coping cycle." Bennis, (1969) characterized OD as "a response to change, a complex educational strategy intended to change the beliefs, attitudes, values, and structure of organizations so that they can better adapt to new technologies, markets and challenges" (p, 2).

These descriptions of OD, but especially Bennis' description, summarized the feeling of Utah leaders as the state continued to incorporate distance education as an alternative method of reaching students in rural areas and at the same time employing cost saving measures.

Bennis further described OD as: (1) An educational strategy employed to implement "a planned organizational change;" (2) A strategy that was closely allied with changes the organization was seeking in regard to the desired change; (3) A strategy which relied on experienced behavior; (4) A strategy involved in using change agents generally external to



the current system (Bennis called this a controversial issue); (5) A collaborative relationship between change agent and members of the current “client” system; (6) A concept that involved change agents sharing, “a set of values about the world in general and human organizations in particular “which shape their strategies, determine their interventions, and largely govern their responses to client systems;” (7) A process that included “a set of normative goals,” shared by the change agents and based “on their philosophy.” These “key normative goals” were:

- (a) Improvement in interpersonal competence;
- (b) A shift in values so that human factors and feelings come to be considered legitimate.
- (c) Development of increased understanding between and with working groups in order to reduce tension.
- (d) Development of more effective team management;
- (e) Development of better methods of conflict resolution. More open methods of conflict resolution are sought than suppression, compromise and power;
- (f) Development of organic rather than mechanical systems (Bennis, pp. 10-16).

Schmuck and Runkel (1985) identified four designs of OD. They were: (1) Training (2) Survey data-feedback (3) Constructive confrontation (4) Process observation and feedback. The change agent must react in different ways in each of the four design settings. In training, for example, the change agent or facilitator trained group members in skills and procedures which the organization wanted to improve helping it fit better in its surrounding environment. (pp. 24-25)

### A Sociotechnical View of Organizational Development

To achieve effective organizational behavior, structure, orderly procedures and control must remain in place. Owens (1995) wrote, "What is sought, administratively, is a new and more functional basis for task analysis, structural arrangements, selection and use of technology, and selection and professional development of individual people and groups of people on the staff" (p. 230). This is a "sociotechnical orientation," according to Owens, and the combination of the social and the technical are stressed "when we acknowledge that technological change and innovation are likely to play an increasingly important role in organizational change" at the university level. Owens emphasized that the main purpose of the systems leaders "is to develop organizational structures that... assure the development of more adaptive ways of integrating people, technology, task and structure in a dynamic, problem-solving fashion" (p. 230).

Many Utah faculty were willing to teach distance education courses, but leaders must remember that incentives need to be based on sound educational goals and the centrality of the faculty cannot be overlooked. This assumed more than just training faculty, the faculty must have ownership in the implementation of distance education in the state. This will be more difficult to accomplish, not only in Utah but in other areas as well.

### Force Field Analysis and Organizational Change

Force field analysis was another concept of organizational change that related to adopting new innovations. Force field analysis was created by Kurt Lewin (Owens, 1995). Owens and Steinhoff (1976) provided a discussion of force-field analysis and its role in

organizational change. They indicated that force field analysis has proven useful in school systems. In force field analysis, the status-quo was represented by the organizational system in equilibrium. While this equilibrium was present in the organization, there were forces trying to disturb it; forces advocating change and other restraining forces attempting to keep the organization unchanged. Lewin, according to Owens, developed a fundamental three-step change strategy. It was based on the idea "that in order to effect organizational change, it is first necessary to break the equilibrium of the force field" (it must be unfrozen). (Owens, 1995, p. 231). With that accomplished, change could be introduced. As Owens has discussed, "no one knows better than educational administrators how fragile change can be, and how easily the organization can slip back into its old ways" (p. 231). Owens named step three "refreezing."

This is an institutionalizing process that serves to protect and insure the long-range retention of the change. Of course, refreezing smacks of a new status-quo; in Lewin's view, the desired amount of flexibility could be built in by establishing 'an organizational set up which is equivalent to a stable circular causal process.' Unfreezing can be a highly traumatic experience to a very rigid and resisting organization.' It can also create 'greater organizational flexibility over time' (pp 231-32).

The resisting forces, once identified, should be openly discussed. In order for organizations to achieve the involvement necessary for change to result, the culture of the organization must possess "growth-enhancing" characteristics and a culture that: (a) is intellectually, politically, and aesthetically stimulating; (b) emphasizes individual and group

achievement; (c) places high value on the personal dignity of individuals; (d) accepts divergent feelings and views in a nonjudgmental way; (e) is oriented to problem solving rather than to winning or losing in intra-organizational skirmishes” (Owens, 1995, p. 233).

It was evident from this discussion that faculty must be thoroughly involved in the process of change if distance education as an alternative method was to become stronger and more viable at the university level.

### Change Process in Education

Studies from 1975 have added to what is known about change in schools and school systems. Fullan, (1982) described change as “a process, not an event.” The event occurs over time and involves a number of people who view change differently and have different interpretations of change (p. 23). Wise (1977) wrote that successful change processes provide time for fits and starts and safe havens for those attempting to implement new ideas. Innovation perceived by adopters is distinctly different from current practice, and was viewed as more likely to persist if (a) it fit the organization's culture and (b) enough time was provided during the complex implementation period. (Crandall, Eiseman, & Louis, 1986)

Fullan & Stiegelbauer, (1991) also contended that “educational change is technically simple and socially complex” (p. 65). The implementation process involved the characteristics of the change itself (needs, clarity, complexity, practicality), local characteristics, and such external factors as the government and other agencies” (p. 68).

Fullan & Stiegelbauer added that "In relatively stable or continuous communities there is a tendency for innovations favoring the least advantaged not to be proposed (the bias of neglect) and there is a likelihood that educators can introduce innovations (which they believe in) unbeknownst to the community" (p. 58).

Clark, Lotto & Astuto, (1984) wrote that change can be accomplished by "ordinary schools" and "school systems" and this can be done despite the fact that change is complex (pp. 59-64).

## **Literature Review**

### **Distance Education: Definition**

Distance education has been recently defined as "any form of teaching and learning in which teacher and learner are not in the same place at the same time, with information technology their likely connector" (Gilbert, 1995, p. 3). Previous to the development of interactive television which allows for two-way communication between teacher and student, distance education was defined as separation of the instructor and the learner by space and time. Moore (1993) has written that "the first attempt in English to define distance education and to articulate a theory appeared in 1972" and he indicated that the theory was eventually referred to as "transactional distance" (p. 22). Moore continued by stating that distance education "is not simply a geographic separation of learners and teachers, but, more importantly, is a pedagogical concept. It is a concept describing the universe of teacher-learner relationships that exist when learners and instructors are separated by space and/or by time" (p. 22).

Verduin and Clark (1991) offered this definition which accounted for the impact of technological communication methods on distance education by bringing student and teacher together in time. The four steps were: “(1) The separation of teacher and learner during at least a majority of the instructional process; (2) The influence of an educational organization, including the provision of student evaluation; (3) The use of educational media to unite teacher and learner and carry course content; (4) The provision of two-way communication between teacher, tutor, or educational agency and learner” (p. 11).

Barker, Frisbie and Patrick (1993) have written about the differing definitions of distance education. Barker et al. quoted Beaudoin (1986), Keegan (1986) and Moore (1987) concerning the variance in DE definitions. They indicated that correspondent study is linked less and less with DE. “The term distance education is being used more frequently by educators and legislative policy makers around the country. In most cases, reference is intended to mean the simultaneous telecommunicated delivery of instruction from a host site or classroom to distant sites, coupled with live audio and/or video instruction between teacher and student(s)-not to correspondence study” (1993, p. 39). In telecommunication settings, Barker, Frisbie and Patrick indicated that the learning and teaching can occur simultaneously for student and teacher and the exchange of information does occur in real time.

The definition of distance education has changed with the coming of the new telecommunications technologies. With these changes, the attention of higher education administrators is being drawn to distance education. Some changes are necessary at the

university level because of "declining enrolments, [sic] and aging student population and reduced levels of state funding" (Barker, Frisbie & Patrick, 1993, p. 39).

Distance education literature contained many definitions which were partially out-dated when viewed in terms of telecommunications technologies now in use. Definitions that included a physical separation of the instructor and pupil, a separation in time of the two, and independent learning without contact with an instructor or other students were valid in some applications of distance education, but the separation of place and time has changed with the technology now available. (1993, p. 39) Although separation is still an issue in video interactive distance classrooms, the ability to see and react to one another is a reality in distance education two-way video and audio applications. Garrison and Shale outlined a definition which applied more to the education application than to the distance education method itself. " (1) Distance education implies that the majority of educational communication between (among) teachers and student(s) occurs noncontiguously. (2) Distance education must involve two-way communication between (among) teacher and student(s) for the purpose of facilitating and supporting the educational process. (3) Distance education uses technology to mediate the necessary two-way communication" (1987, p. 11)

In Iowa, Simonson and Schlosser (1995) discussed a new definition which related to those concerned with interactive television methods. "Distance education implies formal, institutionally based educational activities where the teacher and learner are normally separated from each other in location but not normally separated in time, and where two-way interactive telecommunication systems are used for the sharing of video, data and

voice instruction” (p. 13). The focus has been on attempting to offer the distance learner the same educational experience as the traditional in-class learner with both exhibiting similar outcomes. “Separation of the student and the teacher is a fundamental characteristic of distance education. Increasingly, educators are trying to use technology to increase the access of the distant learner to the local classroom, and to make the experience of the remote student comparable to the experience of the local learner” (p. 13). According to Simonson & Schlosser, the Iowa distance education program was founded “on the belief that live, two-way interaction is fundamental to effective learning” (1995, p. 13).

Distance education has existed in the United States as part of the continuing education programs of American universities. Verduin and Clark (1991) said that much of the distance education familiar in the United States aimed at adult learners. They discussed time and place as important choices offered to adults who cannot take classes at the times they are offered or in the location where they are offered. This is a major appeal of distance education. In addition Verduin and Clark indicated that distance education “requires certain traits that are more typical of adult than of pre-adult learners” (p. 5)<sup>1</sup>. Holmberg discussed the issue of adult education and cites the creation of distance education in correspondence study as “a means of providing adult education, based on belief in education for its own sake and also for improving social status” (1989, p. 17). He

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Consult Verduin and Clark (1991) for a complete historical overview of distance education traced as far back as 1728. Isaac Pittman taught shorthand by correspondence as early as 1840 in Bath, England.



cited the opportunity for adults to educate themselves when the opportunity had been denied in earlier years.

Willis, (1993) provided a valuable guidebook which summarized the roots of distance education, research in distance learning, and what factors have impacted on distance learning. He discussed the planning and implementation of a distance education program and named the key players and their roles in the program. He also offered a look at the future of distance education. Willis defined distance education as a process in which the student and the teacher "are separated by physical distance, and technology (i.e., voice, video, data, and print) is used to bridge the instructional gap" (p. 4). He indicated that the technology being used needs to be in the background so that the interaction between learner and instructor may take place naturally.

Willis discussed the difficulty of using technology in the classroom. Many instructors have had the impression that the message was not getting through because of the lack of face-to-face contact. "Distant teachers have few, if any, visual cues. Even the visual cues that do exist are filtered through technological devices" (1993, p. 7). This was difficult for the instructor because "teacher-class conversation can feel contrived when spontaneity is altered by technical requirements and distance" (p. 7).

The survey of Utah faculty in higher education gathered information concerning instructors attitudes on the importance of feedback, especially nonverbally, and interaction with class members located at a distance. The importance of interaction, feedback and nonverbal communication to instructors in the traditional classroom was an important point of information. Interaction through two-way video instruction has allowed

instructors better feedback nonverbally and this should improve as faculty are trained as suggested by Willis. (1993)

Azarsma (1993) traced the history of telecommunications. Azarsma reviewed many of the distance education applications from correspondence to teleconferencing used in business and education and in other applications and indicated that “teleconferencing has been applied to business, education, medicine, news, military, NASA, agriculture, art and state and federal government” (p. 141). Azarsma defined distance education as “a situation where the learner and the educator use telecommunications or electronic devices (cable, satellite, fiber optics, broadcast, video, and computer technology) to interactively follow part or all of a course program” (p. 168). He predicted the continuing evolution of distance education. Azarsma also discussed the cost effectiveness of video conferencing and the use of multiple sites. He traced the satellite industry from its beginning in 1962 with the launch of Telstar 1 to what was projected to be a \$3.7 billion industry in 1990. “The new technology presents information in a more concrete fashion and provides students with more accurate verbal and visual facsimiles” (p. 151). Successful teleconferencing applications were reviewed in this text such as the University of Missouri’s Video Instructional Program which sent a telecourse throughout the nation via satellite. Azarsma wrote that those taking the telecourse felt that the ability to interact “made the course more productive” (p. 151).<sup>2</sup>

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Azarsma provides a detailed list of national distance education projects in this work on pages 171 through 175.

### Research of Faculty Attitudes in Distance Education

Research related to faculty attitudes in distance education was limited. Most distance education research literature has centered on methods and learning from the students perspective. Cookson (1989) reviewing research in distance education listed a number of research areas. He identified two main categories of empirical studies "specific distance education methods and student outcomes." Dillon and Walsh (1992) also indicated that most of the research centered on the learner. In fact, most of the research, according to Dillon and Walsh, has examined "learning outcomes, learner characteristics, and learner attitudes" (p. 5). They made it clear that the faculty "has been largely neglected by the research," even though much of the research did discuss the central role to be played by faculty, their part in distance education has been bypassed. They examined 225 articles and discovered that just "twenty-four research studies relating to the faculty have been conducted" (p. 15).

Grossman has presented information about faculty training for distance education and connected attitudes which relegate distance education to less than first-class status, "to the fact that distance educators fail to understand the traditional academic culture that prevails in all institutions of higher education." Dillon and Walsh indicated further that the literature "defines faculty development in distance education as training" (p. 18). Bergquist and Phillips (1975), quoted by Dillon and Walsh, noted that "the literature generally fails to view faculty development within the framework of a system which supports both professional development (i.e., faculty growth) and the organizational

development (i.e., improving the institutional environment for teaching and decision making) in which professional development must occur" (p. 18).

A director of instructional communications systems at the University of Wisconsin-Extension in Madison, Marcia Baird stressed the importance of training faculty in distance education teaching skills. She wrote that, "there is tremendous challenge to anticipate and support the needs of instructors who deliver programs at a distance" (p. 24). She indicated that in many reports concerning distance education instructor development needed to be emphasized. Baird suggested that seminars and workshops could help train, as well as orient faculty in diverse departments concerning distance education, and that peer roundtables worked well to showcase technological availabilities when linking sites for roundtable discussions. (1995)

Rogers (1995) has discussed the importance of working with faculty and their distance education teaching methods. The Rochester Institute of Technology offered, "assistance and guidance in instructional technologies to give them more control over their distance teaching methods. She wrote that it is important for faculty to envision their role as "facilitators and mentors for learning" instead of regarding themselves as "information providers" (p. 8).

Clark (1992) in *Faculty Attitudes Toward Distance Education in United States Public Higher Education* found that "faculty attitudes toward distance education in the United States were rarely discussed in the higher education literature, and most related studies were concerned with the attitudes of the small percentage of college and university teachers participating in distance education activities" (p. 9).

### Clark's Faculty Attitude Findings

In a national faculty survey, Clark (1992) reported that faculty attitudes were slightly positive toward distance education as a general concept. The faculty indicated that they held slightly to moderately positive attitudes toward the development and distribution of distance education (DE) by educational consortia working with their institutions. The attitude was slightly positive toward DE use in higher education programs. But when asked about using DE in their own academic areas the faculty members were slightly to moderately negative toward using DE, and attitudes were more negative toward the use of DE in the faculties individual programs. (1992) The Utah faculty survey found that faculty were more positive toward DE's use in higher education program and majority were willing to teach a course that hadn't. See Chapter 4 for the complete analysis of the survey items.

Clark also discovered that two-year and comprehensive university faculty held a positive attitude toward DE as a general concept, while university research faculty were neutral. Assistant professors were significantly more positive in their attitudes toward DE than chairs at comprehensive universities, but at research universities, chairs were significantly more positive than assistant professors. Clark found that women at two-year institutions were significantly more positive than men, and Business faculty were more positive than faculty in Physical Science overall.

The Clark survey focused on U.S. public higher education institutions and divided the schools surveyed into three categories: research institutions; comprehensive public

institutions; and two-year institutions having more than an enrollment of 6,000. Using direct mail and campus representatives Clark had a 66 percent return as 317 of 480 of the faculty nationwide returned usable surveys.

He also found “that video media, which may be considered the closest in their attributes to the face-to-face classroom experience, are likely to be considered more readily for adoption by most higher education faculty” than other applications. These applications or methods included audioconferencing, and correspondence study. Clark also discovered that computer-conferencing and audiographics were more preferred than audioconferencing and correspondence methods. Faculty indicated “slightly positive attitudes toward videoconferencing and telecourse study, slightly negative attitudes toward two computer-based media (audiographics and computer-conferencing), and moderately negative attitudes toward correspondence study and audio-conferencing” (1992).

In the open response category Clark asked faculty, “Whether or not your institution makes significant use of distance education methods, should it be doing so?” Of those responding to this question, 64 percent said that their institution should be using DE, while 17.4 percent said it should not. In the current research, the question was posed as a forced choice question and the response was higher than reported by Clark. In Clark’s study, the open question, “Do you like the general concept of distance education? Why or why not?” Forty-five percent had reservations related to the quality of interaction between teachers and students. Eighty-one references were made about the quality of teacher-student interaction, most referring to the relative lack of direct face-to-face contact in

distance education. With this information, the current survey of Utah faculty addressed faculty attitudes toward communication interaction and feedback in the classroom and whether or not it can be replicated in the distance two-way video and audio classroom. Also in response to this question, 28% cited the benefits of increased access to higher education via DE. This and cost-effectiveness were the most commonly cited benefits of DE while negative faculty attitudes and budget concerns were among the most frequently discussed obstacles or barriers in response to this question.

Clark indicated that there were a number of studies looking at “U.S. higher education faculty attitudes toward instructional innovations” conducted over the 25 years preceding 1992. He also pointed out that a faculty attitude study toward distance education didn’t involve the review of studies centering on faculty attitudes “toward instructional innovation” (1992, p. 22). Clark reported that “no previous studies were found in the literature in which an attempt was made to determine overall U.S. college and university faculty attitudes toward the concept of distance education or the media and methods commonly used in its provision” (p. 26). Some of the studies relating to the faculty dealt with a few higher education institutions and not with a number of institutions as Clark’s study did.

Dillon (1989) studied faculty attitudes concerning telecourses taught at Oklahoma institutions of higher education broadcast over the Oklahoma Educational Television Authority in 1988. A 20-item questionnaire was given to 100 faculty involved in teaching telecourses and 82 responded from twelve colleges and universities in Oklahoma. Dillon found that 44 percent “felt the workload was equivalent to traditional teaching and 38

percent believed the work required for a telecourse was greater.” She conducted interviews with 38 of the faculty responding to the survey, and with five chief academic officers, and five telecourse coordinators at five different sites in Oklahoma. Dillon discovered that over 80% “indicated that they would volunteer to teach a telecourse again,” but only 42% “felt their colleagues perceived telecourse instruction as favorably as did the telecourse faculty themselves.” She also reported that those answering her survey, felt that the telecourse program influenced their universities in a positive way. The positive attitude centered on the feeling that telecourses increased enrollment and created additional opportunities for nontraditional students and also provided “alternative means of taking filled required courses.” Dillon concluded that faculty should be more involved development of and the operating of DE and that programs set up for faculty development include training surrounding the distance education classroom.(pp. 35-43)

Clark (1992) also reviewed a number of studies that looked at faculty attitudes. A survey conducted on 13 campuses of the technical college system in Minnesota attempted to focus on barriers that could prevent the use of distance education learning methods and technologies. Derr (1991) asked respondents to consider barriers that might have prevented faculty from accepting distance education as an alternative form of education. Derr surveyed 419 full time faculty at the schools in the Minnesota system and discovered that 75% of the respondents felt that they weren’t “very familiar with distance learning technologies” (Clark 1992, p. 27). Derr posited that the lack of knowledge concerning distance education created a barrier which prevented the development of distance education.



Bunting (1990) found that faculty who also reported using discussion group methods and media in classes were more likely to favor experimenting with educational technology. Lecturers were less convinced of the benefits of technology education. Of 285 respondents, 71% at 20 institutions of higher education belonging to the League for Innovation in the Community College, were familiar with general terms such as teleconferencing and interactive video, but not with more technical terms.

In a study involving Colorado State University and the University of Wyoming, Bankirer (1987) reported that eight out of 10 faculty at the two research universities felt that face-to-face teaching in the classroom was the most effective method of teaching. Bankirer in this stratified sample of 213 assistant, associate and full professors at these similar institutions both public land grant research universities, observed that CSU faculty were markedly more favorable to using media in teaching, including distance education than the faculty at Wyoming. CSU faculty indicated more experience in continuing education, extended studies and outreach teaching than Wyoming faculty, 41 to 29 percent. Apparently, higher exposure to the innovation of DE created a more favorable attitude. Bankirer also found that eight of 10 faculty responding felt that preparation for technology teaching was not well-enough rewarded. The 93 respondents strongly agreed (95% at CSU and 77% at Wyoming) that technology could “effectively extend the reach of the university” (Clark, 1992, p 27).

Lewis (1985) found, in a study of faculty attitudes toward educational technology, that higher education personnel used technology in teaching to be more effective as instructors and to better motivate students. He learned that the instructors used video to motivate

students and computer technology as a tool to increase teacher effectiveness. Video and computer use were more favored by the faculty than audio technology methods. Lewis gathered information from 10 focus groups with 81 faculty from two and four-year institutions and later other groups that consisted of 173 two and four-year higher education faculty from eight schools to learn about faculty attitudes toward the use of technology in the classroom. Lewis had the 173 respondents answer a questionnaire after seeing a videotape that demonstrated 12 possible applications of audio, video and computer technologies in higher education. Obstacles that surfaced in the study of Utah faculty concerning the use of DE in higher education were also reported by Lewis. Lewis listed potential obstacles that the faculty recognized which prevented more effective use of information technology in higher education. The most common barriers cited by Lewis were limited finances for software and hardware, inadequate rewards for the faculty and those of the faculty who weren't interested in the new video and audio distance education methods available.<sup>3</sup>

Gayeski (1989) discussed instructional technology methods that succeeded and failed from film to interactive video and teleconferencing from the 1950's to 1989. She quoted VanWyke (1976) who said that "with few exceptions instructional technology has failed to live up to expectations" (p. 9). Gayeski looked for patterns to indicate which methods of instruction had that potential to be successful. She pointed out that educational television,

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A complete chart of obstacles to more effective use of information technologies in higher education is found in Clark (1992) page 24. The obstacles from Lewis' study are listed with the percentage of faculty naming the obstacle or barrier.

thought to have great promise, failed to be a strong instructional media tool. Educational television which became public television, but never reached the educational and learning potential foreseen prior to the development of today's public television which has had number of successful programs. Gayeski cited Berkman (1976); Gordon (1976) and Shorenstein (1978) as those documenting educational television's overall failure as a direct teaching-learning tool. Some universities delivered complete broadcast degree programs on television..

Other failures discussed by Gayeski were: teaching machines, a technique of individual instruction; dial access, which offered students individual use of audio or videotapes through a wired network in campus buildings; Videotext, text and graphics sent over phone lines or broadcast on unused spectrum and; interactive cable.

Gayeski named video as the best example of a successful method of educational technology. Video was inexpensive and offered an easy to use format. Brush and Brush (1986) called the video format "a four billion dollar a year field" (1989). Gayeski had hope for what she termed questionable media methods such as teleconferencing, computer assisted instruction, interactive video, CD-Rom and AI (artificial intelligence).

In examining these technology approaches, Gayeski named barriers which obstructed or prevented the technologies from taking hold. Many of these were named by Utah faculty in written responses to the question concerning barriers which were at work in preventing the growth of distance education as an alternative method of instruction. Gayeski outlined these barriers beginning with technophobia, reaction to a new and unknown instructional method; reduction of contact between people, students and

instructors didn't enjoy learning in solitude; description of legal and economic status, social aspects of change that were resisted because they challenged systems or organized communities traditional way of doing things. (1989)

A study by E. Joyce Black looking at faculty attitudes in Canada found that "faculty support for distance education varies according to the views they hold about university education, its functions, and acceptable forms of instruction" (1992, p. 25). Black surveyed 487 faculty and had a 73% return rate. She wrote that the differences between faculty depended on their view of higher education. "Those who support distance education unconditionally subscribe to a mass system of higher education whereas those who are opposed think of university education in elite terms," (1992, p. 25). Wedemeyer (1981), as quoted by Black, made the point that "academic scepticism was due to elitism and unscientific reasoning." Black believed that society demanded access for education and that distance education composed one answer to the need for more available higher education. Black quoted Kirby, "On one hand the traditionalists often view distance education as the ultimate erosion of academic standards, whereas on the other hand distance education advocates see opposition to their cause as obstructionism and academic protectionism" (Kirby 1988, p. 115). Black also drew some of the same conclusions as Garrison and Shale (1990) that transaction between student and teacher was an extremely important feature of distance education.

Black also discussed that "distance education is often viewed as second-best to classroom, face-to-face instruction" (p. 7) as had Kirby in 1988. Black's study was similar to the findings of Johnson (1978) "that faculty perceptions about accessibility to university

education and educational quality create a value conflict for many faculty” (p. 8). Black also found that those responding “believed that dialogue and academic discourse are necessary features of education that must be assured in distance education in order to achieve quality” (1992). Black’s study also discovered that faculty believed that the missing immediate interaction was a problem with distance education. She also found that the separation of the instructor and student was a major item of concern for the faculty. This supported Garrison and Shale (1990) who determined that distance education must highlight exchanges or transactions between the instructor and the learner and the learner and other learners. Faculty were concerned that this is a very necessary part of the educational process.

Black like Verduin and Clark (1991) indicated that more familiarity with distance education and more knowledge of the methods of distance education would lead to more acceptance of distance education on the part of the faculty.

#### Faculty Attitudes and Interactive Video

Dillon and Walsh (1992) indicated that the discussion of strategies for video instruction, which included interactive video teaching, had only recently surfaced in the literature. Although distance education has been written about extensively, only recently has research focused on improving teaching methods in video instruction and the factors involved in this type of distance learning application. What made these new delivery methods so interesting was the possibility of immediate interaction between student and teacher in the full motion two-way video and audio format.

As faculty attitudes change to accept distance teaching as an alternative to traditional classroom instruction, the actual delivery of instruction would continue to be a challenge for faculty. Sebastian (1995) suggested that faculty, using television or related video technology in instruction, needed to focus on learning to use the technology so as "to personalize their instruction and actively involve students in the learning process" (pp. 39-40).

Wolcott (1993) identified factors or behaviors that were crucial to distance education. These factors were listed as developing detailed course syllabus, creating ways for distance students to interact, developing methods of providing feedback to remote site students, using good quality audio and visual materials, and becoming familiar with the technology used to deliver instruction at a distance. More attention to instructional design methods at higher education institutions has been the direct result.

A Utah study conducted by Egan, Sebastian, Welch, Page, Nkabinde, & Jones (1993) through interviews with television instructors, surveyed factors that the educators deemed important to "quality television instruction." These elements were identified by Sebastian (1995) as:

competent faculty skilled in their subject area and in presentational skills;  
meaningful interactions that occur between and among instructors, site facilitators and students; well organized and readily available support materials; effective collaboration between instructors, program planners and instructional designers; integration of multimedia into the distance program; and instruction that is

responsive to student learning needs and which results in student achievement (1995, p. 40).

Ellis (1993) wrote that "Instructional videoconferencing using two-way audio/full-motion video offers a potential high-growth vehicle for universities and colleges" (p. x). This type of technology has offered course work to a number of individuals covering a huge geographical area, and in turn has saved universities money. The technology of today has allowed universities to cater to students who are non-traditional and must work during regularly scheduled classtimes or have other responsibilities. Ellis' study examined factors related not only to technology but to the "sociological, and pedagogical concepts as important communication factors that influence the educational experience for 2-way videoconference participants" (p. x). Gunawardena (1988) surveyed institutions of higher education and found three basic divisions of delivery systems in use at the time. The three were: "noninteractive open-broadcast and cable systems (one-way delivery systems), and videocassette recordings." She predicted the use of these technologies for distance education in the future. Later Gunawardena (1990) identified four categories of video-based delivery methods: (1) Pre-produced television programs, (2) Televised instruction, (3) Interactive video (the combination of computer and video technologies) and (4) Videoconferencing, which involves full motion one-way or two-way video and two-way audio delivery. She discussed the need for developers to be aware of "the relationship that exists between the instructor, the student and the content" (p. 13).

Barker, Frisbie and Patrick wrote that the popularity of video interactive courses made it impossible to review all the programs involving full motion video applications (1993). In

the late '80's interactive video broadcasts using satellite delivery were offering credit courses to high school students in Arkansas, California, Oklahoma, Texas and Utah (1993).

Battaglino (1996) found misconceptions surrounding the use of interactive video especially as it related to videoconferencing. She indicated that many people seem to believe that "interactive video conferencing has been available...for many years; it is not cost effective nor exciting so it is not widely popular; and it is best employed by business people" (p. 73). She said that "the facts are opposite." Battaglino argued that until recently much of the world didn't have the technology to make videoconferencing possible, but when travel costs by those using the videoconferencing were considered, it proved to be cost effective.

Fyock (1994) studied a consortium of schools in South Central New York State which offered two-way interactive television advanced placement classes. Again the study looked at the perspective of the learner, and focused on the methods of instruction that students found effective as they received distance education. The students involved said the technology provided learning just as effectively as the traditional face-to-face classroom would have done.

Herman's (1994) research moved away from the learner focus and looked at techniques that made distance teaching effective. Herman interviewed and observed faculty and students to learn about actions and behaviors that developed interaction between students at distance sites and the teacher. Herman wrote about four dimensions that seemed to encourage interaction between instructor and students at remote sites. The four were: (a)



nonverbal immediacy behaviors; (b) verbal 'immediacy' behaviors; (c) personalizing the class for each student; and (d) active learning techniques (1994).

Boone, Bennett and Ovando (1995) suggested that, when using two-way video with full-motion video in instruction, it is important that the technology offer interaction between the instructor and the students. This study focused on teachers enrolled in a course offered by the University of Indiana. The teachers at the sites felt that broadcasts didn't create the needed interaction as was possible in the traditional classroom. This study suggested that interaction, a highly important dimension in the classroom, needed to be developed in distance education courses.

Other studies have shown that interaction yielded positive attitudes towards instruction (Garrison, 1990; Hackman & Walker, 1990; Ritchie & Newby, 1989) and was an important factor in the success of course work. Interaction improved with the use of nonverbal immediacy techniques according to Comstock, Rowell and Bowers (1995). They wrote that "teachers can use immediacy behaviors to communicate this positive regard and stimulate their students" (p. 251). Comstock, Rowell and Bowers defined immediacy factors in nonverbal communication as "those that enhance closeness to and interaction with others because they reduce psychological and/or physical distance between communicators...and promote liking" (p. 251). These researchers cited Mehrabian's studies from 1971 and 1981 as examples.

Levin (1994) looked at teachers using technology in a Southern California school district. Levin suggested, that although researchers have looked at methods and approaches to using telecommunication in K-12 classrooms, that the studies have not

examined the effect of the use of technology on instructors. Levin believed that even though a few teachers had undergone thorough training in using telecommunication technology that this approach to education was still in its early beginnings.

Gehlauf, Shatz and Frye (1991) have stated that training of teachers in interactive television teaching is essential for content to be relayed effectively in the medium of interactive television.

A Utah study called for development of faculty instructors. Hess, Brown, Esplin, and Andrews-O'Hara, (1995) stated that training for faculty and other instructors and support staff "are critical to the successful implementation of new technologies in the classroom" (p. 19). This article also gave a complete summary of the Utah Education Network.

#### Nonverbal Communication

Nonverbal communication has been defined as all the messages exchanged in communication between two or more people outside of the words that have been used. (Berko, Wolvin and Wolvin , 1998). Miller defined nonverbal communication as "communication without words." Argyle has written that people use nonverbal communication for a number of reasons. Argyle said that "Words have limitations" and nonverbal cues are often more effective at communicating while in addition "nonverbal signals are powerful" and these types of messages are "likely to be more genuine" plus nonverbal cues "can express feelings too disturbing to state (p. 5). Argyle as quoted in Miller also said that "a separate communication channel is necessary to help send complex messages" (p. 5).

Berko et al indicated also that people depend on nonverbal cues in communication to interpret "social meaning" (p. 103). Verbal interaction has been possible in distance education for a number of years. Nonverbal communication which has been recognized as helping to communicate messages from person to person has also been present at least in one-way video applications of distance education. But in applications involving two-way audio and video, nonverbal messages and interaction between student and teacher have become more and more important.

Nonverbal communication in the traditional classroom has not always been recognized as important. Teachers have been aware that nonverbal communication cues accent and regulate verbal messages. Nonverbal messages also are used to repeat, substitute for, compliment or contradict the verbal messages being exchanged in communication settings. Cooper (1994) summarized research on nonverbal communication in the classroom in three areas:

- (1) Teachers used a relatively restricted number of nonverbal behaviors from the range of possible response options
- (2) A majority of teachers' nonverbal messages were used for controlling and directing purposes rather than for encouragement and supportiveness and
- (3) Nonverbal interaction between teachers and students was generally characterized by formalism rather than intimacy (pp. 56-57).

Cooper also indicated that proxemics, environmental factors, and kinesics have been extensively investigated in the classroom context, but other areas haven't been investigated. Teachers, as well as others who have lectured, advised and presented

information to people, used nonverbal communication to send messages in the face-to-face settings.

Woolfolk and Brooks (1985) wrote that nonverbal behavior by teachers has continued to become more important than superficial observation and that researchers have recently studied it more formally. Cooper indicated that nonverbal research has centered on three major areas of nonverbal communication “proxemics (physical space and interpersonal distance), coverbal behavior (gestures, facial expression, eye gaze, etc.), and paralanguage (voice tone, rate of speaking, pauses, etc.)” (p. 61).

Another approach to organizing nonverbal codes included channels used to send messages. They are broken down in categories such as: kinesics (body language, facial expressions, eye contact or eye gaze); paralanguage or vocalics (the way we say what we say); haptics (touch); proxemics (use of space); chronemics (time); physical appearance and artifacts (the decorations and clothing we wear). (Burgoon, Buller and Woodall, 1989, p. 21). Burgoon et al. discussed nonverbal communication as having a “multiplicity of functions” including interaction (p. 23). They have pointed out that “nonverbal cues affect the outcomes of communication. They are part of the social influence and facilitation process; that is, they aid or inhibit persuasion and behavioral change.” Nonverbal cues also relate to “information processing and comprehension” (p. 23). Proper use of nonverbal cues in teacher-learner interactions can communicate a message more effectively and efficiently.

The traditional interaction between teacher and student in the classroom has been somewhat recreated with the new video technologies now available for use in distance

education such as in full motion two way video and two-way audio systems. “Our world is changing rapidly as technology becomes a major player in information transmission, education and training” (Pucell 1995, p. 49). As Pucell observed, teaching is changing and those teachers in command of superior communication skills will be most effective. Learning to communicate in the new interactive video setting, verbally and nonverbally will be a challenge for faculty in the years to come. The Utah faculty were asked for responses concerning the importance nonverbal communication has had in the traditional classroom and about its importance in the distance classroom. In many distance education settings, the nonverbal component hasn’t been a major factor. In the new interactive two-way video and audio settings it will be important. Distance education strategists need to help faculty reevaluate teaching approaches, methods and outcomes and teaching styles. (Pucell, 1995).

In addition to the technology requirements of the distance education classroom, adapting teaching styles will include learning to communicate nonverbally with the students in the distance classroom. Utah faculty were asked if they thought nonverbal communication could be achieved in the distance classroom as well as in the traditional classroom setting using two-way video and audio applications. The respondents didn’t believe that it could be as effective. Pucell also commented that teachers cannot expect to be as effective immediately in the ITV classroom. Getting the students involved will require good nonverbal skills, appropriate feedback and movement. In interactive video teaching, Pucell counseled teachers to “be prepared, be flexible, be interactive, be seen, be

heard” (p. 53). The last four have much to do with nonverbal communication including the suggestion to be heard which deals with proper use of the voice.

Willis (1993) has said that visual cues were more limited in distance education and that “even the visual cues that do exist are filtered through technological devices” (p. 7). Willis cautions that this difficult assignment for the teacher leaves the classroom experience seeming to be contrived “when spontaneity is altered by technical requirements and distance” (p. 7).

Teachers need to be aware and alerted to the importance of every channel of communication, verbal and nonverbal, in order to be successful in the technology laden distance classroom. The training necessary for teachers to learn to be more interactive included understanding nonverbal immediacy. Research has indicated that students react better to teachers who are more immediate. (Frymier, 1993)

Non verbal immediacy concerned the amount of “perceived physical or psychological closeness between people” as first defined by Mehrabian (1971). “People are drawn toward persons and things they like, evaluate highly, and prefer; they avoid or move away from things they dislike, evaluate negatively, or do not prefer” (p. 1). The most commonly used nonverbal behaviors identified by scholars were, “smiling, touching, moving close to another, eye contact, and leaning toward someone” (Richmond, 1991, p. 206). In the ITV distance education application movement, smiling, and eye contact are obviously applicable and can aid the instructor to be more immediate and more related to the classroom. Gorham (1988) found that “verbal and nonverbal immediacy contributed to students’ perceptions of teacher immediacy, and was associated with students’ affective

and cognitive learning.” Guerrero and Miller (1997) recently said that “distance education instructors who are animated, fluent, composed, and warm are likely to convey enthusiasm and immediacy despite the geographical separation between them and their students” (p. 31). Motivation is also a factor discussed in the literature which related to teacher-student immediacy and contributed to student learning and influence by the instructor. Frymier (1993) indicated that an enthusiastic presentational manner by the instructor can communicate to students that the material is important and can be appreciated. Teacher behavior has been shown to be key to influencing students enthusiasm for the content or subject. Frymier found that teacher immediacy had a positive impact on students’ state motivation to study. Motivation research, according to Frymier, has been basically state or trait. State motivation was improved by more immediate teachers and according to Frymier this was especially true for students who displayed motivation that was low when entering the classroom. (1993)

Educators have often used the inability to interact with students as a barrier that has prevented them from accepting distance education as a viable method of teaching. Interactive television systems allowed for immediate feedback even though the two parties were located in separate places. And although the technology is not yet perfected and feedback was more difficult than in the traditional classroom, interaction was a factor in the interactive video distance classroom. Class size can also be a factor in face-to-face interaction in either traditional or distance education classes and so can the use of multiple sites in distance teaching.

Guerrero and Miller (1997) studied videotaped instruction and the use of nonverbal behaviors on initial impressions. They discussed that the creation of positive attitudes in the distance education classroom would differ based on the kinds of media being used. Nonverbal cues that would seek response to questions and feedback would be present in the interactive teleconferencing distance media setting.

Barriers that might prevent faculty from adapting to Distance Education.

Rutherford and Grana, (1995) listed barriers that they felt might prevent acceptance of technology teaching. Among the barriers were: “fear of change; fear of time commitment; fear of appearing incompetent; fear of not knowing where to start; fear of being married to bad choices, fear of technological failure, and fear of having of having to move backward to go forward” (p. 83).

Dillon and Walsh (1992) indicated that a number of studies “cite faculty resistance to instructional technology as a primary barrier to the continued growth of distance education programs” (p. 5). They quoted McNeil (1990) in regards to attitudes towards technology as a barrier. “Attitudinal issues--how people perceive and react to these technologies--are far more important now than structural and technical obstacles in influencing the use of technology in higher education” (p. 5).

Moskal, Martin and Foshee (1997) listed nine factors that are of high importance if distance education programs are to be successfully adopted and put into practice in higher education. These were areas which could become barriers to effective distance education



if not properly planned for and handled adequately. The nine were:

- (1) easy to use; (2) offers clear advantages over traditional delivery (compatibility);
- (3) compatible with instructor's discipline (relative advantage and compatibility);
- (4) increases student motivation (relative advantage); (5) increases student learning (relative advantage); (6) time is available to learn how to use it (relative advantage and compatibility); (7) equipment is available to use in the classroom (relative advantage and complexity) (8) funds are available for necessary materials (relative advantage); (9) training is provided for faculty (complexity) (p. 20).

Heinich (1985) discussed the fear of change as a barrier to acceptance of an innovation. "Technologically based instruction poses a threat to the base of our present system; the more comprehensive the technology, the greater the threat. When instructional technology becomes sophisticated enough to be considered an alternate, rather than a complement, to the traditional instruction, it becomes a base for the design of a new educational system" (p. 10). Heinich has also written about state funding practices that have blocked the adoption of new instructional approaches. Another barrier named by Gayeski was "lack of appropriate designs and information" which related to effective use of the technology and the ability to design programs that could have been used effectively with the available technology. "Downtime" when technology didn't work correctly or the way it was envisioned is another barrier to technology instruction. (1989)

Hall (1991) has discussed the changing of faculty roles. Hall said that faculty do fear being replaced by officials who embrace new innovations that affect educational delivery. "This may not be an entirely unjustified fear, for in fact some educators and government

officials tend to think of innovations in educational delivery, at least those which they may be willing to fund, as ways to reduce faculty costs and increase 'efficiency'" (p. 116). Hall advocates teachers attempting to use technology in teaching as well as using it in research.

#### Utah's approach to technology.

Cecelia H. Foxley Commissioner and Chief Executive Officer of the Utah State Board of Regents in a memorandum to the Regents written on January 13, 1995 outlined the importance being placed on distance learning by the current administration.

Governor Leavitt, legislators and administrators in Utah's system of higher education have continuously discussed the importance of exploring the use of technological advances to educate Utah's students. Foxley stressed that "distance learning is one way to give students access to the resources of the Utah System of Higher Education" (1995). She emphasized the belief on the part of the Governor and many legislators that the use of technology delivery systems that are non-traditional "will reduce the need for some current or future capital facilities projects in the state" (1995, p. 1).

Funding was available to Utah's universities for the development of class instruction that can be sent from the traditional campus to distance sites where learners gather to receive instruction through two-way audio-video technology.

A document has been prepared by the Chief Academic Officers of the Utah System of Higher Education titled "Creating the Vision: Planning and Policy Statement." This document outlined the strategy for delivering a technology driven education to Utah's

changing university studentbody. The document discussed the potential of savings which could be realized as the state prepared to educate students in their own communities.

The Utah State Board of Regents in the document "acknowledge the need to meet the system imperatives of access, efficiency, quality and reduced costs." For this to happen they indicated that, "the character of learning and the impact of technology on learning processes need to be examined." The development of a model "for integrating technology with instruction that will assure that quality education will result" was discussed as an outcome. (Foxley, 1995, p 2).

The document identified nine planning principles which the technology plan should incorporate when created by the Utah System of Higher Education (USHE). Taking these nine principles, four guidelines were created.

- (1) Courses and programs should be part of a system-wide general education core that emphasizes problem-solving, critical-thinking, competency-based instruction.
- (2) Pre-major courses and foundational courses for majors at four-year schools should be based on problem identification and problem-solving approaches, critical thinking, and higher-level integration of foundational skills with discipline-specific content.
- (3) Interactive concurrent enrollment instruction should be delivered by higher education institutions to high schools.
- (4) Some limited degree programs should be offered in areas identified by the State Board of Regents as high-demand and high-need programs for the State. These degrees may be either undergraduate or graduate, but must be subject to a careful process for

their review and approval carried out by the system's Chief Academic Officers and recommended by them to the Regents for similar review and approval"

(Foxley, p. 5).

The Utah EDNET program has been offering on air television courses and closed circuit courses to various sites in the state for many years for college credit. Television courses aren't new to the state and are continuing as are courses on video, but new technology has changed the way course work can be delivered over the EDNET system. Two way video (interactive video courses) with full motion video and two-way audio gives educators in the state the opportunity to move the mission of the regents ahead and to comply with the wishes of the administration for more technology driven educational programs. Courses were being delivered and others developed using state funding. These courses were delivered to students at sites around the state. This was occurring at all four-year campuses as well as at the community college level of the system at this writing.

The Utah planning document put forward several questions that have been asked worldwide in developing distance education. The following important questions were asked by The Utah Board of Regents:

(1) What is the effect on student performance? Although some national data reflect no differences in levels of student achievement in comparisons between traditional learning formats and televised instruction, in our system there must be careful testing of learning outcomes in both formats. Both cognitive and affective kinds of learning must be tested. Courses and subject matters that are most

effectively taught by distance learning--and those that are least effectively taught-- must be identified.

(2) What is the impact on demand for on-campus courses? An assumption underlying much of the interest in distance learning is that it will reduce or replace some of the heavy demand for on-campus courses. Are students who would originally register for traditional college classes being served by the new system? Are concurrent enrollment students opting for televised, interactive instruction and profiting from the experience? Or, is a new market of non-traditional, homebound students being created?

(3) How appropriate and beneficial is it to offer degree programs as well as individual courses through distance learning? Some supporters of distance learning feel that degree programs should be provided. It is certainly the assumption of many that the Associate of Arts/Science should be made available electronically. However, there should be careful attention to data about learning outcomes and student satisfaction with degree programs before decisions can be made about the number and kinds of baccalaureate and graduate degree programs that might be offered.

(4) Should distance learning be a way of making the senior year of high school more challenging or of integrating students more quickly into postsecondary learning experiences? Here, too, testing of students already enrolled in concurrent enrollment or advanced placement courses should be completed in order to

determine student success rates after these students accelerate their high school experience or enter post secondary education settings early (Foxley, 1995, pp 5-6).

These questions were not centered on the faculty who must deliver the education but needed answers. But also needing answers were questions concerning the faculty and their willingness to teach distance education classes and what methods they felt were effective in educating Utah's students. Faculty attitude information toward distance education is crucial if Utah's colleges and universities are to incorporate continuing successful programs. Questions needed to be asked of faculty concerning the importance of interaction with students, and the training necessary to teach in the new interactive video arena. The faculty involved in distance education must be in command of public speaking ability and camera consciousness in order to be effective in video interactive distance teaching and other factors apply to other methods and media now in use in distance education worldwide.

#### Distance Education Methods

There have been a number of methods employed in distance education from correspondence courses to the two way delivery of interactive television. Moskal, (1997) looked at distance education delivery approaches and named them as: Computer-Based, 2-Way Video/2-way Audio, Desktop Video, pre-recorded Video Telecourses, 1-Way Video/2-Way Audio, Audio Teleconferencing, Audiographics and Correspondence. Verduin and Clark (1991) had outlined different delivery modes used in distance

education. They discussed the audiocassette, telephone (still used today in audio applications), radio, and books on tape, broadcast television, cable television, microwave broadcasting, satellite broadcasting, videocassettes, computers and computer aided instruction, and print. One of the most popular forms of distributing distance courses is the videocassette. According to Verduin and Clark, the Corporation for Public Broadcasting found in a national survey that "32 percent of responding colleges offered telecourses via videocassette." The distance education methods used in the survey were used by Clark in his 1992 study and those that are suggested here by Moskal.

## CHAPTER 3

### **Research Methodology**

#### **Introduction**

This chapter identified the universities and colleges in Utah whose faculty were surveyed. The selection of subjects is discussed first. The second section of the chapter addresses data collection. Section three discusses the research questions from which the questionnaire was drawn. Research questions were patterned after a national faculty study conducted by Thomas Allen Clark at Southern Illinois University (1992). Since the focus of this study was faculty in the state of Utah and the willingness of the faculty to adapt courses to distance education teaching, the survey instrument was adapted to apply to this situation. The discussion addressed how the instrument was adapted, reconstructed and validated. Data Analysis will be discussed in the fourth section of this chapter. In the development of the instrument from Clark's instrument, a focus group was held and a review of the suggestions focus group members made is included in this chapter.

#### **Selection of Subjects**

The study population consisted of all faculty members at the nine universities and colleges in the Utah System of Higher Education. A sample was systematically drawn from current lists of faculty members at these institutions. Since the selection of participants was random from these lists, it included a range of professors from those who



had no experience in distance education to those who had already participated in distance teaching, allowing for different faculty perspectives. Those who had taught distance education courses were identified; Those who hadn't taught distance education courses were asked if they would be willing to teach them in the future.

The nine higher education institutions in the state are: The University of Utah, and Utah State University the state's two research universities; Southern Utah and Weber State Universities, the state's comprehensive four year institutions; as well as the state's community colleges: College of Eastern Utah, Dixie, Snow, Salt Lake Community College and Utah Valley State College.

Faculty participants were chosen from current faculty lists with a random start to allow each faculty member an equal opportunity to participate in the survey (Crowl, 1986, p. 70). The survey was sent to 635 total faculty members with approximately 200 being sent to each of the three divisions of the state's schools. The three divisions were formulated by classification of the schools in the state. The five community colleges were included in one group. Utah and Utah State, the two research universities were included in a second group and Southern Utah University and Weber State University the state's comprehensive universities were placed in a third group. It was determined that just over 600 surveys would be a strong representative number, equaling nearly 17 percent of the faculty. Faculty at the nine institutions in Utah totaled approximately 3751 as figured from faculty lists obtained from each of the institutions. The proportional cluster sample was used because of the different sizes of the universities and colleges in the state of Utah and the need for a representative sample from each of the groups. The three natural groupings

of universities and colleges in the state allowed for proportional numbers to better make comparisons and a more representative response from each of the groups and the individual schools. The current lists obtained for the study indicated that the University of Utah had 1448 total faculty and Utah State 884, Weber State 433, and Southern Utah University 199. The five community colleges totaled only 786 faculty members. Salt Lake Community College had the largest faculty with 306 faculty members while Dixie had just 72. These numbers didn't include adjuncts. Each of the three groups represented approximately one-third of the faculty respondents and the number of surveyed faculty members was between 10 and 20 percent at each of the nine institutions in the state.

The sample size was determined based on Cox's (1996) discussion relating to sample size. According to Cox, for a sample size to give the researcher confidence within five percent, a population size of 3,000 would require 341 samples and a population size larger than 3,000 to infinity would require 384. To be confident within 10 percent only 96 would be required at the level of infinity. Cox said that a common guideline, and one that is backed by other researchers, "is that you want at least two thirds of the questionnaires to be returned to justify a claim of probable representation. The more you get above two thirds, the more confident you can be; and the less you get, the less confident you can be of representation" (Cox, 1996, p. 63-64). From the population of 3751 faculty members approximately 200 names were chosen from each of the three cluster groups. The total sample consisted of 635 faculty names which represents nearly 17 percent of the Utah faculty. Of the 635 surveys mailed, 421 were returned, a percentage of 66.3 percent.

Permission was received from the Commissioner of Higher Education in Utah, Cecilia Foxley to conduct the survey using Utah faculty at the nine institutions of higher education in the Utah system. Foxley's response letter authorizing the researcher to contact the chief academic officers of the colleges and universities in Utah is contained in Appendix B. Each of the academic vice presidents granted their permission to conduct the survey on their campuses. Permission information was included in the letter of transmittal to each of the individual faculty members systematically selected to participate in the survey.

#### Data Collection

The survey was direct mailed in October and November of 1997 to the randomly selected faculty members. Some were delivered to the department personally by the researcher and some schools allowed for campus mail delivery of the first mailing. The second mailing was direct mailed in November.

In his 1992 national survey, Clark used a campus coordinator method. Surveys were mailed to coordinators at the various campuses selected for the study. He recommended for future studies that the direct method be used to yield good results. (Clark, p. 146) This survey was mailed to the potential respondents with a letter of transmittal and a self-addressed stamped envelope for ease of return by those willing to participate. The letter of transmittal is contained in Appendix C. The number of faculty responding to the first mailing of the survey was 336. A follow-up mailing was prepared and sent in November to those not responding to the first mailing. The follow-up mailing was completed on November 21, 1997. This second mailing included a revised letter of transmittal, another

survey and a stamped return address envelope in case the original survey had been misplaced, lost or thrown away. Dillman, in his work on survey guidelines and methods, suggested sending a follow up to those not responding with a revised letter and a stamped addressed return envelope. (Dillman, 1978).

The total number of returned surveys was 421. The return percentage was 66.3% of the 635 faculty selected for possible participation. This response percentage meets the number researchers have used as a number allowing strong results and conclusions. The follow-up mailing was necessary to generate the final 66.3%. Babbie (1973) discussed response rates and indicated that 50 percent "is adequate for analysis and reporting." Babbie also indicated that a response rate of 60 percent "is good" and that 70 percent would be considered "very good" (p. 165).

In this proportional cluster sample, survey numbers were proportionately determined based on the size of the schools. One hundred-forty-three surveys were sent to the University of Utah and 83 to Utah State University, a total of 226 in the research university group. Surveys were sent to 143 faculty members at Weber State and 68 at Southern Utah University for a total of 211, and 198 were sent to the five community colleges. The actual numbers sent to each community college were: College of Eastern Utah 23; Dixie 20; Salt Lake Community College 79; Snow 22; and Utah Valley State College 54.

In selecting the participants, a random start was obtained from a table of random numbers (Babbie, 1986, p. 144). Following the random start, names were systematically chosen from the faculty lists. Every fourth faculty name was selected from the lists of

faculty teaching at the community colleges, every third name from the comprehensive universities faculty and every twelfth name on the lists of the research universities. This method yielded the survey number sent to faculty members at each of the institutions.

### The Questionnaire

A 35-question instrument was developed and pilot tested (n=30). The questionnaire contained forced choice responses, Likert-scale close-ended items, ranked items and open-ended questions. Demographic information obtained included, institutional type, academic rank, tenure status, administrative positions held, academic area, years of college teaching experience, current age group, and gender. The respondents were also asked to rank their preferred faculty duties: Teaching, Research/scholarly pursuits, or service activities. Respondents were asked to return the survey in the stamped returned addressed envelope to the researcher at Southern Utah University.

The Clark survey instrument (1992) was based on five general attitude questions found in a study completed by Johnson at the University of Michigan in 1978. Clark's questions were used as models to get general attitude information concerning distance attitudes and methods and were modified for this attitude survey of Utah's faculty regarding distance education. The questions in the survey related to the research questions outlined in chapter one. Questions were based on faculty attitudes in Utah concerning distance teaching in various media method formats including full two-way video and audio formats now being employed on the Utah Ednet system. It was assumed that Utah faculty members, would be familiar with distance education in its various formats because of the push by the governor

and the state legislature for more distance learning courses since 1993. Faculty answered questions regarding their general attitude and knowledge of distance education, their participation, their knowledge of distance education methods and which methods were deemed to be most effective, and their willingness to participate in the future in the teaching of distance education courses. Items also asked for attitude information regarding interaction and nonverbal communication in the classroom since interaction and feedback have been discussed so much in the literature of distance education. Did the Utah believe their institutions should be involved in distance education and if they themselves were willing to teach distance education courses using two-way video and two-way audio technology were questions that needed responses. Another item explored whether Utah faculty members felt the video distance classroom could be as effective as traditional classrooms, and whether immediate two-way feedback made distance teaching more feasible or inviting to them. They were also asked if this method was believed by them to be more effective than other methods.

Items also sought to determine the respondents extent of participation in distance education and the respondents attitude concerning future participation in distance teaching. The complete survey is included in Appendix C.

Research questions were grouped in six categories and were modified as the survey instrument was developed. The instrument was first modified following a focus group held with faculty and distance learning staff at a U.S. southwestern university. Members of the focus group had knowledge of distance education and its applications. The research questions are restated here:

1. Were Utah faculty familiar with distance education/distance teaching and how did the faculty at public institutions of higher education in Utah view their own perceived attitudes toward the concept of distance education, (2) and their perceptions of whether distance education should or should not be used at their own institutions? Were they willing to teach distance education courses if they hadn't already taught distance education courses?

2. Did faculty have positive or negative attitudes regarding distance education as an effective method of education and positive or negative attitudes regarding the teaching of college-credit courses as part of college or university academic programs and were attitudes positive or negative regarding distance education in their academic areas, disciplines and in their own courses?

3. What distance methods did the faculty know the most about, which did they prefer and which methods did they view as effective?

4. How did the attitudes of Utah public higher education faculty toward college-credit distance education vary comparing their professional characteristics?

5. Did faculty believe that interaction between students and teachers can be adequately recreated in the video distance education classroom and did they believe that nonverbal communication between teacher and student is important in the conventional or traditional classroom? Did they believe that nonverbal communication between teachers and students can be as effective in the distance classroom using the new technologies and does the technological ability to have immediate interaction and immediate feedback between student and teacher make distance education more feasible as an alternative educational

practice? Were the Utah faculty more willing to instruct distance education courses using full motion two-way video and audio than they would using other methods?

6. Did public higher education faculty in Utah have positive or negative attitudes toward distance education? Did they like the concept of distance education? What barriers or fears do they see preventing faculty from accepting distance education methods as an effective form of university instruction?

### Data Analysis

The purpose of this research was to survey faculty and discover attitudes concerning the offering of distance education courses for college credit and the importance the faculty held for interaction between student and teacher which can now be better reenacted imitating the traditional classroom setting through full motion video applications.

The first five items on the questionnaire were analyzed in frequency tables and comparisons of the faculty on demographic data of the groups in the study. Question one related to familiarity to the term distance education/distance teaching and the respondents were asked to check one of three boxes. In question two, the respondents were asked to check yes or no to having taught a distance education course of any kind. Those responding no to question two were asked to answer yes or no to the question, *Would you be willing to teach a distance education course?* The faculty were then asked *Whether or not your institution makes significant use of distance education methods do you believe it should?*



A five point Likert scale was used for survey items 6 through 9, with the number one representing *strongly agree* and the number five representing *strongly disagree*. These questions addressed research question number five concerning nonverbal communication, and interaction and the use of advanced technological methods. Item 10 assessed by ranking the faculty members knowledge concerning DE methods. Number one indicated the method the faculty member was most familiar with and the number 8 the method he/she was least familiar with. Item 11 ranked which method of delivery the faculty preferred using, whether or not they had taught a distance education course.

Part IV of the survey instrument consisted of questions 12 through 16 and concerned receptivity to distance education by the Utah faculty. These items used a five point likert scale with the number one equaling *strongly agree* and the number five *strongly disagree*. Item 12 was a statement, *Distance education is an effective educational method*, while 13 asked if the respondent thought *“Distance education should be used as part of college or university academic programs.”* Item 14 was *Distance education courses should be offered for college credit*, and item 15 read *Distance education courses are appropriate in your academic area*. Item 16 asked respondents concerning their own courses and the statement read, *I would like to use distance education for my courses*.

Part V of the instrument focused on media and methods in distance education. Items 17 through 24 addressed each of the media methods and asked whether or not the respondent considered the methods to be effective methods of distance education. For example, item 17 stated *Audio Conferencing is an effective method of distance education* and again the respondent was asked to use a five point likert scale and a number 9 was

used to indicate if the respondent was “not informed enough” to answer the question. This statement format was used for each of the items in this part.

Part VI required open responses. This section of the instrument was made up of items 25, 26 and 27. Item 25 asked the faculty, *Do you like the concept of distance education? Why or why not?* Item 26 asked, *What barriers exist that prevent faculty from accepting distance education as an effective form of education?* Item 27 related to faculty training for distance teaching. *If you have taught a distance education course, were you adequately trained for the experience?* These three items were based on research question number six. A complete list of responses is contained in the Appendix.

Part VII contained the demographic or respondent characteristics items 28 through 35. Similarities and differences in the attitudes of the respondent subgroups were analyzed. The responses allowed for attitude comparisons and were based on academic rank, tenure, administrative positions, academic area, length of college teaching service, current age group, gender and a ranking of preferred faculty duties and by school and school groups.

#### Focus Group Results and Concerns

To demonstrate content validity, the survey instrument was reviewed by faculty members at a southwestern university. Following adjustments based on feedback from these faculty members, the survey was then discussed in a focus group of educators involved in distance education. The discussion centered on the critique of the survey instrument. Background information was presented to the group concerning the current feeling among Utah administrators toward the introduction and implementation of more

distance education courses for college credit at the public higher education institutions in the state. The background briefing centered on understanding the attitude of faculty in Utah toward DE in view of the directive from Utah's current administration. The focus group discussed the importance of nonverbal communication in light of the possible feedback and interaction between teacher and student in the recent full motion video applications of distance education. The current technological advancements make nonverbal communication and feedback much more possible today in distance teaching. The group examined the survey instrument for clarity, responded question by question and offered critical feedback based on their experiences and expertise in distance education. The focus group consisted of faculty who had been involved in distance education and in fact, one member was serving as a university coordinator of distance education.

One question asked by the focus group related to the choices Utah faculty members will have in regards to distance education based on the emphasis of Utah administrators to educate more students through distance education. Utah faculty will have choices. This is significant since faculty members value their ability to govern decisions especially at the department level. Utah leaders have indicated that this is an alternative method of instruction, and that faculty will be able to participate as desired. The number of courses offered will continue to increase, to serve the needs of Utah's rural and nontraditional students, meaning many more faculty will be involved in the near future. The focus group wondered about the incentive to teach distance courses and the available pay structure which has been a problem in other states. The focus group mentioned that course development almost always pays better than when a course is repeated after its

development. They were also concerned about the training received by faculty in advance of distance course teaching.

The knowledge level of the faculty in Utah concerning distance education was seen as important as was the willingness of faculty to participate in this form of university instruction. A screening question was considered important by the focus group to determine the amount of experience the respondents had had with distance education and the level of their familiarity with distance education and distance teaching. A ranking of familiarity was recommended by the group since it is difficult to rate what is meant by a simple question asking about familiarity. The familiarity item was originally meant to measure distance education knowledge as a general concept, but based on feedback from the focus group, the question was limited to one which asked the respondents how familiar they were with distance education/distance learning and the term *teaching at a distance* was dropped from the questionnaire. The item was adjusted to determine whether faculty were *very familiar, somewhat familiar* or *not familiar at all* with the terms distance education/distance learning.

Concerning receptivity to distance education the statements were changed to be more feeling oriented. For example, *Distance education as a general concept* ranked on a scale from one to five with one being a very positive attitude and five a very negative attitude, was changed to read "*Distance education is an effective educational method*" and the scale from one to five was changed so that one represented strongly agree and five represented strongly disagree.

Feedback was considered important by the focus group. They felt that the addition of two-way communication in video applications was highly important to the future success and growth of distance education as an alternative method of education. The group voiced the unanimous feeling that two-way video instruction made distance education more attractive to faculty because of the possible interaction and feedback as part of classroom instruction which is valued by many faculty members. An item was constructed to get information from the faculty regarding interaction and feedback. In discussing face-to-face teaching versus distance education methods, this comment from a member of the focus group pinpointed faculty feelings concerning feedback. "Most faculty members feel like face-to-face teaching is the best method of teaching because *they* like that feeling of feedback from the students. The students are interested in learning and they don't particularly care what method they use to learn long as they feel like they are learning." Another comment expressed the importance of understanding faculty attitudes regarding distance education. "I am extremely interested in faculty issues because I think they are critical. If you are going to do a good job, the faculty must buy into the effectiveness of distance education." This focus group member also said, "It is not easy to convince the entire faculty all at once, but if they try it and they find that the students do learn, they will in fact do it again."

At the suggestion of the focus group members, the demographic respondent characteristics section was repositioned to the end of the survey instrument. This was a helpful suggestion since the survey could then begin with questions immediately centering

on faculty familiarity and faculty knowledge of distance education and willingness to teach distance education courses.

It was suggested that a ranking of the methods of distance education would be more effective for items 10 and 11 on the survey instrument regarding faculty knowledge of and preference of distance education delivery methods. Because it was felt by the group that the video technologies seem more readily accepted by faculty asked to teach distance education courses, a ranking was determined to give better preference information based on a likert five point scale. The focus group felt that finding out which methods the faculty believed were most effective was important and the numerical values on a likert scale would allow the faculty to rank the different methods. Another question relating to the methods of delivery of distance education courses used by instructors was eliminated from the survey instrument and the respondents were asked to rank their most preferred delivery method, whether or not they had taught a distance education course. Originally, definitions were included in the ranking question that dealt with knowledge of distance methods, but the definitions were removed from the item to get a better picture of respondent knowledge without being told the definitions.

The group felt that the eight method areas in the survey were representative of the methods utilized today in distance education. Media emphasis in distance education was discussed and it was noted that even the most basic distance method uses media methods to instruct the courses with audio cassettes, and interaction is often carried out through e-mail communication and by other technological means.

Open response items were limited to three. Several open response items were re-written as forced response (yes or no) questions to limit the length of the instrument. The focus group advocated keeping the following open ended items. The first item was to determine why faculty like or dislike the concept of distance education. The second item addressed what barriers existed that prevent faculty from accepting distance education as an effective form of education and the third dealt with training received prior to teaching distance education courses. The space for the written response was limited for time reasons. The survey instrument is a long one and too much space for open responses might discourage responses. Focus group members felt that a limited space would lead to more responses and another felt the questions would seem easier to answer within a pre-determined space.

The adjustments made in addition to the pre-test of the instrument helped to solidify the instrument. The survey was adjusted and then sent to the 635 Utah faculty members in October and November of 1997.

## CHAPTER 4

### ANALYSIS OF DATA

#### **Introduction**

The survey of Utah higher education faculty was conducted to gather information concerning faculty attitudes toward distance education at the nine institutions in the state. The feelings and attitudes of faculty are important with more and more money being allocated by state government in Utah to technology and the development of distance education courses. This chapter presented the results of the survey based on responses from 421 faculty members in Utah. The survey was mailed to 635 faculty members in the state for a return rate of just over 66 percent. The demographic descriptions of the chapter were presented first and then the research questions were answered in the order they appeared in Chapter 1 and Chapter 3.

#### **Demographic Descriptions of the Utah Faculty**

Demographic information gathered describing the faculty will be considered in each of the six research question categories in order to make comparisons based on these characteristics. The respondents were asked to list their academic rank, whether or not they had achieved tenure, what administrative capacities they were currently serving in, the academic area of their teaching, age, and gender. The respondents represented the nine



public higher education institutions in the state of Utah. Table 1 presented the faculty frequency by school.

Table 1  
*Frequency of Faculty Participation by School*

	Frequency	Percent	Valid Percent	Cum. Percent
SUU	54	12.8	12.8	12.8
Weber State	93	22.0	22.0	34.8
CEU	19	4.5	4.5	39.3
Dixie	13	3.0	3.0	42.3
Snow	20	4.8	4.8	47.1
Utah Valley	47	11.2	11.2	58.3
Salt Lake CC	47	11.2	11.2	69.5
Utah State	60	14.3	14.3	83.8
Univ of Utah	63	14.9	14.9	98.7
Unidentified	5	1.3	1.3	100.0
Total	421	100.0	100.0	

Note. SUU=Southern Utah University; CEU=College of Eastern Utah; Utah Valley=Utah Valley State College; Salt Lake CC= Salt Lake Community College and Univ of Utah= The University of Utah. Unidentified were respondents that couldn't be identified by school.

The faculty were divided into three groups. The group representing the research universities, Utah and Utah State, accounted for 29.2 percent of the respondents. Utah had 63 faculty respond and Utah State 60. Utah represented 14.9% of the total and Utah State's 60 represented 14.3%. The five community colleges represented 34.7% of the respondents and the two state comprehensive schools accounted for 34.9% of the faculty responding. The school with the most faculty responding was Weber State with 93 which

is equal to 22% of the total respondents. Southern Utah accounted for 54 of the survey respondents, 12.8% of the total. Five of the faculty cases chose to remain anonymous and removed the identifying school number from the survey before returning it. See table 2 for the breakdown by institutional group. The groups are defined in the note beneath the table.

Table 2  
*Utah Faculty Response Frequency by Group*

	Frequency	Percent	Valid Percent	Cumulative Percent
Group 1	147	34.9	34.9	34.9
Group 2	146	34.7	34.7	69.6
Group 3	123	29.2	29.2	98.8
NI	5	1.2	1.2	100.0
Total	421	100.0	100.0	

*Note.* Group 1=Comprehensive Universities (Weber State and Southern Utah), Group 2=Community Colleges, Group 3= Research Universities (Utah and Utah State). NI represented cases which didn't identify a school.

The rest of the demographic information gathered concerning the faculty responding to the survey were included here. This information also answered research question number four as to the demographic makeup regarding the Utah faculty. There were 274 men responding to the survey and 139 women, while 8 didn't identify their gender. The 274 men represented 65 percent of the 413 total respondents and the women represented 33 percent. See table 3.

Table 3  
*Survey Item #34-Gender*

	Frequency	Percent	Valid Percent	Cum. Percent
Male	274	65.1	65.1	65.1
Female	139	33.0	33.0	98.1
Missing	8	1.9	1.9	100.0
Total	421	100.0	100.0	

The faculty were asked to identify their academic rank from lecturer/instructor to full professor in four categories as indicated in table 4. There were 131 full professors or 31.1% of the 418 who responded to item number 28 in the respondent characteristics section of the survey. There were 125 associate professors, 111 assistant professors and 50 lecturers/instructors. This indicated an evenly distributed faculty base among the Utah faculty based on academic rank. Only three cases didn't answer this item. See table 4 for the complete frequency listing of the academic rank of surveyed faculty.

Table 4  
*Survey Item 28-Academic rank of Utah professors*

	Frequency	Percent	Valid Percent	Cum. Percent
Full Professor	131	31.1	31.3	31.3
Assoc. Prof.	125	29.7	29.9	61.2
Assistant Prof.	111	26.4	26.6	87.8
Lecturer/Inst.	50	11.9	12.0	99.8
Total Cases	418	99.3	100.0	
Missing	3	.7		
Total	421	100.0		

*Note.* Assoc. Prof.=Associate Professor; Assistant Prof.=Assistant Professor; Lecturer/Inst.=Lecturer/Instructor.

The respondents were asked whether they had achieved tenure or not. There were 255 tenured faculty surveyed and 163 non-tenured faculty, a total of 418. Only three didn't answer the item. The tenured professors represented 61% and non-tenured represented 39% of the respondents.

The academic area of each respondent was another faculty characteristic surveyed. Seven academic areas were provided on the survey and an eighth blank was left for other responses. The largest academic area represented was Science with 97 faculty members which accounted for 23% of the total cases,  $n=418$ . Arts & Letters with 69 respondents had 16.4% and Social Science was the third largest with 51 faculty or 12.1% of the total. There were 41 faculty from Education, 40 from Business, 26 from Medicine and 13 from Communication. Faculty listing other areas accounted for 19.4% or 81 faculty members. Table 5 listed the complete table of academic areas of the Utah faculty.

The respondents were also asked to identify any administrative positions. The respondent group consisted of only two Deans, six Associate Deans, 42 Department Chairs, 10 Assistant Department Chairs, and 19 Sequence Heads. Three-hundred thirty-three were not involved in administrative activities.

Age was divided into six categories. There were no faculty respondents below 25 years of age. The largest group of 145 was between the ages of 45-54 and the second largest segment was 35-44 with 126 or 30 % of the total 411. The results indicated a faculty where nearly 63% are 45 years of age and older. There were almost as many in the 35-44 age category as in the 55-plus category. Ten cases didn't list an age group. See table 6.

Table 5  
*Survey Item #31-Academic Area of the Faculty Respondents*

	Frequency	Percent	Valid Percent	Cum. Percent
Arts & Letters	69	16.4	16.5	16.5
Business	40	9.5	9.6	26.1
Comm.	13	3.1	3.1	29.2
Education	41	9.7	9.8	39.0
Medicine	26	6.2	6.2	45.2
Science	97	23.0	23.2	68.4
Social Science	51	12.1	12.2	80.6
Other areas	81	19.2	19.4	100.0
Total	418	99.3	100.0	
Missing	3	.7		
Total	421	100.0		

*Note.* Cum. Percent=Cumulative Percent.

Table 6  
*Survey Item 33-Age Groups*

	Frequency	Percent	Valid Percent	Cum. Percent
25-34	26	6.2	6.3	6.3
35-44	126	29.9	30.7	37.0
45-54	145	34.4	35.3	72.3
55-64	106	25.2	25.8	98.1
65 or older	8	1.9	1.9	100.0
Total	411	97.6	100.0	
Missing	10	2.4		
Total	421	100.0		

*Note.* The below 25 age group was omitted from the chart since there were no respondents.

## **Research Question Number One**

### **Familiarity with terms used to describe distance education**

The first research question addressed Utah faculty familiarity with distance education and how the faculty at public institutions of higher education in Utah view their own perceived attitudes toward the concept of distance education, and their perceptions of whether distance education should or should not be used at their own institutions?

As recently as 1992, when Clark completed his national survey, familiarity with distance education was not overwhelmingly high. Of those faculty in Utah responding to this item concerning familiarity with distance education, 227 indicated that they were very familiar, 175 said they were somewhat familiar and 16 answered that they were not familiar at all with the terms used to describe distance education. Only three of the respondents, n=421, didn't answer the question. This was a very strong level of general familiarity with distance education and illustrated the high visibility of distance education in Utah. With this high familiarity response, it could be concluded that familiarity has increased fairly substantially since the Clark survey in 1992.

Ninety-five percent of the Utah faculty responding to the survey indicated that they were either very familiar or somewhat familiar with the terms distance education/distance learning. Fifty-four percent of the faculty indicated that they were very familiar with distance education and distance learning. Less than four percent answered that they were not familiar at all with distance education. Table 7 summarized the three categories of the

familiarity item. The attention this alternative method of instruction has received in Utah recently is obviously one reason that so many of the faculty were familiar with the terms distance education and distance learning. In fact, while the time the survey was in the hands of the faculty, the governor of Utah was addressing faculty members on the various campuses concerning the future of the Western Governors' University.

Table 7

*Survey Item #1- Familiarity with the terms Distance Education/  
Distance Learning*

	Frequency	Percent	Valid Percent	Cum. Percent
Very Familiar	227	53.9	53.9	53.9
S Familiar	175	41.6	41.6	95.5
Not Familiar	16	3.8	3.8	99.3
No response	3	.7	.7	100.0
Total Cases	421	100.0	100.0	

*Note.* S Familiar=Somewhat Familiar.

The crosstabulation of familiarity and gender indicated that 148 men and 74 women responding to this item were very familiar with the term distance education, while 115 men and 58 women were somewhat familiar. Only 11 men and four women were not familiar at all with distance education. Of the 274 men responding, 263 of them were somewhat or very familiar with distance education. Women responding totaled 139 and all but seven (132) were either somewhat familiar or very familiar with distance education. See table 8 for the breakdown by gender of familiarity with distance education. Regarding familiarity and age group, six of the 14 not familiar at all with distance education were in the 55-64 age group and another four were in the 45-54 age group. See table 9.

**Table 8**  
***Faculty Respondents Familiar with Distance Education by Gender.***

	Males	Females	Unknown	Total
Very Familiar	148	74	5	227
S Familiar	115	58	2	175
Not Familiar	11	4	1	16
No response	0	3	0	3
<b>Total</b>	<b>274</b>	<b>139</b>	<b>8</b>	<b>421</b>

**Table 9**  
***Familiar by Age***

	25-34	35-44	45-54	55-64	65 older	Total
V Fam.	16	80	78	46	2	222
S. Fam.	10	42	61	53	6	172
Not Fam.	0	4	4	6	0	14
No Resp.	0	0	2	1	0	3
<b>Total</b>	<b>26</b>	<b>126</b>	<b>145</b>	<b>106</b>	<b>8</b>	<b>411</b>

*Note.* V Fam=very familiar; S. Fam=Somewhat Familiar; Not Fam.=Not familiar at all. Resp.=No Response.

The familiarity breakdown by academic rank indicated that 72 of the 131 full professors that responded were very familiar with distance education and 124 of the full professors were either very familiar or somewhat familiar with the term distance education. In fact, 55% of the full professors were very familiar with DE. Seventy-one of 125 associate professors were very familiar with distance education and 55 of 111 assistant professors were very familiar with DE. There were 26 Lecturers/ instructors that



indicated that they were very familiar with distance education which is nearly 51% of them. In all, 48 of 51 lecturers/instructors were either very familiar or familiar. Of 255 tenured respondents, 142 were very familiar with the term distance education and 99 were somewhat familiar and 158 of 163 non-tenured faculty were either very or somewhat familiar. By academic area, Communication faculty were most familiar with distance education as nine of 13 responded that they were very familiar and another three were somewhat familiar or 69 percent. Business faculty also had a high familiarity level as 27 of 40 (67.5%) indicated that they were very familiar. Social Science was next by percentage with nearly 55% checking that they were very familiar. Science faculty were the fourth most familiar group as 49 of 94 (51%) indicated that they were very familiar with the terms distance education/distance learning, and another 45 (46%) were somewhat familiar. Overall, of the 94 Science faculty that represented 22.4% of the total faculty surveyed, nearly 96% fit in the categories of very familiar or somewhat familiar and only three of them were not familiar at all with distance education. In Arts & Letters, 49% of the faculty indicated that were very familiar and 33 (47%) were somewhat familiar.

#### Institutional Use of Distance Education

Attitudes toward institutional use of distance education were part of this first research question. This important attitude question centered on whether faculty agreed that their institution of higher learning should be involved in offering distance education courses. Responding to this forced-choice question, 304 or nearly three-fourths of the faculty,

72.2%, said they believed that their institution should make significant use of distance education methods. Only 94 responded negatively to this item or 22.3 percent. See table 10.

The three groups were all strongly positive towards this item of institutional involvement with distance education methods. The comprehensive universities were the most positive as 78% or 109 of 139 answered yes to this item, but the research universities were nearly as positive. The research universities had 92 of 118 faculty respondents that were positive to this item or nearly 78% and the community colleges had 102 of the 137 (74%) faculty members in this group responding positively.

Institutional use of distance education was considered appropriate by 73.8% of the men responding, but women were even more favorable as 81% answered yes that their institution should be involved in distance education. Only seven faculty members surveyed that responded to this question couldn't be identified by gender.

Examining age group categories and institutional use of distance education, six of 7 in the 65-and-older category said yes (85.7%), and 107 of 136 (78.6) in the age group 45-54 responded yes to this item. The age group 55-64 was nearly as favorable with 76 of 99 or 76.8% responding yes, and the age group 35-44 had 91 of 121 (75.2%) that answered yes. These all indicated a strong positive attitude. The lowest group was the youngest group, 25-34, with 65.4% of 26 respondents indicating that their institution should be involved in distance education.

A strongly favorable attitude was exhibited by Department Chairs as 34 of 41 said yes or 83%, and 4 of 6 associate Deans answered positively. The two Deans were split one

yes and one no. Seventy-four percent of the Sequence Heads surveyed answered yes, and 79.6% in other administrative positions, not identified in the provided categories said yes, 47 of 59.

Academic rank didn't have much affect on the responses as the difference between groups to this item was very small. Full professors said yes overwhelmingly (79.5%) and 90 of 117 associate professors (77%) indicated in the affirmative as did assistant professors and lecturers, 72.3% and 80% respectively. Whether faculty was tenured or not had little affect on this item, as 78.8% of tenured faculty said yes and 74% of non-tenured faculty also said yes.

There were positive attitudes by academic area. Communication Faculty, despite its small numbers, all said yes, 13 of 13, to this item. Faculty in the other category responded very favorably as 72 of 79 (91%) said yes and 36 of 40 (90%) in Education also agreed. Medicine was just slightly less positive than Education with 22 of 25 responding yes or 88%. The lowest of the eight categories was also fairly strong in agreement, as 64% answered yes to the institutional use item.

Table 10  
*Survey Item #5-Whether or not your institution makes significant use of distance education methods, do you believe it should?*

	Frequency	Percent	Valid Percent	Cum. Percent
Yes	304	72.2	76.4	76.4
No	94	22.3	23.6	100.0
No Response	23	5.5		
Total	421	100.0		

Note. Cum. Percent=Cumulative Percent.

### Previous Distance Teaching Experience.

The survey asked if the Utah faculty had ever taught a distance education course and 120 responded that they had, while 299 indicated that they hadn't. Only two didn't answer the item. Eighty-one, or 67.5%, of those who had taught distance education courses of any kind were men and 35 (29%) women. Of the comprehensive university group respondents, 34% had taught a DE course or 50 of 147 while the research group had 33 of 123 faculty having taught a course (27%). The community colleges had fewer that had taught a DE course as just 35 of 146 or 24% had done so. Two faculty members that had taught a DE course weren't identified with one of the three groups. Of the 120 who had taught a DE course, 42% of them or 50 were members of the comprehensive university group.

By age group, 49 of 145 (34%) of those 45-54 had taught a distance education course, while 29 of 106 (27%) in the 55-64 age group had taught at least one course. Twenty-six percent of the faculty, 33 of 126, surveyed in the age group 35-44, had taught a course and only six of 26 (23%) in the 25-34 age group had taught one. In the over 65 group, only one of eight faculty members had taught a distance course.

Seventy-six of the faculty were tenured and just 44 or 36% were non-tenured. Of the 120 having taught a course, 41 (34%) were full professors, 35 (29%) were associate professors, 29 (24%) were assistant professors and 15 (12%) were lecturers/instructors. Of the Department Chairs 10 had taught a distance education course, or 24% of Department Chairs answering the survey. Of those who checked other administrative

positions than those listed, 13 or 11% had taught a distance education course. Of the Business professors surveyed, 48% had taught a distance education course while 33% of the Social Science faculty, 17 of 51, had. In Science, 30% had done so and 24% of 120 Science faculty had taught a course. In medicine, 27% of the Medical professors had taught a distance course.

**Table 11**

***Survey Item #2- Faculty Having Taught A Distance Education Course***

	Frequency	Percent	Valid Percent	Cum. Percent
Yes	120	28.5	28.5	28.5
No	299	71.0	71.0	99.5
No response	2	.5	.5	100.0
Total	421	100.0	100.0	

Nineteen of the faculty had taught more than 10 courses and seven had taught six to 10 courses. Ninety-seven or 23% of the faculty surveyed had taught from one to five courses.

**Willingness to Teach Distance Education**

Willingness to teach distance education is important if this alternative method of instruction is to be successfully developed in Utah and adopted more and more readily by the faculty. Of those who hadn't taught a distance education course, 185 answered that they would be willing to teach a DE course, representing 64.5% of the 287 responding to the willingness item in the survey. Only 102 or nearly 36% said they wouldn't be willing to teach a distance education course. These percentages indicated a willingness on the part of the Utah faculty to give this alternative method of instruction an opportunity to work in

the Utah higher education system. The change process has attracted the attention of the faculty and a strong majority of them were willing to teach a distance education course. A frequency table, table 12, summarized the results of the willingness item. Those answering that they had already taught a distance education course were instructed not to respond to this item which explains the large amount of non-responses.

Table 12.

*Survey Item #4- Faculty Willing to Teach a Distance Education Course.*

	Frequency	Percent	Valid Percent	Cum. percent
Yes	185	43.9	64.5	64.5
No	102	24.2	35.5	100.0
Not responding	134	31.8	100.0	
Total Cases	421	100.0		

Note. Cum percent=Cumulative percent.

Women were slightly more willing to teach a distance education course than were men. The numbers showed that 118 men and 66 women said they would be willing to teach a distance education course. Those that responded no included 67 men and 35 women. The percentage of men willing to teach a distance education course was nearly 64%, fairly positive, while over 65% of the women were willing to teach a course. The most willing group to teach DE courses was the comprehensive university group of Southern Utah University and Weber State University. Respondents from these two universities, 63 of 91 (69%) were willing to teach DE courses. All the groups were moderately positive toward the item as all three had percentages over 60 percent. The community colleges had 68 of

104 (65%) willing, and the research universities had 54 of 89 (61%) respondents willing to teach.

Of the full professors responding to the willingness question, 55 (65%) were willing to teach distance education courses, while 29 were not willing. Almost 30% of total professors willing to teach distance education were full professors or 55 of the 185 willing professors on this item. Associate and assistant professors had a similar ratio with 52 (59%) associate professors and 54 (66%) assistant professors that said they would be willing to teach a distance education course, while only 36 and 27 respectively, answered no. Only eight lecturers/instructors said no and 24 (75%) said they would be willing to teach a distance course.

Of the 172 tenured faculty, 109 said they would be willing to teach distance education courses and 63 said no. That represented a percentage of 63% of tenured professors answering the survey who would teach a distance education course. Seventy-six of 136 non-tenured respondents (67%) said they would be willing to teach DE, while 37 said no.

By academic rank, Communication faculty were most willing followed by Education, Business and Medicine. Of the Communication respondents (n=11), 82% said they would be willing to teach a distance education course while 75% (n=33) of the Education faculty, 66% (n=18) of the Business, and 66% (n=17) of the Medicine respondents were willing. Only one Dean responded to the willingness question and said no to teaching a distance education course. In the Associate Deans category, six of seven said yes and 19 of 26 (75%) of the Department Chairs said they would be willing to teach DE.

Of the faculty willing to teach DE, 61 were in the 45-54 age group. The percentage of the 181 total faculty willing equaled 34% and 66% of the 45-54 age group. Only the 35-44 age group were more willing by percentage as 57 of 81(70%) were willing. The 55-64 age group had 57.5% willing to teach distance education courses.

### **Research Question Number Two**

The second research question focused on the positive or negative attitudes of the faculty concerning teaching distance education courses. The second research question read: *Do faculty have positive or negative attitudes regarding distance education as an effective method of education and positive or negative attitudes regarding the teaching of college-credit courses as part of college or university academic programs and are attitudes positive or negative regarding distance education in their academic areas/disciplines and in their own courses?* This section of the chapter answered these questions.

### **Distance Education is an Effective Educational Method**

The first item asked faculty if they considered distance education as an effective educational method on a scale from strongly agree to strongly disagree, where one equaled strongly agree. Of those responding, 49.8% either strongly agreed or agreed that distance education is an effective educational method. The mean score was 2.69 of the total 410 cases on a five point scale indicating a somewhat positive attitude toward this item. Of the faculty returning surveys, 116 indicated that they were neutral, while just 22 percent of the respondents disagreed or strongly disagreed. The faculty was positive to the



general effectiveness of distance education as an educational method as just 22% of the respondents were in some state of disagreement. In fact, of the 410 cases, only 7.8% strongly disagreed with the statement that distance education was an effective method of education. The comprehensive universities was the most positive group as 46% agreed and another 11% strongly agreed with this item. The community college group and the research university groups were much less positive as the community college group had just 36% of 143 faculty that agreed and another 10% that strongly agreed. The research universities had 35% that agreed and nine percent that strongly agreed that distance education was an effective method of DE. The research universities had the largest neutral group as 33% (41 of 121) was neutral and 22% of the respondents were negative toward the item.

By gender, women were slightly more likely to consider distance education as an effective method of education. The mean score for men who indicated distance education was an effective method was 2.76 where one equaled strongly agree, and for women the mean was 2.55 where one equaled strongly agree. Women faculty had 12% that indicated strong agreement and 43% that agreed or 59 of 136. Nearly 11% of the men strongly agreed and 38% agreed or 101 of 266 men. Tenured professors had slightly over 50% that indicated that distance education was an effective educational method while just over 20% disagreed. Of non-tenured professors, 48% were in agreement with the item and another 45 of the 159 (28%) non-tenured were neutral which left just 23% in disagreement.

Business and Medicine were the two academic disciplines most positive toward this item. Business had nearly 62% of its faculty that agreed with the item and Medicine had

58% that agreed and Education was a close third with 57.5% of the Education professors (23 of 40) in agreement. Social Science, Science and Arts & Letters all had just over 40% in agreement. The least positive group was Arts & Letters as 33% of the respondents disagreed. By academic rank no group was clearly more positive than another, but assistant professors were the most negative toward the item. Of lecturers/instructors 54% agreed (65 of 124) with this item and 53% (68 of 127) of full professors also agreed and 52% (65 of 124) of associate professors also agreed. Only 42% of the assistant professor group either strongly agreed or agreed. No lecturers or instructors strongly disagreed and just 19% disagreed. Department Chairs were slightly positive as 54% of Department Chairs (5 of 41) strongly agreed and 17 of 41 agreed.

Of those who hadn't taught a distance education course, but were willing to teach a course, 17 (9.5%), who strongly agreed that distance education is an effective method, were willing to teach a course while just four were not willing. Another 85 (48%) who were willing also agreed that distance education was an effective method. Of those willing to teach a distance education course, only 15 disagreed and 3 strongly disagreed with the statement that distance education is effective. On the other hand, 27 of 99 faculty (27%) that were unwilling disagreed with the statement that distance education was effective, and 23 (23%) strongly disagreed. There were nearly 51% in the two disagreement categories. Of the respondents 28 were neutral that were unwilling. Of those unwilling to teach a distance course, four strongly agreed that distance education was an effective method, and 17 agreed out of 99 unwilling. For the complete crosstabulation of willing and distance

education is an effective method see table 14. Of faculty that preferred teaching over service and research, 165 of 317 (52%) agreed that distance education was effective.

Table 13  
*Survey Item #12-Distance Education is an Effective Educational Method.*

	Frequency	Percent	Valid Percent	Cum. Percent
Strongly Agree	42	10.0	10.2	10.2
Agree	162	38.5	39.5	49.8
Not Sure	116	27.6	28.3	78.0
Disagree	58	13.8	14.1	92.2
Strongly Dis.	32	7.6	7.8	100.0
Total Cases	410	100.0	100.0	

Table 14  
*Survey item #12 Distance Education is an Effective Educational Method-  
Willing Crosstabulation*

DE Effective	Willing-Yes	Willing-No	Total
Strongly Agree	17	4	21
Agree	85	17	102
Neutral	58	28	86
Disagree	15	27	42
Strongly Disagree	3	23	26
Total Cases	178	99	277

*Note.* The willing measure asked those who hadn't taught a DE course if they would be willing to teach a distance education course.

The faculty that indicated that they were very familiar with distance education strongly agreed and agreed that distance education was effective. Of those very familiar, 13% strongly agreed and 43% or 97 of 224 agreed. Another 48 (21.4) were neutral and just

22.3% disagreed. Of those somewhat familiar with DE, 44% were positive toward the item and 35% were neutral. That left only 36 of 168 (21%) that strongly disagreed (7%) or disagreed (14%)

Distance Education Should Be Used as Part of College or University Academic Programs

In response to the item, *Distance education should be used as part of college or university academic programs*, 65.9% of the total faculty indicated that they agreed or strongly agreed, while of that group, 54% said that they agreed that distance education should be used as part of college or university academic programs. Only 17.4% responded that they either disagreed or strongly disagreed. The overall mean score was 2.46 on a five-point scale, based on 414 respondents, where one equaled strongly agree.

By school groups, the most positive group was the comprehensive universities (Weber State and Southern Utah) as 70% of the faculty responding agreed with this item and just 18% either disagreed or strongly disagreed. Also, of the 49 that strongly agreed, in all three groups, 20 of them (41%) were from this group. The community colleges were nearly as positive as 68% were in agreement with just 16% indicating that they were negative toward this item. Just less than 60% were in agreement in the research university group, while 19% of the research faculty were negative toward the item.

Again the 137 women responding were more likely to agree with the statement. The mean score for women was 2.37 as compared to the men's mean score of 2.51. Nearly 71% of women faculty members agreed or strongly agreed while 63% of the men did. Of the men, 19% disagreed while 15% of the women disagreed. Business professors were the

most positive toward this item as 87% were either strongly in agreement or agreed and just one faculty member of 38 disagreed. Education and Medical professors were also strongly in agreement as 80% and 73% agreed and Social Science had 62% that either agreed or strongly agreed. Of those faculty that preferred teaching, 177 of 321 (55%) agreed with the item and 37 (12%) strongly agreed. Only 16% of them disagreed. Department Chairs were positive toward the item as 66% agreed, but 70% of Sequence Heads agreed and five of six assistant Deans agreed. Lecturers/Instructors were most positive as 73% (36 of 49) agreed or strongly agreed while only eight (16%) disagreed or strongly disagreed. Full professors were the second most positive group (67%) 87 of 129, associate professors were nearly as positive (66.8%), and 66 of 109 (60%) assistant professors were positive toward this item. In fact, only 18% disagreed and 21% were neutral. By tenure the percentages were very close, as non-tenured were just slightly more positive than tenured faculty toward the item (56% to 53%).

Considering those familiar with DE, 72% (165 of 224) of those very familiar agreed that distance education should be used as part of college or university academic programs. Another 11% were neutral, but only 15 faculty members disagreed. Of those somewhat familiar, 59% (101 of 171) agreed and only 19% disagreed. In regard to institutional use of DE, 194 of 299 who agreed that distance education should be used by their institution were in agreement with this item or 65 percent. Another 49 (16%) strongly agreed. Even those who disagreed with institutional use of DE none strongly disagreed with this item.

Those willing to teach DE were also strongly in agreement with this item. Nearly 70% were positive (61% agreed) and just a little over 10% disagreed (18 of 180). Of those unwilling to teach, 42 of 101 (41%) were still in agreement with this item.

Table 15 summarized the frequencies of whether faculty believed that distance education should be used as part of university or college academic programs.

Table 15

*Survey Item #13- Distance Education Should Be Used as Part of College or University Academic Programs.*

	Frequency	Percent	Valid Percent	Cum.. Percent
Strongly Agree	49	11.6	11.8	11.8
Agree	224	53.2	54.1	65.9
Not Sure	69	16.4	16.7	82.6
Disagree	45	10.7	10.9	93.5
Strongly Dis.	27	6.4	6.5	100.0
Total Cases	414	98.3	100.0	
Not responding	7	1.7		
Total	421	100.0		

*Note.* Cum. percent=cumulative percent. Strongly Dis.=Strongly Disagree.

#### Distance Education Courses Should Be Offered for College Credit

In response to this item, 55% indicated that they strongly agreed or agreed that DE courses should be offered for college credit. Clearly, faculty were favorable to the offering of college credit using distance education courses. The mean score of the item was 2.29 indicating a moderate to strongly positive attitude by faculty toward this item. Only 30 respondents disagreed and 25 strongly disagreed with offering college credit for distance

education courses. The 25 represented just six percent of the faculty that strongly disagreed. Of 224 faculty familiar with distance education, 52 (23%) strongly agreed and another 124 (55%) agreed that distance education courses should be offered for college credit. Only 11% of the 224 very familiar with DE disagreed, and of those, only 12 or five percent strongly disagreed. Of those somewhat familiar, only 25 (15%) either disagreed or strongly disagreed with the college credit item. By group both the comprehensive and community college groups were strongly in agreement. Both groups had a combined total of 75% that either strongly agreed or agreed with the item, and 66% of the research faculty group agreed. Another 14% of the total 414 faculty responding to the item were neutral and just 13% of the 414 disagreed.

Among faculty willing to teach distance education, 30 strongly agreed that distance education courses should be offered for college credit and another 118 agreed, a total of nearly 71% that strongly agreed or agreed with this item. Only 34 of 101 (34%) faculty who were unwilling to teach DE disagreed or strongly disagreed with this item.

Concerning institutional use of DE and this item, those that agreed with the institutional use item overwhelmingly agreed (64%) with the college credit item. Another 71 (24%) of the faculty strongly agreed that also agreed with institutional use. Of the 92 that disagreed with institutional use of DE, 21 (23%) disagreed and another 23% strongly disagreed. Of those who disagreed with institutional use, 26 or 28% agreed with the college credit item and another 26% were neutral.

By gender, both men and women agreed with this item. More women by percentage agreed than men, but just slightly. Of the women responding 76% agreed while 71% of

the men agreed. As expected, the faculty by academic rank supported this item. Of full professors, 72 of 129 agreed or 56 percent. Associate professors had 59% that agreed with this item, 54% of assistants agreed, and 49% of lecturers/instructors agreed. These figures didn't include those who strongly agreed. Another 71 of 411 total faculty strongly agreed. When combining disagreed and strongly disagreed less than 11% of the full professors disagreed with this item. Just 18 associates of 124 disagreed, 15 of 109 assistant professors and six of 49 lecturers or instructors (12%) disagreed. Sixty-one percent of Department Chairs, 25 of 41, agreed and another eight (20%) strongly agreed.

The academic area breakdown indicated that each of the areas supported the item of college credit and distance education. Business was the most supportive with 66% indicating that they agreed and another 18% strongly agreeing. Education and Business also had more than 60% in agreement with the item. In fact, 10 of 13 (77%) Communication faculty either agreed or strongly agreed. For the frequency breakdown of faculty responses to this item see table 16.

#### Distance Education Courses Are Appropriate in Your Academic Area

Attitudes of faculty concerning distance education courses in their own academic area were less strong than the previous measures. Of the 411 cases, nearly half (49.6%) responded that they either agreed or strongly agreed with the item *Distance education courses are appropriate in your academic area*. Of that total, 35% agreed while another 15% were neutral on a five point scale. A total of 35% disagreed or strongly disagreed, in fact, 16.2% disagreed and 18.1% strongly disagreed. Some of the disagreement is



**Table 16**  
***Survey Item #14-Distance Education Courses Should Be Offered for College Credit.***

	Frequency	Percent	Valid Percent	Cum. Percent
Strongly Agree	71	16.9	17.1	17.1
Agree	229	54.4	55.3	72.5
Not Sure	59	14.0	14.3	86.7
Disagree	30	7.1	7.2	94.0
Strongly Dis.	25	5.9	6.0	100.0
Total Cases	414	98.3	100.0	
Not responding	7	1.7		
Total	421	100.0		

interpreted to mean that faculty felt some courses were suitable and some were not suitable for distance education applications. This is made evident when consulting the responses to the open question concerning positive or negative attitudes toward distance education.

The mean score of this item was 2.89 which indicated a slightly positive attitude toward distance education courses being appropriate for the faculty members academic areas. The three groups didn't have many differences concerning this item. For example, of those strongly agreeing with this item 22 of 60 (36%) were from comprehensive universities, 20 of 60 (33%) were faculty at community colleges, and 18 (30%) were faculty at research universities. Among those agreeing, 40% were from the comprehensive universities and 26% were from research universities. Of the community college faculty, 32 of 76 (42%) strongly disagreed with this item and 28% (21 of 76) of the

comprehensive universities strongly disagreed while 27% (21 of 76) of research faculty strongly disagreed.

Tenured faculty were slightly in favor of the item as nearly 51% were either strongly in agreement or in agreement. Tenured faculty had 41 (16.4%) respondents that said they strongly agreed and 88 of 249 that agreed (35%), while 32% either disagreed or strongly disagreed. Of the non-tenured faculty, 61 of 159 either disagreed or strongly disagreed, a total of 38% split nearly evenly and 47% were in agreement with 12% strongly agreeing and 35% agreeing with the item.

By gender, women were slightly positive toward the item, while men were slightly negative as 53% of the women and 48.3% of the men were in agreement with this item. A total of 99 of 267 men (37%) and 43 of 137 (31%) women either disagreed or strongly disagreed. Another 39 (14.6%) men and 22 women (16%) were neutral.

When considering the crosstabulation of this item with *Whether or not your institution makes significant use of DE methods, do you believe it should?* The faculty that disagreed with institutional use of DE was also strongly against this item. Of the 92 that said no to institutional use, 44 (48%) strongly disagreed and another 26% disagreed. Of those agreeing with institutional use, nearly 20% strongly agreed and 43% agreed that distance education would be appropriate in their academic area.

Of faculty having taught DE, 29% of 119 strongly agreed with this item and 41% agreed, while another 10% were neutral. Only 19% of those having taught DE disagreed with nine percent indicating that they strongly disagreed with the item. Of the 290 faculty that hadn't taught DE, 41% were negative toward the item as 19% disagreed and 22%

strongly disagreed. Although of those who hadn't taught DE, 32% or 94 of 290 were in agreement that DE was appropriate in their academic area and eight percent strongly agreed.

Regarding faculty familiarity, 47 of 224 faculty that were very familiar with DE were also strongly in agreement with this item or 21% and another 38% agreed. Eleven percent of the faculty very familiar with DE disagreed and 35 (16%) strongly disagreed. Of those who were somewhat familiar, 33% or 56 of 169 agreed that DE was appropriate in their academic area and seven percent strongly agreed. Another 21% of those that were somewhat familiar disagreed, and 37 of 169 (22%) strongly disagreed, a total of 43% that disagreed with this item that were somewhat familiar with DE.

Business faculty was most positive group toward distance education courses being appropriate in their academic area as 53% agreed. And 24% of 38 Business faculty strongly agreed. Communication was also very positive toward this item. Communication professors agreed overwhelmingly and only one of the group disagreed. Nearly 62% agreed with this item. Science faculty were more evenly divided as 45% agreed or strongly agreed and 40% of 94 disagreed. Of the Social Science faculty responding, 58% were positive toward the item and 14 of 50 (28%) disagreed. Of those that disagreed, eight percent strongly disagreed.

Full Professors were more positive than negative as 21% strongly agreed and 35% agreed, a total of 56% positive, while 18% disagreed and 12% strongly disagreed. Another 14% of full professors were neutral. Following full professors were associate professors as 51% agreed or strongly agreed (12%) and just over 33% disagreed.

Assistant professors were evenly divided with 41% choosing either strongly agreed or agreed and 41% choosing to disagree.

Examining age, the 35-44 group was the most positive as 52% strongly agreed or agreed while just over 50% of the age group 45-54 were positive. In the 55-64 age group, 47% were positive toward the item and 35% were negative. See table 17 for the complete summary of the frequencies related to this item.

Table 17  
*Survey Item #15- Distance Education Courses Are Appropriate in Your Academic Area.*

	Frequency	Percent	Valid Percent	Cum. Percent
Strongly agree	60	14.3	14.6	14.6
Agree	144	34.2	35.0	49.6
Not Sure	63	15.0	15.3	65.0
Disagree	68	16.2	16.5	81.5
Strongly Dis.	76	18.1	18.5	100.0
Total Cases	411	97.6	100.0	
Not responding	10	2.4		
Total	421	100.0		

#### I Would Like To Use Distance Education for My Courses

The faculty was much less positive toward the use of distance education in their own courses. Respondents who strongly agreed with the statement *I would like to use distance education for my courses* totaled 42 (10.3%) of the 409 cases responding to the item. There were 114 faculty that agreed with the statement which was just 27.1 percent. There were a total of 38% of the faculty that either agreed or strongly agreed.

The overall mean score was 3.13, a slightly negative response on a five point scale where one equaled strongly agree. Of the 409 cases, 87 strongly disagreed, meaning that just over 20% held a strongly negative attitude toward using distance education in their own courses, but 79 others disagreed with this item. Overall, 156 faculty members agreed or strongly agreed with the statement *I would like to use distance education in my courses*, while 21% were neutral. The neutral element was significant since some of the 21% neutral, or 87 faculty members, could perhaps be convinced in the future to teach distance education courses in their own areas.

The academic area of the faculty member would be an influence as to what courses faculty believed could be offered through distance education. A number of those who answered the open response question that asked faculty if they liked distance education and encouraged a written answer, were qualified by conditions one of which was that some courses were not appropriate for distance education. A future study needs to explore this issue of appropriateness of courses for distance education applications.

By groups, the community colleges were more positive as 13.4% of 141 indicated that they strongly agreed with this measure. Comprehensive universities were a close second on this measure, as 11.3% strongly agreed, but more of them agreed with the item than either of the other two groups 32% agreed to 28% for the community colleges and 24% of the research university faculty. The research faculty had 25 of 121 (21%) that strongly disagreed with this item and the other two groups had 18% each that strongly disagreed. See table 19 for the crosstabulation of the three groups with this item.

The difference of means was not significant between men and women. The mean score of the men was 3.16 and the mean score of the women on a five-point scale where one equaled strongly agree was 3.10. There were 27 men that strongly agreed and 71(27%) that agreed with the statement, while 61 men disagreed and 54 strongly disagreed or 43% percent. Women were more positive to the statement *I would like to use distance education for my courses* as 14 women strongly agreed and 40 agreed. Of the women surveyed, 40% had a positive attitude toward the statement. Only 18 women disagreed, but 32 strongly disagreed which translated into 37% of the 134 women that either disagreed or strongly disagreed.

By age, those in the survey 35–44 actually were more positive than negative concerning the item, as 39% strongly agreed or agreed and 37.5% either strongly disagreed or disagreed. Those 45 to 54 were nearly evenly divided 42.4 to 42 percent. In the age group 55 to 64, 44% disagreed or strongly disagreed, while 35% either agreed or strongly agreed.

Despite the mean reflecting a negative attitude on this item, full professors agreed or strongly agreed with the use of distance education in their own courses 56 to 39% and lecturers and instructors were positive on the item 52 to 31 percent. The two groups accounted for 43% of the total faculty responding to this item. Associate professors and assistant professors responded negatively to the item with associates slightly negative, 38 to 40%, and assistants more negative to the item, as they disagreed 30 to 44 percent. This group accounted for well over half of the faculty cases, 230 of 406. There were no differences to report when comparing tenured to non-tenured professors on this item.

Department Chairs accounted for only 10% of the total faculty responding but had a negative attitude toward the item as 45% disagreed while just 37% of Department Chairs agreed.

Two academic areas were strong in their disagreement with the use of distance education in their courses. Arts & Letters faculty disagreed 51 to 28%, and Science 49 to 29 percent. Social Science professors disagreed 46 to 34%, but Business, Communication, and Education were in agreement with the statement. Business agreed 50% to 23% when agree and strongly agree were combined. Communication agreed 54 to 15%, based on the 13 faculty in that category and Education 50 to 25%, determined from the 40 Education faculty responding.

An interesting finding indicated that those very familiar with distance education were more likely to strongly agree or agree with the use of distance education in their own courses. Of the 223 faculty that said they were very familiar with distance education, 16% or 36 of them strongly agreed with using DE in their courses. Another 75 faculty agreed with using DE in their courses or 33 percent. Only 36% of the faculty that were very familiar with DE disagreed or strongly disagreed with this item. See Table 19. This suggests that the more familiar faculty was with DE, the more likely they were to want to use DE in their own courses.

Those who had taught DE were positive toward the use of distance education in their own courses. Of the 119 that had taught, 22% strongly agreed with this item, while 35% agreed. On the negative side, 14% of those that had taught were negative toward this item indicating that they disagreed and another 11% of the 119 strongly disagreed. Of faculty

that hadn't taught DE, 25% said that they would like to use DE for their courses while another five percent strongly agreed and 23% were neutral. However, of those that hadn't taught DE, 47% disagreed as 62 (22%) disagreed and 73 (25%) strongly disagreed.

### Research Question Three

The third research question explored faculty knowledge of distance education methods, the methods faculty preferred using, and the methods the faculty viewed as effective. In order to obtain information concerning the knowledge of distance education methods, the respondents were asked to rank the eight categories with number one being the method the faculty member knew the most about, and the number eight representing the number the faculty member knew the least about.

Table 18  
*Survey item #16-I Would Like To Use Distance Education in my Courses*

	Frequency	Percent	Valid Percent	Cum. Percent
Strongly Agree	42	10.0	10.3	10.3
Agree	114	27.1	27.9	38.1
Neutral	87	20.7	21.3	59.4
Disagree	79	18.8	19.3	78.7
Strongly Dis.	87	20.7	21.3	100.0
Total Cases	409	97.1	100.0	
Not responding	12	2.9		
Total Responses	421	100.0		



Table 19  
*Crosstabulation of the three Groups by Item #16-I Would Like to Use Distance Education for My Courses.*

	My Use					Total
	S. Agree	Agree	Neutral	Disagree	S. Disagree	
CU	16	45	34	21	26	142
CC	19	39	23	26	34	141
Research	7	29	30	30	25	121
Missing	0	1		2	2	5
<b>Total</b>	<b>42</b>	<b>114</b>	<b>87</b>	<b>79</b>	<b>87</b>	<b>409</b>

Note. CU=Comprehensive Universities; CC=Community Colleges; Research=Research Universities. S. Agree=Strongly Agree; S. Disagree=Strongly Disagree.

Table 20  
*Crosstabulation of Familiarity with Use of Distance Education in Faculty's own courses. Item #1 and Item #16 on survey.*

Familiar	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total Cases
Very Fam.	36	75	32	40	40	223
SW Fam.	5	35	51	33	43	167
Not Fam.	1	2	4	6	3	16
<b>Total</b>	<b>42</b>	<b>114</b>	<b>87</b>	<b>79</b>	<b>87</b>	<b>406</b>

Note. Very Fam.=Very familiar; SW Fam.=Somewhat familiar; Not Fam.=Not Familiar at all.

The Methods of Distance Education with Which the Faculty Were Most Familiar

The Utah faculty knew the most about correspondence study and the least about audiographics. The mean score of correspondence study in this item was 2.91 with the number one equaling the method the faculty knew the most about. In fact, 117 of the 348 respondents ranked correspondence study as the method with which they were the most familiar. The item considered here (number 10 on the survey) asked the faculty to *Rank in order the technology or method of distance education you know the most about, using number 1 to represent the method you know the most about and number 8 to represent the method you know the least about.* Telecourses and videoconferencing were second and third choices of the faculty. Telecourses had a mean score of 3.48 and 153 of 351 respondents listed telecourses as their first or second most familiar method. Videoconferencing with a mean of 3.60 ranked as the third most familiar or well-known methods among the Utah faculty. Seventy-nine said they were most familiar with telecourses and 29 were most familiar with video conferencing. The mean scores for item 10 were displayed in table 21.

Nearly thirty-four percent, 117 respondents of the 348 selected correspondent study as the method with which they were most familiar. Of those 78% selected correspondence study in their top four choices of methods they knew the most about. Less than four percent said they knew the least about correspondence study as a method of distance education.

Table 21  
*Survey Item #10. Faculty ranking mean scores of methods with which they were most familiar.*

	N of cases	Most familiar	Least familiar	Mean	SD
AC	345	1.00	8.00	3.71	1.87
VC	350	1.00	8.00	3.60	1.61
CC	338	1.00	8.00	5.20	1.61
A	331	1.00	8.00	7.19	1.26
TC	351	1.00	8.00	3.48	2.18
C	348	1.00	8.00	2.91	2.03
FM	341	1.00	8.00	5.15	2.42
INT	343	1.00	8.00	4.10	2.19

note. AC=audio conferencing, VC=videoconferencing, CC=Computer Conferencing, A=audiographics, TC=telecourses, C=correspondent study, FM=full motion-two way video, INT=internet or on-line courses.

#### Distance Education Methods Preferred by the Utah Faculty

Item 11 of the survey asked the faculty to determine which of the methods was their preferred method of distance education delivery, whether or not they had taught a distance education course. The actual question in the survey read: *Whether or not you have taught a distance education course, please answer this question. In rank order, which distance education technology do you or would you prefer using? Rank 1 through 8 where 1 is your most preferred delivery method.*

Two-way full-motion video was the most preferred method of distance education selected by the faculty with 189 of 337 faculty choosing it as their number one choice. The 189 represented 56% of the 337 responding to the item. Another 47 selected it as their

second most preferred delivery method. Overall, 83% selected full motion two-way video in the top four of DE delivery methods. Internet or on-line courses was selected by the second largest group as their number one most preferred method as a total of 59 faculty selected it as their number one preferred method. Sixty-two others selected internet as their second choice and another 52 named it as their third choice. Overall, 67% of the faculty selected internet or on-line courses as one of their top four preferred methods. There were 330 faculty that responded to the internet item.

The third most preferred distance education delivery method was videoconferencing with telecourses a close fourth. Videoconferencing was the most preferred method by 40,  $n=321$ , of the faculty and telecourses,  $n=321$ , was selected by 37. Videoconferencing was actually preferred by more faculty when considering the top four places with nearly 79% choosing it as one of their top four preferences. Videoconferencing was selected by 104 faculty members their second choice behind full motion two-way video. By contrast, 56% selected teleconferencing as a top four choice.

Using mean scores of the eight choices on this item, full-motion two-way video was number one with a mean score of 2.41, videoconferencing was second with a mean of 3.17, internet or on-line courses was third, 3.72, and teleconferencing was fourth with a mean score of 4.21. See table 22.

Even though correspondent study was the most familiar method, as previously reported, only 20 of the 323 faculty responding on the preference item selected correspondence study as their most preferred delivery method. Only one faculty member

chose audiographics number one, and six each selected computer conferencing and audio conferencing.

Of those who indicated that they had taught distance education courses, 61 selected two-way full-motion video as their number one preferred choice and 16 selected it as their second choice. Of those selecting internet courses as the most preferred delivery method, 21 of them had previously taught a distance education course and 19 selected it as their second choice. Only five faculty members having taught distance education selected videoconferencing as the most preferred method, but 30 picked it as their second choice, and 14 selected teleconferencing as their number one preference, while 16 chose it as their second most preferred method. Of those faculty members never having taught distance education, 127 selected full motion two-way video as their number one choice, 38 selected internet number one and 35 videoconferencing as their top choice. Teleconferencing was the first choice of the fourth largest group having never taught DE (23).

Faculty preferred to use distance education methods that involved the new video technological methods as the top four preferred methods were newer methods that offered better interaction and feedback between faculty and students.

#### Effective Methods of Distance Education

The faculty were asked to indicate their attitude toward the use of the distance education methods when used in college-level for credit instruction on a five-point scale where one equaled strongly agree and five equaled strongly disagree. Those not informed enough checked the number nine. The method faculty selected as the most effective was

full motion two-way video and audio with a mean of 2.19. Internet on-line courses was the second most effective method according to faculty with a mean of 2.61 and the two

Table 22

*Survey Item #11-Distance Education Method the Faculty Preferred Using*

	N of cases	Minimum	Maximum	Mean	SD
AC	314	1.00	8.00	4.9522	1.7841
A	303	1.00	8.00	6.6964	1.4873
C	323	1.00	8.00	5.4365	2.2960
CC	310	1.00	8.00	4.6774	1.6969
FM	337	1.00	8.00	2.4125	2.1155
INT	330	1.00	8.00	3.7152	2.1826
TC	321	1.00	8.00	4.2087	2.1397
VC	321	1.00	8.00	3.1651	1.6510

note. AC=Audioconferencing; A=Audiographics; C=Correspondence Study; CC=Computer Conferencing; FM=Full motion or compressed two-way video, two-way audio; INT=Internet or on-line courses. TC=Telecourses; VC=Videoconferencing;

were followed by videoconferencing and telecourses with means of 2.84 and 2.89 respectively.

The faculty most strongly agreed that full-motion two-way video and audio was an effective method as 82 respondents strongly agreed on this item and another 194 agreed that it was an effective method. When considering the 378 responding 73% strongly agreed or agreed that two-way video and audio was an effective method. Internet on-line courses were judged effective as 33 strongly agreed and 139 faculty members agreed with the item. In fact, over 45 percent either strongly agreed or agreed that on-line courses were effective.

Telecourses were selected as an effective method by 16 faculty members who strongly agreed, but 171 agreed that it was effective while 94 were neutral. In fact including the neutral responses, 81.7% of the faculty indicated that it was an effective distance education method. Only 12 faculty members strongly agreed that Videoconferencing was an effective method, but 169 agreed. Less than 25% disagreed that videoconferencing was an effective method. Breaking it down further, nearly 16% disagreed and just eight percent strongly disagreed.

Correspondence Study was judged as an effective method by the faculty as its mean score was slightly positive at 2.98. Computer Conferencing was not as effective in the judgment of the faculty based on a mean score of 3.21. Audioconferencing's mean score was 3.76 indicating a fairly negative expression by faculty of its effectiveness. Disagreeing that the item was effective as a method of distance education were 139 faculty members. See table 24 for the complete cases answering each item regarding effective methods and the mean scores for each of the distance education methods on this measure.

There were a number of faculty members who selected number 9 on the survey indicating that they were not informed enough to determine the effectiveness of these methods. Eliminating those respondents acted to strengthen the measures that resulted.

Again the faculty judged the new technological methods to be the most effective methods of DE indicating a positive potential for the continued development of these methods in distance education use. By group, the comprehensive faculty strongly agreed that full motion two-way video was effective as 73% selected either strongly agree or agree out of 135 faculty in the group that responded to the item. Only eight percent of the

Table 23  
*Survey Items 17 through 24-Effective Methods of Distance Education*

	N of cases	Minimum	Maximum	Mean	SD
AC	349	1.00	5.00	3.7593	.9646
VC	375	1.00	5.00	2.8427	1.0467
CC	363	1.00	5.00	3.2094	1.0001
A	336	1.00	5.00	2.9851	.9757
TC	383	1.00	5.00	2.8381	1.0781
Corr Study	393	1.00	5.00	2.9771	1.0652
Two-way V	378	1.00	5.00	2.1852	.9622
Internet	377	1.00	5.00	2.6976	.9994

Note. AC=Audio Conferencing; VC=Video Conferencing; CC=Computer Conferencing; A=Audiographics; TC=Telecourses; Corr Study=Correspondence Study; Two-way V=Full two-way video, two-way audio; Internet=Internet on-line courses.

comprehensive faculty disagreed that this method was effective. Of the community college faculty, 102 of 132 (77%) said that this method of full-motion two-way video was effective and 68% of the research faculty agreed or strongly agreed that this method was effective. The three groups selected telecourses and videoconferencing as effective but fewer strongly agreed with these methods as effective when compared to full motion two way video. Faculty were slightly more positive toward teleconferencing than videoconferencing. Of the comprehensive faculty, 47 agreed with teleconferencing being effective and 46 agreed with videoconferencing, while 46% of community college faculty agreed that teleconferencing was effective and 44% agreed that videoconferencing was effective. Research faculty thought that videoconferencing was more effective 45 to 38 percent. Examining the group attitude toward videoconferencing as an effective method,



169 faculty agreed that it was effective and another 12 strongly agreed. The three groups all indicated that videoconferencing was effective and the percentages were within two points on this measure.

#### **Research Question Four**

The fourth research question was answered as demographic group or professional characteristic information was compared to the responses of the faculty to the various survey items of the other research questions. The question was worded: *How do the attitudes of Utah public higher education faculty toward college-credit distance education vary comparing their professional characteristics?*

#### **Research Question Five**

The fifth research question focused on nonverbal communication and its use in the distance education classroom as well as on the importance of immediate interaction and feedback. It also asked if faculty would be more willing to teach distance education courses using full motion two-way video and two-way audio. The actual question read: *Do faculty believe that interaction between students and teachers can be adequately recreated in the video distance education classroom and do they believe that nonverbal communication between teacher and student is important in the conventional or traditional classroom? Do they believe that nonverbal communication between teachers and students can be as effective in the distance classroom using the new technologies and does the technological ability to have immediate interaction and immediate feedback between student and teacher make distance education more feasible as an alternative*

*educational practice? Were the Utah faculty more willing to instruct distance education courses using full motion two-way video and audio than they would using other methods?*

Each of these questions were answered in the following section.

#### Nonverbal Communication is Important in the Conventional Classroom

The Utah faculty overwhelmingly agreed that nonverbal communication between teacher and student is important in the conventional classroom. This was an important measure to see how the faculty felt about nonverbal communication in their classrooms. Of the 417 faculty that responded to this item, 222 strongly agreed and 154 agreed that nonverbal communication is important in the conventional classroom or a percentage of 90 percent. Only 20% indicated that they disagreed or strongly disagreed with this item.

By group, 55% of the comprehensive universities faculty most strongly agreed with this nonverbal communication item and another 38% agreed. The community colleges had 53% strongly in agreement while another 35% agreed, and the research universities had 49.6% that strongly agreed and 38% that agreed. Sixty-one full professors and 70 associate professors selected strongly agreed while 59 assistant professors and 28 lecturers/instructors strongly agreed. Another 50 full professors, 46 associate, 43 assistant professors and 15 lecturers/instructors agreed that nonverbal communication is important in the traditional classroom. Of the 271 men, 134 (49%) strongly agreed and 110 (41%) agreed that nonverbal communication is important in the conventional classroom. Of 138 women responding, 85 or 62% strongly agreed and 39 (28%) agreed.

In academic areas, Science had 89 of 96 (93%) of the faculty strongly agree or agree and 46 of the 89 (52%) strongly agreed) with the statement. Twenty-three of 26 in Medicine, 44 of the 51 in Social Science and 67 of 69 (97%) of the Arts & Letters faculty responded positively with 56 strongly agreeing. All 13 Communication faculty agreed. See table 23 for the complete frequency summary of the faculty on a five point scale.

**Table 24**  
*Survey Item #6-Nonverbal Communication Between Teacher and Student is Important in the Classroom*

	Frequency	Percent	Valid Percent	Cum Percent
Strongly Agree	222	52.7	53.2	53.2
Agree	154	36.6	36.9	90.2
Not Sure	21	5.0	5.0	95.2
Disagree	12	2.9	2.9	98.1
Strongly Dis.	8	1.9	1.9	100.0
Total	417	99.0	100.0	
Missing	4	1.0		
Total	421	100.0		

#### Nonverbal Communication Can Be As Effective in the Distance Education Classroom

The faculty did not agree that nonverbal communication between teacher and student could be as effective in the distance classroom using two-way video and audio methods as it is in the conventional classroom. Although faculty agreed that this was an effective method, only 18.5 percent of the 416 responding to the item indicated that they strongly agreed or agreed. On the other hand, 36.8% disagreed with the item while 19% strongly

disagreed. Only 77 respondents strongly agreed or agreed concerning the effectiveness of nonverbal communication in the full-motion two-way video distance classroom, while 153 disagreed and 79 strongly disagreed. Nearly 37% disagreed and 19% strongly disagreed with this item. The mean score of 3.52 on a five point scale, where one equaled strongly agree, indicated a moderately negative attitude toward the ability to recreate nonverbal communication in the distance education classroom. Table 25, a frequency table summarized the faculties responses to this item. Full professors, associate professors and assistant professors all had over 40 faculty that disagreed or strongly disagreed. Of 129 faculty, 47 full professors disagreed, (36%), and 48 associate professors of 123 (39%) also disagreed. Forty assistant professors out of 110 (36%) disagreed and 30 of 123 associate professors and 22 of 110 assistants strongly disagreed.

By gender, only 28 women of 138 (20%) agreed or strongly agreed with this item and 49 of 270 men (18%). Forty-eight women (35%) and 105 men (39%) disagreed and 24 (17%) and 53 (20%) strongly disagreed, respectively. Respondents by age were similar to other demographic groups with a moderately to strongly negative result in each category. Fifty of 124 faculty from 35-44 disagreed and 52 of 142 in the 45-54 age group disagreed while 38 of the 106 from 55-64 disagreed with the statement.

Immediate Interaction and Immediate Feedback between Student and Teacher  
Makes Distance Education More Feasible

The faculty agreed that interaction and feedback made distance education more feasible. A total of 296 of the 414 faculty members that responded (71.5%) said that the

**Table 25**  
***Survey Item #7-Nonverbal Communication Between Student and Teacher***  
***Can Be As Effective in the DE classroom (Using Two-way Video and Two-way***  
***Audio Media Methods) as it is in the Conventional Classroom***

	Frequency	Percent	Valid Percent	Cum. Percent
Strongly Agree	15	3.6	3.6	3.6
Agree	62	14.7	14.9	18.5
Neutral	107	25.4	25.7	44.2
Disagree	153	36.3	36.8	81.0
Strongly Dis.	79	18.8	19.0	100.0
Total	416	98.8	100.0	
Missing	5	1.2		
Total	421	100.0		

technological ability to have immediate interaction and immediate feedback between student and teacher, made distance education more feasible than if immediate interaction and feedback were not available. A total of 58 respondents or 14% were not sure, while 60 faculty respondents (14%) either disagreed or strongly disagreed. The mean score on this measure was 2.26 on a five point scale which illustrated a strongly positive attitude toward the technological interaction between student and teacher with video based distance education delivery methods. By group, a near equal amount of comprehensive and research university faculty strongly agreed with this feasibility issue concerning interaction and feedback. Of the comprehensive faculty, 21% (30 of 144) were strongly in agreement and another 54% agreed, while 10% were neutral and just a total of 14% disagreed. The research group faculty had 22% in strong agreement and another 52% in agreement and 14% neutral. Of the research faculty, just a little over 11% disagreed with

the item. The community college faculty had 22% that strongly agreed with this feasibility measure and another 45% that agreed, while nearly 17% were neutral, and 16% (26 of 143) disagreed.

Of those very familiar with DE, 58 of 223 (26%) were strongly in agreement with this item. Another 115 or 52% agreed and 23 (10%) were neutral. Only seven percent disagreed and another four percent strongly disagreed. The faculty that indicated they were somewhat familiar had 29 or 17% strongly agree with this item and 80 (47%) agreed. Another 31(18%) were neutral and only 32 total faculty disagreed that were somewhat familiar and just eight of those strongly disagreed. Of those not familiar at all with DE, 12 or 75% indicated that they were in agreement with this item.

Regarding institutional use of DE, 81 of 300 faculty in favor of using DE at their institutions strongly agreed with this feasibility item. Another 166 (55%) agreed and just 19 (6%) disagreed and only 3 strongly disagreed. Among those faculty that said no to institutional, 38 agreed with the item or 40% of the 94. Just 36% of the faculty answering no to institutional use of DE, 34 of 94 faculty, disagreed that the technological ability to have immediate interaction and immediate feedback between student and teacher made DE more feasible. Of those willing to teach DE, 42 of 182 or 23% strongly agreed and 99 (54%) agreed with this item of feasibility. Only seven percent disagreed and only two percent strongly disagreed. Of those unwilling to teach DE, 31 of 101 (31%) disagreed and of those just 12 strongly disagreed. Another 45 of the 101 (45%) unwilling to teach DE agreed with this item.

**Table 26**  
***Survey Item # 8-The Technological Ability to Have Immediate Interaction and Immediate Feedback Between Student and Teacher Makes Distance Education More Feasible.***

	Frequency	Percent	Valid Percent	Cum. Percent
Strongly Agree	88	20.9	21.3	21.3
Agree	208	49.4	50.2	71.5
Neutral	58	13.8	14.0	85.5
Disagree	42	10.0	10.1	95.7
Strongly Dis.	18	4.3	4.3	100.0
Total	414	98.3	100.0	
Missing	7	1.7		
Total	421	100.0		

The support for this item was also highly positive in other demographic areas. Business faculty were strongly positive as 31 of 39 (79%) either strongly agreed or agreed with the item and only two strongly disagreed and just one disagreed. Science faculty were also strongly in agreement as 15 strongly agreed and 52 agreed, meaning 67 of 95 (71%) of the Science faculty were positive to the item and another 13 were neutral, while just 12 disagreed (13%) and three strongly disagreed (03%). Ten of 13 Communication faculty either agreed or strongly agreed with the feasible item.

Academic rank also showed positive agreement to this item. All four categories were close to 75% either strongly agreeing or agreeing. Only 17 full professors, 19 associate professors, 18 assistant professors and five lecturers exhibited negative attitudes by checking either disagree and strongly disagree. Only 18 of the faculty strongly disagreed and no lecturers respondents strongly disagreed. Of 41 Department Chairs, seven strongly

agreed (17%) and 20 agreed (49%), while eight were neutral and eight assistant department chairs of 10 were in agreement and 13 of 19 (68%) sequence heads were also positive toward the item. All age groups were also in agreement.

Both men and women had positive attitudes toward this feasibility item. Of the men, 52 of 270 (19%) strongly agreed and 141 (52%) agreed, while of the 136 women, 33 (24%) strongly agreed and 63 (46%) agreed with the item. Only 11 men and 7 women strongly disagreed.

Faculty Would Be More Willing to Teach Distance Education Courses  
Using Full Motion Two-way Video and Two-way Audio

Faculty were more positive on the item, *I would be more willing to teach distance education courses using full motion two-way video and two-way audio*. Eighty-eight respondents said they strongly agreed and 169 agreed (66.4%) out of 387 respondents. Of those responding 34 of the faculty members indicated that they were not informed enough and less than 15% said that they disagreed or strongly disagreed with this item. The mean score based on 387 responses was 2.30 which demonstrated a strongly positive attitude toward teaching distance education using this highly interactive method. For the frequency table see table 26.

By faculty groups, 26% of the community college faculty strongly agreed with this item of being more willing to teach DE using full motion two-way video and two way audio while just 23 of the research faculty strongly agreed and 20% of the comprehensive faculty. Of those agreeing, 74 (52%) were from the comprehensive universities, 51 (46%) from research universities and 44 (34%) faculty were from the community colleges. The



community colleges had 26 (20%) that disagreed with the item and the other two groups had just 11% each that disagreed.

**Table 27**  
*Survey Item #9-I Would Be More Willing to Teach Distance Education Courses Using Full Motion Two-way Video and Two-way Audio*

	Frequency	Percent	Valid Percent	Cum. Percent
Strongly Agree	88	20.9	22.7	22.7
Agree	169	40.1	43.7	66.4
Neutral	73	17.3	18.9	85.3
Disagree	38	9.0	9.8	95.1
Strongly Dis.	19	4.5	4.9	100.0
Total	387	91.9	100.0	
Not Informed	34	8.1		
Total	421	100.0		

note. Not Informed=Not Informed Enough or Missing

By academic rank, 24 full professors, 23 associate professors, 23 assistants and 18 lecturers/instructors strongly agreed that they would be more willing to teach distance education courses using full motion two-way video and audio. Only 16 full professors, 19 associates, 14 assistants and six lecturers disagreed or strongly disagreed with this item. By gender, only 38 of 255 men and 19 of 124 women disagreed or strongly disagreed and 52 men and 36 women strongly agreed. Another 111 (44%) men and 53 (43%) women agreed. Tenured and non-tenured faculty both showed overwhelming support. The academic area category was strongly positive overall. Communication, Education, Medicine and Business showed the most positive attitudes toward this measure. Of

Communication faculty, 10 of 11 (91%) agreed and 82% of the Education faculty agreed. Over 72% of the medical faculty agreed, Social Science had 72% in agreement and 68% of the Business faculty agreed. The area least in agreement was the Arts & Letters faculty as just 55% agreed and 21 disagreed. Of the 305 faculty that preferred teaching, 74 (24%) strongly agreed and 130 (43%) agreed with the measure concerning two-way video and just 16% strongly disagreed.

Of those willing to teach distance education courses who hadn't, 51 (29%) were strongly in agreement with being more willing to teach distance education courses using full motion two-way video and two-way audio. Of those who agreed to the two-way video item 85 of 173 (49%) were also willing to teach a distance education course. See table 28.

**Table 28**  
*Crosstabulation of Those More Willing to Teach DE Using Full Motion Two-way Video With Those Willing to Teach a DE Course.*

Two-Way V.	Yes	Willing		Total
		No		
Strongly Agree	51	4		55
Agree	85	21		106
Neutral	28	26		54
Disagree	7	20		27
Strongly Dis.	2	13		15
Total	173	84		257

### Research Question Six-Content Analysis

Items 25 and 26 of the survey answered research question number six. The research question asked, *“Do public higher education faculty in Utah have positive or negative attitudes toward distance education? Do they like the concept of distance education? What barriers or fears do they see preventing faculty from accepting distance education methods as an effective form of university instruction?”* Written responses to items 25 and 26 allowed the respondents to express and elaborate their views and attitudes concerning distance education.

Item 25 asked *Do you like the concept of “distance education”? Why or why not?* Item 26 asked the faculty to identify barriers to the acceptance of distance education. It read, *What barriers exist that prevent faculty from accepting distance education as an effective form of education?* The most recurring categories the faculty chose to discuss as important to them were grouped and discussed in this section of the chapter. First, item 25 was discussed and then item 26. Item 27, an open response item, was not analyzed, but the complete list of answers by professors is contained in the appendix as were the other two item lists.

#### Item 25 Do you like the concept of “distance education”? Why or why not?

Positive or *yes* responses to this item totaled 171. There were 124 negative or *no* answers to this item. There were 72 responses that were qualified and couldn't be categorized as *yes* or *no*. Of the faculty sending back the survey, 54 didn't answer the question. There were a total of 421 surveys returned. As a percentage of the total

answering either positively or negatively regarding whether they liked or disliked distance education, 54% answered yes and 46% answered no. As a percentage of all responding to the item, n=367, 46% answered yes and 32% responded no. Another 19% of the 367 offering responses gave qualified answers which couldn't be classified as either positive or negative.

The research university group was nearly even with 41 faculty that answered positively to the item while 40 responded negatively. The comprehensive universities, SUU and Weber State, had 64 positive responses and only 40 negative responses to the item. The community colleges had 65 respond positively and 42 answer negatively. Twenty-seven of the research faculty gave responses that couldn't be classified as either yes or no and there were 18 no responses in the group. Of the 146 faculty at the two comprehensive universities, 24 responses couldn't be classified as yes or no and 18 didn't respond to the item. The five community colleges had 144 respondents and 21 responses couldn't be classified as positive or negative. In all three groups, many responses discussed both positive and negative issues of distance education and fell into this couldn't be classified category. Sixteen of the community college faculty members had no written response.

#### Accessibility issues of distance education.

The most common response to item 25 focused on access issues. The responses centered on the perceived need for distance education to take education to those who couldn't come to campus for a number of reasons. Of those responding to item number

25, n=367, 137 discussed access issues and the need for increased availability in rural areas, especially for those who otherwise wouldn't be able to complete a college degree.

Table 29  
*Responses to Item 25 by School Groups*

School Group	Yes	No	Couldn't Det.	No Resp	Total
Research Univ	41	40	27	18	126
Comprehensive	64	40	24	18	146
Comm Colleges	65	42	21	16	144
Unidentified	1	2	0	2	5
Total	171	124	72	54	421

Note. Responses based on item 25, *Do you like the concept of distance education? Why or why not?* Couldn't Det.=Couldn't Determine; No Resp=No Response

One respondent described the need this way. "If it [distance education] is being used to accommodate a student who cannot reach the campus, I am in favor of distance learning. If it is used to simply show-off the latest technology, or to replace the teacher in the classroom, I will not support it. I strongly feel that the personal one-on-one experience is important in the learning process." Another wrote that "the time has come," to use distance education. This respondent felt that there is "not enough room or resources to continue [the] present pattern," and then stressed that remote areas need distance education. "Rural areas especially need it for college education. Health sciences really need distance learning to reach rural areas." The need for access was also expressed by a faculty member from a research university. "It provides education opportunities to people who otherwise might not be able to get a college education. Electronic delivery is clearly not as good as an instructor in person. But it is a good compromise." A community

college faculty member wrote, "I see the value of distance education to be greatest when: (1) Distance from an educational institution is too great for commuting; (2) Time constraints make attending traditional classes impossible; (3) It is a supplement to traditional education." Another respondent agreed with the distance from campus idea. "I like it because it is increasingly necessary and likely cost effective. It is important to reach widely dispersed populations of the west."

Other comments were closely associated with these statements by the faculty. "Strong proponent. As a department chair, I provide opportunities for faculty & students to use this media. It is a healthy change for both. It provides access and convenience for both." And another wrote: "Yes, I like it. Distance education makes it possible for nontraditional students to complete course work and training that they might not otherwise be able to get." This comment comes from a faculty member with distance education experience. "Distance education makes available a variety of learning options, especially for nontraditional learners. I've worked in correspondence study and in ednet, partly because I want to see college level instruction available to a large segment of society. Distance education is ultimately a more democratic form of education."

#### Classroom interaction and distance education.

Interaction between instructor and student was the second most discussed issue in response to item 25. There were 117 of the 367 answering this item that addressed interaction issues. The 117 represented 31 percent of those that responded to the item. Presented here are some examples that highlighted the interaction issue. "I think distance

education has a place in higher education. However, I do not want it as a substitute for the conventional classroom experience. Students need the interaction with the professor and their peers.” Another perspective discussed access and then interaction. “In some limited situations, yes. Overall, though, I am strongly opposed to most distance learning. Every cognitive development perspective stresses interaction as a critical element in learning, and many focus on student-student interaction as more important than student-instructor interaction. Electronic interaction hasn’t the scope and scale of human interaction--many of the subtle nonverbal cues are lost. From my perspective, this is not learning.”

Another interaction concern was voiced in this comment regarding classes which are interaction intensive. “Distance education is better than no education but might not be as effective as a live classroom, especially for the disciplines which require a lot of interaction-teacher/student but also student to student. Group work is essential in my classes and I see myself as a guide on the side, not a sage on the stage. How can the individual contact be maintained in distance education?”

Several simply stressed the need for student-teacher interaction in classes. “It has its place. I do not see it taking the place of the classroom. Some subjects will always need a teacher, student one-on-one,” and another respondent added, “I believe there is simply no substitute for real person-to-person interaction between teachers and students.” Another was unconvinced that the new methods of interactive video can accomplish what can be done in the traditional classroom. “I believe direct communicative contact between instructor and student is necessary--it helps more in the instruction. I am not convinced

that this can be (or is currently) attained. I am not overwhelmed with enthusiasm for distance learning.”

A positive look at interaction in distance education was provided in this response. “Yes. Allows access to classes/course work that may otherwise be unavailable to students, and (2) allows for contact/interaction between students in a variety of settings and communities, enriching exposure to cultural and environmental differences.” Some commented on immediacy and nonverbal aspects of communication in the classroom. “Generally dislike [distance education] because the immediacy and nonverbal aspects are missing,” and another answered regarding the use of machines in education. “I think it is one useful technique, but should not replace the live classroom totally. People need to react to and interact with people, not machines or the image of people on machines. A vital and necessary component of educating people would be lost if the live classroom disappeared.” Face-to-face contact is considered essential by a number of faculty members. “There is a moral and spiritual aspect of education that is undermined by distance education. I would find it impossible to recommend highly to others a student with whom I did not have face-to-face contact.”

#### Cost related issues and distance education programs.

Twenty-seven respondents discussed issues related to the costs of distance education. This did not seem to be a major issue on the minds of the faculty, but a few did address cost issues involved with distance education. Some felt that it would save money for the state as more students were offered courses at a distance. One respondent wrote: “Yes,



distance education allows for more students to be educated with less expense for classrooms,” and another commented that they would accept it for economic factors. “It is a necessary evil when factors like physical distance and/or economics comes into play. Mostly, however, I believe students are better served in classrooms.” Faculty members pointed out that education is continually becoming more expensive. “Yes, [distance education is] too expensive for some people to gain more education using the present systems.” Another issue that related to cost was the updating of course work in video formats. “Time and cost at developing good distance instruction discourages continued course revision required for good instruction. As a result, courses become static and eventually outdated.” A different viewpoint stated it this way. “It provides education on the level of student needs-meets criteria of time, money and convenience.” Several others discussed cutting faculty as a cost saving measure. “Generally, no. I think it’s a gimmick to try to cut costs by increasing student/faculty ratios,” and “Yes, but only when it is done properly. From an economic point of view, it’s convenient and efficient. It can be effective if used properly.”

#### Educational issues of concern to the faculty

Educational issues were also discussed by the faculty respondents. These issues included the idea voiced by a number of faculty members that distance education is not a replacement for traditional education. A total of 27 respondents mentioned educational issues. Another educational issue focused on subject matter that faculty believed did not

adapt well to distance education methods. Some faculty members responded that distance education is not appropriate for the faculty members discipline.

One faculty member summed up teaching issues with this response. "It forces you to rethink education and become a better teacher. But it is not a replacement for a traditional university experience. It is of value primarily to those who cannot access a university because of geographical distances." Another faculty member criticized distance education because it isn't as strong as traditional methods. "No, not a good enough substitute for normal methods" and another follows up this response challenging the quality of distance education methods, "I believe that, at present, it is primarily a way to grant credit without truly educating and certainly without developing an education attitude. This may improve with advancing technology but at present it is quite clear that distance technology does not equal distance education." Others argued that it cannot replace classroom education but should be used as a supplement only. "As a supplement to traditional classroom, yes-it increases accessibility for students. I am strongly opposed to it as a replacement for traditional education," and, "I have yet to see any evidence to suggest that distance learning is a more effective educational tool than traditional methods. Distance learning is a compromise to teach more students with fewer resources. The quality of education will be inferior. Our students deserve better." Being on campus and using the research facilities available is another educational issue voiced. This educator said, "For learning information I see it as valuable. For methods and skills-not as effective without teacher feedback. To get the academic experience I believe all students need to be on campus for at least one full year. They need to use research facilities on campus."

In the area of subjects not adapting well to distance education methods. A physical education professor wrote: "Not in my field of physical education. There needs to be a continual process of critical evaluation, feedback, practice that you just don't get by way of the suggested methods." Another faculty member talked about it as not an answer for certain subjects. "I like the idea, but think for many...topics it is not appropriate as the sole method of delivery," and another comment discussed subjects that need interaction. "I do not see it taking place of the classroom. Some subjects will always need teacher, student one-on-one."

#### Motivational issues related to faculty and to students

The motivation or the lack of it on the part of students is an issue of concern of the Utah faculty. Some feel that distance education or distance learning is most effective with highly motivated students.

One faculty member stressed that distance education "appears to be best suited to rote memorization of material or to highly, advanced course work with highly motivated students-re graduate courses. The typical undergraduate course or lab course is not well suited to the current technology." Another faculty member is favorable toward distance education for some students. "Yes, I am highly supportive of distance education for select audiences-those are more highly motivated students, generally older and more mature, and those whose learning styles are oriented to distance education delivery...not as useful for younger, less motivated minded students." A more brief response made the same point, "It is OK for self-motivated students." Some believed that its benefits were limited. "Only a

few students benefit from it. Most think of it like watching TV; unless they are motivated they will not do well.”

Other issues mentioned in the written responses to item 25 included distance teaching as ineffective, the threat of reduction of faculty and technical problems with distance methods.

**Item 26 *What Barriers exist that prevent faculty from accepting Distance Education as an effective form of Education?***

There were a number of barriers actually mentioned by the Utah faculty and a number of them mentioned in this and other studies were discussed in the review of the literature. This item was not meant to gather just negative attitudes that faculty or administrators have toward distance education and learning, but to give faculty an opportunity to discuss any aspect of education that might prevent distance education from continuing to develop and improve. The question was not posed to mean that distance education could be a better educational method than any other method, if these barriers were removed, but to identify the barriers that might prevent it from becoming a viable alternate form of education. Could barriers be identified and perhaps removed or at least addressed so that distance education could be used, as the faculty has suggested, to get education to students who can't come to campus and can't get the necessary education in any other way?

Of the faculty at the Utah community colleges, 119 responded to this item, 125 of the comprehensive universities faculty and the research universities had 96 actual written responses to item 26. There were also three written responses from faculty not identified

with any of the three groups. There were 78 faculty members who did not respond to this item. Again the total cases was 421.

The most common response to this item was interaction issues and each of the three groups of Utah institutions addressed these issues more than any other. Overall, 91 faculty members addressed this area in their open responses to item 26. The item read: *What barriers exist that prevent faculty from accepting distance education as an effective form of education?* Interaction issues were mentioned by 33 comprehensive faculty members, 32 community college faculty members and 26 of the research university faculty. The 91 responses related to interaction as a barrier represented 27% of the 340 faculty that wrote responses.

Interaction wasn't the only issue addressed by the faculty. Other issues viewed as barriers included familiarity including the fear of the unfamiliar, technical problems, quality and effectiveness of distance education, the role of the faculty, time, money, motivation to change, curriculum development, fear of video, work preparation, support at distance sites, and political motives.

#### Interaction issues related to distance education

Educators have often used the inability to interact with students as a barrier that could prevent distance education from becoming a viable educational method. Interactive television systems have now introduced immediate feedback and interaction, even though the two parties are located in separate places. And although the technology is not perfected and feedback was more difficult than in the traditional classroom, interaction

was a factor in the interactive video distance classroom. Class size can also be a factor in face-to-face interaction in either traditional or distance education classes and so can the use of multiple sites in distance teaching.

Responses from the faculty included comments that looked at the deficiencies they saw in distance education. "Lack of personal contact with students," and "Personal interaction and communication." One faculty member commented, "Some of us want a more personal approach to teaching-going one-on-one with a student," and still another faculty member put it this way, "There is a lack of interaction with students" and "There is a value in a student actually seeing and interacting with a professor on a one-to-one basis." Others were concerned with the difficulty of the setting and the lack of nonverbal and verbal interaction. "The nonverbal communication is needed for me to feel comfortable. I rely on nonverbal communication in my class."

Nonverbal was also stressed as important by other faculty members. "There are missing components, tone of voice, nonverbal communication, other students, before and after class chatting, etc.," and another faculty member was similarly concerned with nonverbal communication. "Teachers like to see the light bulb flash in people's brains; that is difficult to do in most forms of distance education," and again related to nonverbal communication was this comment. "My colleagues and I accept distance education as a manageable alternate method, but we hold numerous reservations about appropriate feedback of student's body language, learning styles and collaborative efforts." Some were concerned with social areas, "Student and teacher are isolated," and, "Educators are social animals- we teach by interacting, not by machine, it is the live interchange among students; students

and faculty that enhance learning.” This interchange between students was stressed by another faculty member, “Technology can actually help a lot in skill building. But the ability to interact with others is part of what makes us humans. The most stimulating and challenging part of my education experience was the exchange of ideas with other students.”

Dialogue and learning in a shared environment were further discussed in this comment. “Part of the problem is the use of the word ‘effective.’ Effective at what level? Memorization of facts does not require an interactive classroom. Most teachers believe a great deal of learning takes place simultaneously in a classroom because of the dialogue that takes place. This is severely restricted in most distance learning paradigms.” Another view was expressed in this way: “Most professors I know still highly value the give-and-take of the classroom, which is comprised to some extent by distance learning!” The issue of how personal teaching can be is directly related to interaction. A professor at a Utah comprehensive university said, “For instructors who see the classroom as an interactive and personal environment, the use of some media seems to be limiting and even nonpersonal (impersonal).” Another professor addressed several of these barriers. “Belief that technology will get in the way of effective interpersonal communication and relationship. [it] Takes away the human side—the direct interaction and chance to see people grow and develop in front of you.”

A comprehensive university professor offered this comment concerning interaction and distance education. “Education, especially higher education, is about interaction between students and professors. I do not feel that in distance education, even with remote

monitors and two-way electronic communications, this can be accomplished.” This same professor stressed the difficulty of reaching every person in the traditional classroom, not just the DE classroom. “I have approximately 80 students in my class each quarter. Even with close physical proximity, and immediate visual and nonverbal student feedback (both of which are difficult if not impossible to obtain in distance learning) I find it difficult to reach every student in the classroom....There is a marked difference between televised reactions and direct personal reactions.”

#### Issues of familiarity with distance education

Faculty responded that barriers are often related to a lack of familiarity with Distance Education, lack of an understanding of the concept, as well as a lack of training which was also viewed a faculty role issue. In the Community College group, 28 discussed issues of familiarity. Only 10 in the research university group discussed issues of familiarity, but another 25 had comments related to this area in the comprehensive university group. One faculty member described it as “fright of the unknown,” while a short reply simply said, “fear of new things,” and another said that the faculty “are not informed well-enough and [have a] fear of the unknown.” A community college faculty member said that faculty have a “fear of the unknown” and that they “were not familiar with options.” Several others commented on the lack of knowledge and the lack of experience and as one respondent put it, “lack of familiarity with [the] system.” Many of the written responses in this area weren’t lengthy. A faculty member described it this way. “If such barriers exist, they could include general lack of familiarity on the subject, the large amount of work that the class may appear to have and not wanting to step out of their comfort zone.”



Technology as a barrier to distance education applications.

Technology problems was another concern of the faculty. In fact 62 total comments addressed this issue. Technology as a barrier and technology problems were stressed by 23 community college faculty, 26 faculty members of the comprehensive university group and another 13 from the research faculty group. This represented 18% of the faculty that responded to item 26 concerning barriers that focused on the technology issue.

Some didn't feel like the technology is ready for distance education to be effective and others said that the technology is not understood and is sometimes a barrier to the message the faculty is trying to send. "The technology is still limited, in that it cannot provide a true classroom experience. Often technology can be cumbersome and get in the way of effective teaching." Another comment was similar. "The equipment and technology is not really ready. Something is always down which means your lesson plans are not effective to all sites at all times." Disruption of courses because of technology was another fear faculty discussed. "Technology often fails interrupting instruction." This was a fear displayed in a number of the comments. To illustrate, a direct comment from a faculty member simply said, "Fear. Discomfort with the technology." A parallel comment dealt with this fear as a threat to faculty. "It is my perception that many feel somehow threatened by the concept. The technology is not widely understood or appreciated. I think many feel their role as teacher is somehow diminished by distance learning." This lack of understanding of the technology was mentioned in a number of different comments of the faculty. One faculty respondent put it this way, "The technology can be intimidating. Overcoming traditional delivery systems can hinder the process." A comment from a

comprehensive university was important as to the difficulty of teaching and using technology at the same time. "Having to manipulate the equipment as well as teach in a specific discipline-too many things to do while trying to teach." This is closely associated with comments such as a "Belief that technology will get in the way of effective interpersonal communication and relationship." Another comprehensive faculty respondent said, "For me, most of the barriers are technological. There is some resistance to fear of the unknown technologies."

Other concerns dealt with limited available equipment necessary to fully apply a distance education program. "Limits in existing technology at each institution," was a worry from a faculty member at a research university in the state.

#### Quality and effectiveness of distance education.

The quality of distance education and its effectiveness is another area discussed in the written responses by the faculty to this item. There were 61 comments classified in this category or nearly 18% of the faculty responding to the item. The comprehensive universities mentioned this barrier most, as 25 comments came from that group, and 22 of comments came from the research university faculty. Only 14 comments in this category were from faculty teaching the community colleges.

The difficulty of adapting certain courses including hands-on courses to distance education was discussed by the faculty as a barrier. The faculty was also concerned that information is needed to indicate that DE is effective or ineffective.

The faculty addressed issues such as hands-on courses that wouldn't adapt well to distance education. One faculty member at a community college expressed the concern

this way. "Not good for courses like chemistry and physics that should have a strong hands-on component." Another comment closely related to the previous example said, "How in the world is a professor going to offer a biology or chemistry lab via distance education?" A related comment was worded this way by a Utah faculty member. "In my field very difficult hands-on skills cannot be handled at a distance, but many theory and lecture classes could."

One faculty member objected to the application of DE to every academic area. "It isn't appropriate in all disciplines and is being sold as the new way of teaching everything." Vocational areas could suffer said some of the faculty. "Vocational education needs the hands-on one-on-one between teacher and student. Watching videos helps, but must be followed by hands-on experience."

Comments also discussed effectiveness, or lack of it, concerning the methods of distance education. One comment discussed this issue of effectiveness. "Statistics that show that distance learning is very ineffective." Another comment related to effectiveness was, "Part of the problem is the use of the word effective. Effective at what level? Memorization of facts does not require an interactive classroom." The ability to judge the effectiveness of the education received by the student is a worry for some faculty. "It is not as effective as traditional. Students need more than getting an A-grade. Are they really learning?" Quality related comments included this statement by a faculty member. "It is not an effective way to ensure a meaningful or quality educational experience." One opinion discussed the lowering of standards for students using distance education which is a quality issue connected to the learning question posed by a faculty member. Others were

concerned that barriers were due to the lack of information concerning effectiveness. One faculty member stated it this way, "Research proving it as effective," and one faculty member wrote, "A sense that it falls short in providing students with an appropriate educational experience," and still another professor was even stronger. "It is a poor replacement for real education at a university, which involves much more than what can be achieved via electronic media." One faculty member wrote that DE shouldn't replace all the students experience and predicted the failure of the Western Governors University because of a lack of understanding concerning the total educational experience. This comment is reported entirely here: "Faculty know that the cultural environment of the college campus cannot be matched by distance learning, and they are right. Efforts such as the WGU are bound to fail because those leading the charge do not understand the elements of education that will be lost by such an effort. Distance education in the rest of situations is a supplement that provides for a portion of the students education. It cannot replace it in total."

Learning styles of students was mentioned by a faculty member. "I again believe that if we value and honor different cultural ways of learning, diversity in learning styles, etc., we have to recognize that distance education may only meet certain learning styles." A closely related comment said, "Some forms of such classes may be more conducive to selected faculty and teaching styles just as it is to students and student's learning styles."

#### Time as a barrier to distance education

Time was mentioned as a barrier to distance education by 17% of the faculty, as 58 written responses to this item discussed time factors. There were 21 mentions of time by

the community college faculty, 19 by the comprehensive faculty members and 18 by the research university respondents.

The faculty discussed time in relation to the amount of time in preparation of a DE course and time as a factor related to course load. A comprehensive faculty member wrote, "Lack of support-in terms of money and time-especially for developing and teaching courses at this university, it is in addition to existing course [load]." Another comprehensive faculty member simply said, "It is more time consuming to prepare," and this comment seemed to describe the feeling of many faculty members, "[it's] very time intensive. Much more so than traditional classes."

It appeared from the comments that time was a barrier because the faculty felt the time was not available to them to do the job necessary to prepare the courses. "It can be time consuming to teach and to learn via distance means" said one faculty member which illustrated the feeling that time was a barrier. Following this same line of response, a community college faculty member wrote. "It takes a huge amount of time to prep courses, the student feedback is marginal, some kinds of students do poorly, with DE. Huge class size can present overwhelming paperwork loads for teachers." A research university professor commented, "It is very time consuming and expensive to get started." Another said, "I do not have much free time to explore it's utility, nor am I 'forced' to consider using it. Therefore, these are barriers."

#### Money as a barrier to distance education

Money related issues were discussed by 51 faculty or 15% of the total 340 respondents. The most comments regarding this issue came from the comprehensive

universities as 22 of them mentioned money. The community college faculty brought this issue forward 15 times and there were 14 research faculty members that thought money was a barrier. Some of the respondents simply put the word "money" alone as a response.

Money was discussed as a barrier from several different viewpoints. A research faculty member said "The pay is ridiculously low. If they want good faculty to accept distance education assignment then the pay should be equivalent to teaching a course on campus," and "Lack of proper support, equipment, compensation for efforts." Others discussed incentives related to a financial benefit for faculty and the proper funding. One faculty member said, "To do it correctly takes a great deal of work with minimal rewards." A community college faculty member discussed the money issue with this comment. "Not compensated adequately for huge development time. Not compensated adequately for sharing of final product (repeated showing). Our course doesn't have a high enough enrollment to merit money given to distance course development."

Another view related to the need for financial support of distance education to make it effective. "No funding. It is very time consuming and expensive to get started. As far as I can tell there has been no new funding and I don't think I have ever seen a real cost benefit analysis of traditional vs. Distance Education." A comment that highlighted the cost of distance education was voiced by a research faculty member, "Too expensive if effectively done (class size must be small if real two-way interaction is to occur)." An issue related to cost was that of funding to allow for courses to be redeveloped and another mentioned the lack of funding to allow for video courses to be redone regularly in order to keep them fresh.

A faculty member at one of the two comprehensive universities wrote about "Money for time away from normal job." This same professor continued, "Put the money into the one that needs to be fixed. We have not had the funding base to update our campus classrooms and labs with state of the art instructional equipment, hardware, software and now, another of the new innovations, something that will solve our problems before the ones we have, could have been solved." Others also discussed the need for compensation because of increased workloads. Another comment talked about money and training. "Time and money to train faculty, time and money to develop courses for Distance ed."

"Suspicion that legislators expect canned education to reach more students with less cost and maintain an ill-defined Utah standard. Use of DE, rather than proposed use of DE as a way to reduce the cost of H. E. [higher education] by syphoning funds from traditional campuses," was a barrier in the mind of some faculty members as the previous quote documented.

#### The Role of the Faculty as a Barrier to Distance Education

Of the faculty responding to this item concerning barriers, 58 recorded answers that fit with a category dealing with the role of the faculty in distance education. Some of these related to time and money issues, but other were related to training and to the potential loss of jobs by faculty. The role of the faculty is an area that needs to be considered since the faculty hasn't always been consulted in the development of distance education programs. The community colleges were the most concerned with this issue as 25 of the 58 comments came from this group. The comprehensive universities had 20 faculty

comment about the faculties role in distance education and 13 research faculty offered responses fitting this category. The 58 represented 17% of the 340 respondents.

One faculty member wrote, "It diminishes the role of faculty." Another commented that: "There's a lot of fear of course...meaning that teachers may have their livelihoods threatened." This was mentioned by several faculty respondents. One research professor said, "The very real fear that it will reduce the number of faculty jobs and diminish the quality of education." This was a concern of a number of faculty. A community college professor wrote: "It is my perception that many feel somehow threatened by the concept. The technology is not widely understood or appreciated. I think many feel their role as teacher is somehow diminished by distance learning."

A faculty member concerned about training and faculty roles wrote: "Training! The instructor needs some information and training before he/she starts the class. Back-up support must be trained and efficient." Other comments from community college faculty said, "We need more direction and more education using these methods." Others were also concerned with training and education concerning DE and the use of mentors to help at the remote sites as well as the lack of experience in the DE setting. "Adequate training, financial compensation for the added training and time. Lack of experience and experience with the classroom setting," was an additional comment about training and experience. Several others commented concerning the lack of training and the lack of resources as well as experience. One research faculty respondent wrote that faculty "need to be convinced that it is a good teaching method. Obviously, they need to be trained," and another was concerned with "lack of understanding of the difficulty of converting face-to-face



interactive classes by those promoting the distance education form. Lack of support infrastructure—for example: trained TA's, facilities, for group and team work, library facilities, grading help, etc.” Another faculty member from a comprehensive school echoed this response. “Resources (time and money and equipment and training) to develop an honest educational experience for students vs. Just throwing together an inferior product that satisfies the mandate,” and another comment stressed the lack of knowledge “about how to facilitate learning and teach using this method.

#### Motivation to change as a barrier to distance education

There were 28 responses that discussed motivation to change on the part of the faculty. This represented just over eight percent of the faculty and wasn't a major concern. Of the 28 responses in this category, 16 of them were from the comprehensive universities.

The motivation to change was discussed as a resistance to change or innovation. A faculty member responded this way, “Barriers are resistance to change, inadequate competence with technology and inadequate technology” and another faculty member called it a “concern for change” and still another talked about the unwillingness on the part of faculty to be “innovative.” “Change is always difficult,” wrote one and another said simply that for some it is a “fear of change.” Several responses focused on tradition as a barrier and the unwillingness to adapt to new methods. “Change of accustomed ways is sometimes difficult,” was the comment of one comprehensive faculty respondent, and another said, “too many faculty are too entrenched in their traditional teaching practices,” and “they are not ready to train themselves to be instructed with new technology out of fear or ignorance or pride!”

### Curriculum development as a barrier to distance education

Only six percent of the faculty discussed concerns of curriculum development, although many of the other comments implied curriculum concerns. There were 22 respondents that addressed curriculum development problems as a barrier. Twelve of the respondents or 55% of the 22 were faculty of the five community colleges. Concerns in this area focused mostly on the time, work, and the cost to develop the distance education courses as well as the lack of knowledge concerning the methods which could prevent solid curriculum development. For example, one respondent wrote, “[It] takes a huge effort to prepare excellent courses. Our field changes repeatedly so [we] have to update frequently.” A comprehensive faculty member commented on the lack of support for curriculum development. “Lack of support-in terms of money and time-especially for developing and teaching courses at this university, it is in addition to existing course [load].”

Curriculum problems were also associated with problems of changing courses to adapt to the distance education format or method. One comment indicated “The governor’s emphasis on skills is problematic for many courses which are not skill oriented. The nature of many courses would have to be changed, or subverted, for them to be put on the internet.” Another said, “Willingness to change ways of instruction that have been successful. Why change for the sake of change.” This previous comment applied to curriculum approaches and others discussed the fact that some courses seem difficult to teach using forms of distance education.

### Other Barriers Concerning Distance Education

The faculty responding discussed several other areas which they considered to be barriers to distance education. The others were: Fear of video or fear of showmanship; Work, which has been mentioned in a number of responses considered in other areas; Support at distance or remote sites; and politics.

The fear of video was discussed by five percent of the faculty. Several commented on being in front of the camera as the following comment stated. "Fear of getting in front of a camera; presence in front of camera may not be effective." A research faculty member commented that "faculty are selected for traits other than their abilities to act (as on stage). Many of us are not performers-rather scholars." Another comment addressed the concept of faculty becoming 'star performers.' "The idea that the governor has expressed that only superstars would be teaching. What is a star teacher anyway and who comes up with the definition? The idea of a competitive market of courses is suspect because it compromises the integrity of the teaching process."

### Item 27 If You Have Taught a Distance Education Course, Were You Adequately Trained for the Experience?

This item was not discussed in detail here because the need for training was discussed by the faculty in previous items. The complete faculty responses were included in the appendix, but most faculty members that responded to this item indicated that they had been well-trained. A number of faculty members didn't provide written responses.

## CHAPTER 5

### SUMMARY, RECOMMENDATIONS AND CONCLUSIONS

#### **Introduction**

This chapter presented a summary of the study, the summary by research questions, and conclusions. The limitations of the study were also presented in this chapter as well as the recommendations of the study and recommendations for future study.

#### **Summary**

The purpose of this study was to gather information concerning Utah Higher Education Faculty attitudes toward distance education at the nine public institutions in the state. The feelings and attitudes of faculty were considered important with more and more money being allocated by state government in Utah to the development of distance education courses and programs. This chapter presents the summary of the results, the conclusions of the study, and future recommendations for further study.

To determine higher education faculty attitudes toward distance education, a survey of Utah public higher education faculty in Utah was conducted. The willingness of the faculty to incorporate distance education courses into the curriculum was considered crucial if Utah was to continue to develop and improve distance education college credit courses. The survey gathered information regarding faculty familiarity with and attitudes toward

distance education by institution type and faculty demographic subgroups. The survey based on responses from 421 faculty members in Utah was mailed to 635 faculty members in the state and achieved a return rate of just over 66 percent. Two mailings of the survey were conducted in October and November of 1997.

The survey found that Utah higher education faculty was highly familiar with the terms distance education/distance learning as over 95 percent of the faculty surveyed indicated that they were familiar or very familiar with distance education. Only 16 of the faculty said that they were not familiar at all with DE. The faculty also said that they would be willing to teach DE even if they hadn't already done so. Communication, Education and Business were the most willing academic areas represented by the faculty to teach a distance education course, if they hadn't already done so. Women were slightly more willing to teach a distance education course than were men. The most willing group to teach DE courses was the comprehensive university group of Southern Utah University and Weber State University.

The faculty was also in agreement that distance education was an effective educational method. The mean score was 2.69 of the total 410 cases on a five point scale, where one equals strongly agree, indicating a somewhat positive attitude toward this item. Of those responding, 49.8 percent either strongly agreed or agreed that distance education is an effective educational method. The faculty was positive to the general effectiveness of distance education as an educational method as just 22% of the respondents were in some state of disagreement. In fact, of the 410 cases, only 7.8% strongly disagreed with the statement that distance education was an effective method of education.

The Utah faculty was also very supportive of their institutions being involved in offering distance education courses. Over 76% of 398 faculty members responding, said yes that their institution should be involved in offering distance education courses.

The faculty surveyed were slightly positive toward the use of distance education in their own academic area, but held slightly negative attitudes toward the use of distance education in their own courses. The mean score was 3.13 on a five point scale on this measure where one equaled strongly agree. Just 38% of the faculty either agreed or strongly agreed with the use of distance education for their own courses and of those just 10% strongly agreed with using distance education for their own courses. The Business faculty was most positive toward distance education courses being appropriate in their academic area as 53% agreed. And 24% of 38 Business faculty strongly agreed. Communication faculty was also very positive toward this item and the community colleges were the most positive of the three institutional groups.

Faculty were clearly favorable to the offering of college credit using distance education courses. Fifty-five percent of the faculty indicated that they agreed with offering of college credit for distance education courses. Of the faculty surveyed, 66% indicated that they agreed or strongly agreed that distance education courses should be used as part of college or university academic programs. Only 17.4% disagreed or strongly disagreed. The overall mean score of the 414 cases was 2.46 on a five-point scale which indicated a moderately positive attitude. Again only 55 respondents either disagreed or strongly disagreed with offering college credit for distance education courses, and of those, just six percent of the 414 faculty strongly disagreed.

The Utah survey found that the faculty attached strong importance to nonverbal communication skills in the classroom, but that faculty did not agree that those nonverbal skills could be used as effectively in the distance education classroom.

The faculty surveyed knew the most about or was most familiar with correspondence study as a method of distance education. It was followed by teleconferencing, video conferencing and audio conferencing, internet on-line courses and full-motion two way audio and two-way video. However, the Utah faculty preferred using full-motion two-way video and two-way audio the most and then internet on-line course methods, videoconferencing and teleconferencing.

A large number of the faculty surveyed indicated that distance education would be more feasible for them because of the technological ability to have immediate interaction and immediate feedback between student and teacher as offered by the new two-way video methods. Seven of 10 faculty members strongly agreed or agreed. The mean score was 2.26 which indicated a strongly positive attitude toward the technological interaction between student and teacher with video based distance education delivery methods.

Faculty were positive on the item, *I would be more willing to teach distance education courses using full motion two-way video and two-way audio*. Eighty-eight respondents said they strongly agreed and 169 (66.4%) agreed. Less than 15% said that they disagreed or strongly disagreed. The 2.30 mean score demonstrated a strongly positive attitude toward teaching distance education using this highly interactive method. By faculty groups, 26% of the community college faculty strongly agreed with this item and 23% of the research faculty strongly agreed and 20% of the comprehensive faculty.

## Summary by Questions

### The First Research Question-Summary

The Utah faculty surveyed was overwhelmingly familiar with distance education/distance learning. Ninety-five percent of the surveyed faculty indicated that they were either very familiar or somewhat familiar, n=402, with the terms distance education/distance learning. Well over half, (54%) indicated that they were very familiar with distance education and distance learning. Less than four percent answered that they were not familiar at all with distance education/distance learning. The attention this alternative method of instruction has received in Utah recently is obviously one reason that so many of the faculty were familiar with the terms distance education and distance learning. In fact, during the time the survey was in the hands of the faculty, the governor of Utah was addressing faculty members on the various campuses in the state concerning the future of the Western Governors University.

Attitudes toward institutional use of distance education were part of this first research question. Faculty agreed that their institution of higher learning should be involved in offering distance education courses. Nearly three fourths of the faculty, 72.2%, said they believed that their institution should make use of distance education methods. Only 94 faculty members responded negatively to this idea or 22.3 percent. Women were more likely than men to view institutional use of distance education as appropriate. Of the men responding, 73.8% said yes, and 81% of the women were favorable to this measure. This indicated that the faculty is open to the continued use and development of distance education at Utah's institutions of higher education. A strongly favorable attitude was



exhibited by Department Chairs as 83% or 34 of 41 answered yes to this item showing support for distance education by these administrators. A solid majority of the Utah faculty surveyed were willing to teach distance education courses. Willingness to teach distance education, on the part of those who haven't, is highly important if this alternative method of instruction is to be successfully developed in Utah public higher education. Involvement by more and more faculty should be the trend based on the responses to the willingness item in the survey. The following percentages indicated a willingness on the part of the Utah faculty to give this alternative method of instruction an opportunity to work in the Utah higher education system. Of those who hadn't taught a distance education course, 65% said that they would be willing to teach a distance education course (n= 287). Only 36% said they wouldn't be willing to teach a distance education course. The percentage of men and women willing to teach a distance education course was very similar. Sixty-five percent of the women surveyed and 64% of the men were willing to teach distance education. By academic rank, Communication faculty were most willing followed by Education, Business and Medicine. Eighty-two percent of the Communication respondents (n=11) said they would be willing to teach a distance education course

Faculty preferred to use distance education methods that involved the new technological methods as the top four preferred methods were newer methods that offered better interaction and feedback between faculty and students.

### The Second Research Question-Summary

The faculty was positive to the general effectiveness of distance education as an educational method. This is good news for those attempting to implement DE as an alternative form of education in the state. Nearly 50% were in agreement and only 22% of the respondents were in some state of disagreement. In fact, only 7.8% strongly disagreed with the statement that distance education was an effective method of education.

By gender, women were slightly more likely to consider distance education as an effective method of education. The mean score for men, who indicated distance education was an effective method, was 2.76 where one equaled strongly agree, and for women the mean was 2.55. Regarding those who were willing to teach a DE course, 85 (48%) also agreed that distance education was an effective method. Of those willing to teach a distance education course, only 15 disagreed and 3 strongly disagreed with the statement that distance education is effective. This is not interpreted to mean that distance education was any more effective than traditional methods, but that faculty agreed that it could be effective when properly used and for some courses.

### Distance Education Should be Used as Part of College or University Academic Programs

The faculty responded positively to the item, *Distance education should be used as part of college or university academic programs*, almost 66% of the total faculty indicated that they were in agreement. Impressively 54% said that they agreed that distance education should be used as part of college or university academic programs. A small percentage, less than 20% responded that they either disagreed or strongly disagreed. This supports

the faculty attitude that distance education can be effective and used to teach certain courses. At some point, studies need to be completed which look at specific courses to determine which ones can be taught most effectively using distance education.

#### Faculty Response to Distance Education Courses Should Be Offered for College Credit

Not surprisingly, 55% of the faculty surveyed held a positive attitude toward the statement that DE courses should be offered for college credit. The mean score of the item on a five point scale was 2.29 indicating a moderate to strongly positive attitude toward this item. Only 30 respondents disagreed and 25 (6%) strongly disagreed with offering college credit for distance education courses. This was important because it indicated that faculty believed that DE courses could be developed and delivered that would offer college quality work through distance education. Obviously, not all were convinced, but a majority of the faculty agreed making it feasible to continue to move ahead and build on and increase the courses being offered to distance students.

#### Faculty Use of Distance Education in their own Academic Area

Faculty were less excited about the use of DE courses in their own academic area, although the numbers were somewhat encouraging for those hoping that DE will become more accepted as alternate method of educating students. Of the 411 cases, nearly half responded that they generally agreed that DE courses were appropriate in their academic discipline (49.6 %). A total of 16.2 % disagreed and 18.1% strongly disagreed. Some of the disagreement was interpreted to mean that some courses were suitable and some were not considered suitable by the faculty for distance education applications. The mean score

of this item was 2.89 which indicated a slightly positive attitude toward distance education courses being appropriate for the faculty members academic areas.

#### Faculty Response to the item-I Would Like to Use Distance Education for My Courses

When it comes to using DE in their own courses faculty were not nearly as positive. Only 10% of the respondents strongly agreed with the statement *I would like to use distance education for my courses*. There were 114 faculty that agreed with the statement which was just 27.1%. The overall mean score was 3.13 a slightly negative response on a five point scale. Eighty-seven of the 409 cases strongly disagreed, meaning that just over 20% held a strongly negative attitude. Overall, 156 faculty members agreed or strongly agreed with the statement, while 21% were neutral. As distance education methods become more and more familiar faculty will naturally become more open to teaching their own courses through DE. This highlights the importance of the neutral element 21% or 87 faculty members, who could with more information and knowledge be convinced in the future to teach distance education courses in their own areas. A future study needs to explore this issue and perhaps the improvement of video two-way applications will attract more professors to distance education because of its interactive qualities.

Despite the mean reflecting a negative score on this item, full professors agreed or strongly agreed with the use of distance education in their own courses 56 to 39% and, lecturers and instructors were in agreement on this issue 52 to 31 percent. The two groups accounted for 43% of the total faculty responding to this item. By academic area Arts & Letters faculty strongly disagreed as did Science. Social Science professors disagreed but

the percentages were closer. Business, Communication, and Education were in agreement with the statement that they would use DE in their own courses.

An interesting finding indicated that those very familiar with distance education were more likely to strongly agree or agree with the use of distance education in their own courses. This emphasizes the importance of familiarity and the correlation of familiarity with acceptance of DE methods as a viable alternative on the college campus.

Of the 223 faculty that said they were very familiar with distance education 16% or 36 of them strongly agreed with using DE in their courses. Another 75 faculty agreed with using DE in their courses or 33 percent. Only 36 percent of the faculty that were very familiar with DE disagreed.

### Research Question Number Three-Summary

#### The Methods of Distance Education with Which the Faculty Were Most Familiar

Correspondence study was the method of distance education with which the Utah faculty were most familiar and audiographics was the method with which they were the least familiar. The mean score of correspondence study in this item was 2.91, with the number one equaling the method the faculty knew the most about. Telecourses and videoconferencing were second and third choices of the faculty. Telecourses had a mean score of 3.48 and Videoconferencing, a score of 3.60 that ranked third most familiar..

#### Distance Education Methods Preferred by the Utah Faculty

Full motion two-way video was the most preferred method of distance education selected by the faculty Overall, 83% selected full motion two-way video in the top four of

DE preferred delivery methods. Internet or on-line courses (67%) was the second most preferred method. Videoconferencing was third and telecourses was a close fourth. Using mean scores of the eight choices on this item, full-motion two-way video was number one with a mean score of 2.41, videoconferencing was second with a mean of 3.17, internet or on-line courses was third, 3.72, and teleconferencing was fourth with a mean score of 4.21. Only one faculty member chose audiographics number one, and six faculty selected computer conferencing and audio conferencing.

Whether faculty had taught distance education courses or not, full motion two-way video and two-way audio was the number one preferred choice. The second most preferred method was internet on-line courses. Faculty preferred to use distance education methods that involved the new technological methods as the top four preferred methods were newer methods that offered better interaction and feedback between faculty and students.

#### Effective Methods of Distance Education when Used in College-level for Credit Instruction

Full motion two-way video and audio with a mean of 2.19 was the method the faculty selected as the most effective DE method. Internet on-line courses was the second most effective method according to faculty followed by videoconferencing and telecourses with means of 2.84 and 2.89 respectively. Correspondence Study was judged as a slightly effective method by the faculty as its mean score was 2.98. Computer Conferencing was not as effective in the judgment of the faculty based on the mean score of 3.21.

Audioconferencing's mean score was 3.76 indicating a fairly negative expression by faculty of its effectiveness.

There were a number of faculty members who selected number 9 on the survey indicating that they were not informed enough to determine the effectiveness of these methods. Eliminating those respondents strengthened the measures that resulted.

By group, the comprehensive faculty strongly agreed that full motion two-way video was effective (73%). Of the community college faculty, 77% said that this method of full-motion two-way video was effective and 68% of the research faculty agreed. The three groups selected telecourses and videoconferencing as effective by mean scores, but fewer strongly agreed with these methods as effective when compared to full motion two way video.

#### Research Question Four-Summary

The fourth research question was answered based on the professional characteristics of the faculty to the various survey items in the other research questions and is not part of the discussion.

#### Research Question Five-Summary

The fifth research question focused on nonverbal communication and its use in the distance education classroom as well as on the importance of immediate interaction and feedback and if faculty would be more willing to teach distance education courses using full motion two-way video and two-way audio.

### Nonverbal Communication is Important in the Conventional Classroom

The Utah faculty strongly agreed that nonverbal communication between teacher and student is important in the conventional classroom. This was an important measure to see how the faculty felt about nonverbal communication in their classrooms. Of the 417 faculty that responded to this item, 90% agreed. Only two of 10 indicated that they disagreed or strongly disagreed. Women were more likely to agree than men, but both groups were in agreement with the importance of nonverbal communication. Of the 271 men, 134 (49%) strongly agreed and 110 (41%) agreed that nonverbal communication is important in the conventional classroom. Of 138 women responding, 85 (62%) strongly agreed and 39 (28%) agreed.

In academic areas, Science faculty were very strong in their agreement to this nonverbal item as (93%) of the faculty strongly agreed or agreed, but Social Science had an even higher agreement percentage as 67 of 69 agreed (97%). All 13 Communication faculty agreed.

### Nonverbal Communication between teacher and student could be as effective in the distance classroom as it is in the convention classroom using the full motion two-way videoand audio method

The faculty did not agree that nonverbal communication between teacher and student could be as effective in the distance classroom using two-way video and audio methods as it is in the conventional classroom. Only 18.5% of the 416 responding to the item indicated that they strongly agreed or agreed with the item and 36.8% disagreed with the item and 19% strongly disagreed. The mean was 3.5 on a five point scale where one



equaled strongly agree, and indicated a somewhat negative attitude toward the ability to recreate nonverbal communication in the distance education classroom.

**Distance Education Would be more Feasible for the Faculty because of the Technological Ability to Have Immediate Interaction and Feedback**

The faculty surveyed was strongly positive that distance education would be more feasible for them because of the technological ability to have immediate interaction and immediate feedback between student and teacher as 71.5% (296 of 414) of faculty members strongly agreed or agreed. Fifty-eight faculty or 14% were not sure and only 60 respondents or 14% either disagreed or strongly disagreed with this item. The mean score based on the n of 414 was 2.26 which indicated a strongly positive reaction to the technological interaction between student and teacher with video based distance education delivery methods.

**I Would be More Willing to Teach Distance Education Courses using full motion two way video and two-way audio**

The faculty exhibited a strong willingness to teach distance education courses using full motion two-way video. Faculty recognize the important tool this technology was allowing for interaction and feedback in the classroom. This item should give administrators positive encouragement for the continuing development of courses which utilize this DE media method. The mean score of the item, *I would be more willing to teach distance education courses using full motion two-way video and two-way audio* was 2.30 on a five point scale. Eighty-eight respondents said they strongly agreed and 169 agreed. The percentage of the two categories in agreement represented 66% of the 387 respondents.

This is indicated that emphasis needed to be placed on this type of delivery method in order to get the faculty more involved in distance education.

#### Research Question Six-Summary

Research question six analyzed the written responses of the Utah faculty to items 25 and 26. The research question asked, *“Do public higher education faculty in Utah have positive or negative attitudes toward distance education? Do they like the concept of distance education? What barriers or fears do they see preventing faculty from accepting distance education methods as an effective form of university instruction?”* The responses allowed the faculty to express their views and to discuss their attitudes toward distance education.

The actual item on the survey, item 25 asked faculty *Do you like the concept of “distance education?” Why or why not?* Item 26 read, *What barriers exist that prevent faculty from accepting distance education as an effective form of education?* Responses were grouped in categories that contained the most commonly recurring responses the faculty chose to discuss. Item 27, an open response item asking about training for distance education, was not analyzed, but the complete list of answers by professors is contained in the appendix as were the other two item lists.

#### Do you like the concept of “distance education?” Why or why not?

The Utah faculty responded positively to this item. In fact, 54% of the faculty members responded positively to the item. This percentage was figured based on the number of faculty that answered either yes or no. As a percentage of all responding to the item,

n=367, 46% answered yes and 32% responded no and 19% offered responses that were qualified and couldn't be classified as either yes or no.

The research university faculty was the least positive group with 41 faculty that responded yes and 40 that responded negatively. The other two groups were much more positive. The comprehensive universities, SUU and Weber State, had much more positive attitudes 62% to 61% in the community colleges.

The faculty discussed the pros and cons of a number of issues which shaped their attitudes toward distance education. The faculty discussed access, interaction, the costs related to DE, educational issues related to traditional education methods, motivation, the belief that distance education is not an effective teaching method, technical problems and the possible reduction of the faculty.

#### Accessibility Issues Concerning Distance Education.

Of the issues discussed by the faculty, access issues were the most common. The faculty focused on the need to take education to those who can't come to campus for any number of reasons. The issue was important enough to be discussed by 137 faculty. It seemed the faculty was strongly in favor of distance education if it was used to increase availability in rural areas, especially for those who wouldn't otherwise be able to complete a college degree.

#### Classroom Interaction and Distance Education.

The importance of interaction in the classroom between instructor and student was another important issue discussed by the faculty. There were 117 of the 367 faculty

responding that addressed interaction issues. The 117 represented 31% of those that responded to the item. A comment that highlighted the importance of the interaction issue is included here. "I think distance education has a place in higher education. However, I do not want it as a substitute for the conventional classroom experience. Students need the interaction with the professor and their peers."

#### Cost Related Issues and Distance Education Programs.

Issues related to the costs of distance education were discussed by 27 Utah faculty members. This was not a major issue on the minds of the faculty but some of the respondents commented that it would save money for the state as more students were offered courses at a distance and some said they would accept distance education because of economic factors.

#### Educational issues of Concern to the Faculty.

Educational issues were discussed by 27 faculty respondents. These issues included the idea voiced by a number of faculty members that distance education is not a replacement for traditional education. Another educational issue centered on subject matter not adapting well to distance education methods. Some faculty members strongly voiced the opinion that DE is not for their courses because they don't adapt well and interaction is lacking.

One faculty member summed up teaching issues with this response. "It forces you to rethink education and become a better teacher. But it is not a replacement for a traditional

university experience. It is of value primarily to those who cannot access a university because of geographical distances.”

#### Motivational Issues Related to Faculty and to Students

The motivation or the lack of it on the part of students is an issue of concern of the Utah faculty. Comments indicated that faculty believed that distance education or distance learning is most effective with highly motivated students.

#### What Barriers exist that prevent faculty from accepting Distance Education as an effective form of Education?

Of the faculty, 340 responded to this item which considered barriers that might prevent faculty from accepting distance education as an effective form of education. The Utah community colleges had 119 respond to this item, 125 of the comprehensive universities faculty and 96 of the research universities faculty offered written responses. There were 78 faculty members who did not respond to this item. Again the total cases was 421.

#### Interaction Issues.

The most common response to this item dealt with interaction issues between professors and students, and students and students, and each of the three groups of Utah institutions addressed these issues more than any other. Overall, 91 faculty members commented on interaction issues. Interaction issues were mentioned by 33 comprehensive faculty members, 32 community college faculty members and 26 of the research university faculty. The 91 responses related to interaction as a barrier represented 27% of the 340 faculty that wrote responses.

Interaction wasn't the only issue addressed by the faculty. Other issues viewed as barriers were the fear of the unfamiliar, technical problems, quality and effectiveness of distance education, the role of the faculty, time, money, motivation to change, curriculum development, fear of video, work preparation, support at distance sites and political motives.

#### Issues of familiarity with distance education.

The lack of familiarity was discussed as a barrier to distance education. Faculty also addressed the lack of understanding of the concept, and a lack of training with distance education methods. The community college group discussed issues of familiarity more than the others as 28 comments related to this issue. Only 10 research university faculty discussed issues of familiarity, but 25 comprehensive faculty had comments related to this area. A community college faculty member said that faculty have a "fear of the unknown" and that they "were not familiar with options" of distance education methods.

#### Technology as a barrier to distance education applications.

The technological effectiveness of distance education was a concern of faculty in this area. Total comments addressing this issue were sixty-two. Technology as a barrier was stressed by , 26 faculty members of the comprehensive university group, 23 community college faculty and another 13 research faculty. This represented 18% of the faculty that responded to item 26 concerning technology barriers. Some of the barriers were that faculty didn't believe the technology is ready for distance education to be effective and

others said that the technology was not understood and was sometimes a barrier to the message the faculty was trying to send.

#### Quality and effectiveness of distance education.

The quality of distance education and its effectiveness is another area discussed in the written responses by the faculty. There were comments classified in this category by nearly two of every 10 of the faculty responding. The comprehensive universities mentioned this barrier most, as 25 comments came from that group. The research university made 22 comments related to the effectiveness and quality of DE, but only 14 comments in this category were from community college faculty.

The difficulty of adapting certain courses including hands-on courses to distance education was discussed by the faculty as a barrier. The faculty was also concerned that information is needed to indicate that DE is effective or ineffective. The faculty also were worried about hands-on courses that they felt wouldn't adapt well to distance education delivery.

#### Time as a barrier to distance education.

Time was mentioned as a barrier to distance education by 17% of the faculty. There were 21 mentions of time by the community college faculty, comprehensive faculty members had 19 related comments and 18 by the research university faculty.

The faculty discussed the amount of time it takes to prepare a DE course and time for faculty to teach DE courses based on their course load. A comprehensive faculty member wrote, "Lack of support-in terms of money and time-especially for developing and

teaching courses at this university, it is in addition to existing course [load].” The faculty believed that DE courses were more time intensive than traditional courses.

Money as a barrier to distance education.

Money related issues were discussed by 15% of the faculty respondents. The most comments regarding money came from 22 comprehensive university faculty members. The community college faculty brought this issue up 15 times and there were 14 research faculty members that thought money was a barrier. Money was discussed as a barrier from several different viewpoints from low pay for teaching the courses to proper support, and equipment to allow for quality teaching.

The Role of the faculty as a barrier to distance education.

Of the faculty responding to this item concerning barriers, some of the barriers were related to time and money, but other were related to training and to the potential loss of jobs by faculty. The role of the faculty is an area that needs to be considered since the faculty hasn't always been consulted in the development of distance education programs. The community colleges were the most concerned with this issue as 25 of the 58 comments came from this group. The comprehensive universities had 20 faculty comment about the faculties role in distance education and 13 research faculty offered responses fitting this category.

One faculty member wrote that distance education, “diminishes the role of faculty.”



Motivation to change as a barrier to distance education.

There were 28 responses or just eight percent of the faculty that discussed motivation issues. Of the 28, comprehensive university faculty accounted for 16 of the comments.

The motivation to change was discussed as a resistance to change or innovation. A faculty member responded this way, “Barriers are resistance to change, inadequate competence with technology and inadequate technology” and another faculty member called it a “concern for change” and still another talked about the unwillingness on the part of faculty to be “innovative.”

Curriculum development as a barrier to distance education.

Only six percent of the faculty discussed concerns of curriculum development, although many of the other comments implied curriculum concerns. There were 22 respondents that addressed curriculum development problems as a barrier. Twelve of the respondents were faculty of the five community colleges. Concerns in this area focused mostly on the time, work, and the cost to develop the distance education courses as well as the lack of knowledge concerning the methods which could prevent solid curriculum development.

Other barriers concerning distance education.

Other barriers the faculty mentioned involved the fear of video or fear of showmanship; work, which has been mentioned in a number of responses considered in other areas; support at distance or remote sites; and politics.

**Item 27 If You Have Taught a Distance Education Course, Were You Adequately Trained for the Experience?**

This item was not discussed because the need for training was discussed mentioned by the faculty in previous items. The complete faculty responses were included in appendix D. Most faculty members that responded to this item indicated that they had been well-trained prior to teaching a distance education course. A number of the faculty respondents didn't provide written responses to this item.

### **Conclusions**

Results of the Utah faculty attitude survey allowed the following conclusions to be drawn:

1. The Utah faculty was highly familiar with distance education and accepting of the use of distance education. The exception being the use of distance education in the faculty respondents own courses. Clark (1992) had said that familiarity with distance education methods made it more likely that the faculty attitudes would change to accept the innovation of distance education. The Utah faculty was strongly positive concerning whether or not their institution should be involved in distance education delivery. Three of every four faculty members said that their institution should be involved in offering distance education courses. The acceptance of institutional use of distance education and the willingness on the part of the faculty to teach DE courses appeared to be due to the familiarity level of the faculty. And even though the faculty wasn't as accepting of DE for their own courses, the video media methods in distance education were considered to be

effective by the majority of the Utah faculty. Attitudes of faculty concerning distance education courses in their own academic area were less positive than the institutional use measure or the use of distance education for college credit. Just less than half (49.6%) responded that they agreed that *Distance education courses are appropriate in your academic area*. Some of the disagreement was interpreted to mean that faculty felt some academic courses were suitable for distance education applications and some were not. This is made evident by the responses to the open question concerning attitudes toward distance education.

2. A large number of faculty that hadn't taught distance education said they would be willing to teach a course. Willingness to teach distance education is important, if this alternative method of instruction is to be successfully developed in Utah, and adopted more and more readily by the Utah faculty. Of those who hadn't taught a distance education course, 64.5% of the 287 responding said they would be willing to teach one. These percentages indicated a willingness on the part of the Utah faculty to give this alternative method of instruction an opportunity to work as an alternative method of education in the Utah public colleges and universities.
3. The faculty exhibited a strong willingness to teach distance education courses using full motion two-way video and two-way audio. Faculty recognized the important tool this technology was, that allowed for interaction and feedback in the classroom and nearly seven of 10 agreed with the item. These results indicated that emphasis needed to be placed on this type of delivery method in order to get the Utah faculty more involved in distance education. Whether faculty had taught

distance education courses or not, full motion two-way video and two-way audio was the number one preferred choice. The second most preferred method was internet on-line courses. Other video applications of distance education were among the top methods preferred by the faculty, even though, the faculty knew the most about correspondence study.

4. The faculty attitude was slightly positive toward the general effectiveness of distance education as an educational method. Nearly five of 10 faculty agreed that distance education is an effective educational method, while only two of 10 disagreed. Less than one in 10 strongly disagreed. The comprehensive universities group was the most positive concerning the effectiveness of DE.
5. This study made an important contribution concerning the importance faculty gave to nonverbal communication in the classroom. The Utah faculty very strongly agreed that nonverbal communication is important in the conventional classroom. However the faculty did not agree that nonverbal communication between teacher and student could be as effective in the distance classroom using two-way video and audio methods as it is in the conventional classroom. Less than two of 10 agreed. This negative attitude toward the ability to recreate nonverbal communication in the distance education classroom indicated that the faculty recognized the limits of interaction imposed even by today's video distance education methods.
6. The faculty was positive toward the use of distance education as part of college or university academic programs. Of the faculty six of 10 indicated that they agreed.

Less than two of 10 faculty disagreed. The faculty also had a positive attitude toward offering distance education for college credit. The mean score of the item was 2.29 indicating a moderate to strongly positive attitude by faculty. By group both the comprehensive and community college groups were strongly in agreement with offering DE courses for college credit as seven of 10 faculty agreed.

7. The faculty had a strongly positive attitude toward the statement that the technological ability to have immediate interaction and immediate feedback between student and teacher makes distance education more feasible. Seven of 10 faculty members agreed.
8. Access issues were important to the Utah faculty. Many of the faculty discussed this issue and gave it as their reason for agreeing that they liked distance education. The faculty focused on the need for education to be available to all, including, traditional and non-traditional students, whose schedules or location won't allow them to come to campus for traditional courses. Nearly four of 10 discussed access issues and the need for increased availability in rural areas. Some of the respondents cautioned that face-to-face classroom teaching was considered by them as the best method, but that distance education offered an alternative for those who couldn't take advantage of the universities and community colleges in the population centers.
9. To the open response item 25, the faculty said yes they liked distance education, 54% to 46 percent. The least positive group was the research university group as 41 faculty answered positively and 40 responded negatively. Taken together, the

other two groups were much more positive as an average of 61% were positive toward DE. The comprehensive group had 62% that responded yes and the community colleges had 61% that responded positively.

10. The faculty stressed the need students have for face-to-face interaction with professors and with their peers. In fact, 31% of the faculty, that responded to open item 25 in the survey, discussed interaction issues and some made it a strong point that the traditional classroom would always be superior to the distance education classroom. Although a number of faculty felt that distance education has its place in higher education, it was not regarded as a substitute for the conventional classroom experience.
11. The most frequently discussed barrier in written responses by the faculty was interaction. The faculty felt that a university education requires interaction and feedback between professors and students, and students and students. Other barriers discussed by the faculty were lack of familiarity, technical problems with distance education equipment, the quality of distance education and its effectiveness, time, money, the role of the faculty in distance education and the motivation to change. Some mentioned fear of video and the fear of showmanship. Inadequate time and money for necessary curriculum development were also viewed as barriers.

### **Limitations of the Study**

The results of this survey are not generalizable outside of the state of Utah. Although, the results could be used to draw conclusions concerning faculty attitudes in other states at similar institutions in public higher education.

It also might have been more effective to categorize the years of service as educators rather than having the faculty specify an exact year on item 32. The question on feasibility of distance education might have been more clear. The question was intended to compare the new two-way video methods of video applications to other distance methods that didn't offer immediate visual interaction. Also in the future, DE methods would need to be reevaluated as distance education continues to change and new methods are introduced. The results related to these methods will not be frozen in time and will change as new technology is introduced. Also definitions of DE methods might have helped clarify for respondents what the methods were they were attempting to rank for knowledge and preference.

### **Recommendations**

1. Administrators and organizers of distance education programs should continue to move ahead with distance education programs based on the willingness of the Utah faculty to teach distance education courses. Willingness is an important issue if distance education is to become a stronger alternative method of instruction in Utah public colleges and universities. Involvement by more and more faculty should be the trend based on the responses to the willingness item in this survey.

2. The Utah faculty favored the interactive video methods of distance education and efforts should continue to train faculty in the use of these methods which appear to interest and attract the attention of the faculty. Utah administrators need to involve more faculty in the planning and development stages of distance education and program administrators must continue to work to improve the time and reward scenarios for those willing to be involved. Administrators of government must realize that monetary rewards for faculty is fundamental to the growth and development of distance education. As Gibson and Gibson have written, "The success of any distance education system is primarily dependent on the correct mix of human factors that support faculty learner needs. Given our current fascination with technology it is sometimes easier to get a million dollars to fund a new technology system than it is to get \$100,000 a year to maintain the human infrastructure," (p. 15).
3. The Utah faculty needs to be furnished with information concerning the success of distance education programs. A number of open response concerns focused on the lack of knowledge, on the part of faculty members, concerning the effectiveness and quality of distance education. The emphasis on the student, and student learning is important to the success of distance education, but the administrators and leaders of distance education efforts in Utah need to focus on the faculty and allow them to become a part of the development of distance education. As indicated in the review of the literature, most research has focused on student



learning and learning methods used to teach distance education rather than on the faculty who must teach in this new distance education arena.

4. Related to the previous issue is the need to continue to educate faculty about distance education, its methods and applications. Clark surmised that distance education will grow and develop in this country as more and more faculty become familiar with distance education. Utah administrators should be very encouraged with the findings of this study concerning familiarity and willingness and the belief by faculty that institutions should be using distance education. On the other hand, relatively negative attitudes still exist concerning the use of distance education in the individual faculty members courses. Continuing the education of the faculty, concerning distance education and the state's intentions to use it as an alternative method of education is extremely necessary to future success.
5. The content analysis of the responses from the Utah faculty in this survey should be instructive to those government leaders and program administrators desiring the continued growth and development of distance education in the state. The reasons why faculty are positive or negative toward distance education were certainly informative. The barriers that can work against a successful program of DE also were instructive and many will be eliminated, little by little, as distance education programs continue to develop.

### **Recommendations for Future Study**

1. A Major concern of Utah faculty members addressed appropriate applications of distance education. Faculty believed that some courses were appropriate for distance education applications and some were not considered appropriate. A future study needs to explore this issue of appropriateness of courses for distance education applications. Faculty members could be asked to specify which courses they believe could be taught at a distance and which ones they don't believe can be adapted to DE teaching methods. More exposure to the methods of distance education could help faculty determine which courses would be most appropriate.
2. Future studies could incorporate a more hands-on method to investigate faculty attitudes toward distance education. One method could be the use of personal interviews and focus groups. This study did use a focus group to help prepare the survey instrument and adapt it from the Clark 1992 study, and it was very useful. Focus groups could be useful in learning more about faculty attitudes toward training, method acceptance, method preference, interaction issues, accessibility issues, and what faculty members believe the role of the faculty member should be. A more qualitative approach could prove useful to the future of video methods of distance education.
3. Faculty were concerned with the effectiveness and the quality of distance education. Case studies in Utah and other states could provide contrasts and comparisons of successful and not so successful distance education programs in order to improve the distance education practices currently being employed.

4. A focus of future study should be on the training of faculty to meet the special requirements of the full motion two-way video and two-way audio DE classrooms. A portion of this study asked questions about the interaction features now available in distance education and the importance of nonverbal communication. Studies should compare the conventional methods of teaching in the traditional classroom and learn how to replicate success in the distance video classroom. Teachers face technical and space problems related to interaction that traditional teachers haven't had to face. Case studies could take individual teachers and follow their progress, and adaptations, as they teach and learn in this new environment. Verbal and nonverbal communication observations would be useful to future DE instructors.
5. Researchers might look at the history and current status of the EDNET system and future plans to continue to develop course work for college credit in the state using the network's system. This type of study would be useful to other states who might be less advanced in distance education.
6. Although this study was a not a national faculty study, a more comprehensive study of national attitudes, on a larger scale than Clark's 1992 study would be desirable to learn more about faculty acceptance of DE methods as it continues to develop nationally. Other states could also use and improve on this instrument in measuring faculty attitudes toward distance education.

**APPENDIX TABLE**

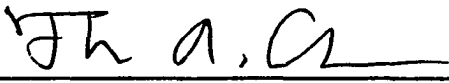
<b>Appendix A</b>	<b>Clark’s Copyright Form</b>	<b>194</b>
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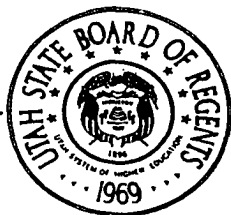
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CECELIA H. FOXLEY  
Commissioner and  
Chief Executive Officer

July 10, 1997

Mr. Art Challis  
Assistant Professor, Communications  
Centrum 213E  
Southern Utah University  
Cedar City, UT 84720

Dear Art:

After reviewing the survey regarding faculty attitudes toward distance education, you have my permission to contact the Chief Academic Officers in the Utah System of Higher Education. Enclosed is a list of the appropriate academic vice presidents and provosts.

While you still must have permission from each of these officers, I see no reason why each one would not approve the survey being disseminated to faculty members on their campus.

Best wishes for the successful completion of your doctorate.

Sincerely,

Cecelia H. Foxley  
Commissioner of Higher Education

Enclosure

UNIVERSITY OF UTAH  
Salt Lake City  
1850

WEBER STATE UNIVERSITY  
Ogden  
1889

SNOW COLLEGE  
Ephraim  
1888

COLLEGE OF EASTERN UTAH  
Price  
1937

SALT LAKE COMMUNITY CC  
Salt Lake City  
1947

UTAH STATE UNIVERSITY  
Logan  
1888

SOUTHERN UTAH UNIVERSITY  
Cedar City  
1897

DIXIE COLLEGE  
St. George  
1911

UTAH VALLEY STATE COLLEGE  
Orem  
1941

Art Challis  
Assistant Professor of Communication  
Department of Communication-Centrum 213-E  
Cedar City, UT 84720

October 3, 1997

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

You have been selected to participate in a timely and important study regarding faculty attitudes toward distance education in the Utah public higher education system.

I am an assistant professor of Communication at Southern Utah University and am completing my doctoral work in the department of educational leadership at the University of Nevada-Las Vegas. This survey is part of my dissertation which examines faculty attitudes toward distance education/teaching.

Your opinions are important and the return of your survey will help to paint a picture of faculty attitudes toward distance education in the state of Utah. It should only take a few minutes to answer the questions and to write a few comments as requested. Participation is voluntary and completely anonymous. Approval has been obtained from the provost or academic vice president at your institution. Permission to conduct the survey was also granted by Cecelia H. Foxley, Commissioner of Higher Education in Utah. The code number on the upper right hand side of the front page of the survey is for return verification. Once the survey is returned you won't be inconvenienced with a follow-up letter. If you prefer, remove the number when returning the survey.

Please return the survey using the stamped return envelope enclosed by October 24th. If you have any questions, please feel free to contact me by calling 801-586-7994. You can also e-mail me at [challis\\_a@suu.edu](mailto:challis_a@suu.edu). Thank you in advance for your willingness to participate.

Sincerely,

Art Challis

Department of Educational Leadership  
4505 Maryland Parkway • Box 453002 • Las Vegas, Nevada 89154-3002  
(702) 895-3491

Art Challis  
Assistant Professor of Communication  
Department of Communication-Centrum 213-E  
Cedar City, UT 84720

November 17, 1997

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

This is a follow up letter concerning the *Faculty Attitudes Toward Distance Education* survey you received in the mail in October. According to my records, your survey has not been returned. Could you please take 10 minutes to fill out the survey and return it to me today. It would be greatly appreciated and will help make the results of the study that much stronger. You were selected in a random sample of Utah Higher Education Faculty to participate in this timely and important study regarding faculty attitudes toward distance education in the Utah public higher education system.

I am an assistant professor of Communication at Southern Utah University and am completing my doctoral work in the Department of Educational Leadership at the University of Nevada-Las Vegas. This survey is part of my dissertation which examines faculty attitudes toward distance education.

Your opinions will help to paint a more accurate picture of faculty attitudes toward distance education in the state of Utah. Participation is voluntary and completely anonymous. Approval has been obtained from the provost or academic vice president at your institution. Permission to conduct the survey was also granted by Cecelia H. Foxley, Commissioner of Higher Education in Utah. The code number on the upper right hand side of the front page of the survey is for return verification. Once the survey is returned you won't be inconvenienced with another follow-up letter or telephone call. If you prefer, remove the number when returning the survey. Please answer all the question to the best of your knowledge. On the ranking questions numbers 10 and 11 please use each number between 1 and 8 in ordering your preferences.

Please return the survey at your earliest convenience. If you have any questions, feel free to contact me by calling 801-586-7994 or at my home 801-586-9711. You can also e-mail me at [challis\\_a@suu.edu](mailto:challis_a@suu.edu). Thank you in advance for your willingness to participate.

Sincerely,

Art Challis

Department of Educational Leadership  
4505 Maryland Parkway • Box 453002 • Las Vegas, Nevada 89154-3002  
(702) 895-3491



**Purpose of the Survey** This survey is designed to learn about attitudes toward distance education held by faculty members at the nine institutions of public higher education in Utah. Your response will help assess these attitudes concerning this form of alternative educational instruction. With more and more money being allocated by state government to technology and distance education applications, your feelings and attitudes are important.

**Survey Conducted by** Art Challis, Assistant Professor of Communication, Southern Utah University.

**Directions:** Please answer the survey questions by marking or circling the box or number which best describes your feelings, attitude or demographic characteristics.

**Part I Familiarity with terms used to describe distance education**

1. How familiar are you with the term "distance education/distance learning?"

- Very familiar
- Somewhat familiar
- Not familiar at all

**Part II. Previous Distance Teaching Experience**

2. Have you ever taught a distance education course of any kind?

- Yes
- No If NO go to #4

3. How many distance education courses have you taught?

- 1 to 5 classes
- 6 to 10 classes
- more than 10 classes

4. If you answered NO to #2, would you be willing to teach a distance education course?

- Yes
- No

**(Please continue to the next page)**

**Part III. Attitudes**

5. Whether or not your institution makes significant use of distance education methods, do YOU believe it should?

- Yes  
 No

To answer the following questions, please indicate your attitude by circling the number of your choice where 1 represents strongly agree and 5 represents strongly disagree.

6. Nonverbal communication between teacher and student is important in the conventional classroom.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
1	2	3	4	5

7. Nonverbal communication between student and teacher can be as effective in the distance classroom (using two-way video and two-way audio media methods) as it is in the conventional classroom.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
1	2	3	4	5

8. The technological ability to have immediate interaction and immediate feedback between student and teacher makes distance education more feasible. (Please circle your answer)

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
1	2	3	4	5

9. I would be more willing to teach distance education courses using full motion two-way video and two-way audio. (Please circle your answer)

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	Not informed Enough
1	2	3	4	5	9

**(Please continue on the next page)**

10. Listed below are the most common applications of distance education worldwide. Rank in order the technology or method of distance education YOU KNOW the MOST about using number 1 to represent the method YOU KNOW the MOST about and number 8 representing the method YOU KNOW the LEAST about.

\_\_\_ Audio Conferencing

\_\_\_ Video Conferencing

\_\_\_ Computer Conferencing

\_\_\_ Audiographics

\_\_\_ Tele-courses.

\_\_\_ Correspondence Study

\_\_\_ Full motion or compressed two-way video with two-way audio

\_\_\_ Internet-or on-line courses.

11. Whether or not you have taught a distance education course, please answer this question. In rank order, which distance education technology do You or would YOU prefer using? Rank 1 through 8 where 1 is YOUR MOST preferred delivery method.

\_\_\_ Audio Conferencing

\_\_\_ Video Conferencing

\_\_\_ Computer Conferencing

\_\_\_ Audiographics

\_\_\_ Tele-courses

\_\_\_ Correspondence Study

\_\_\_ Full motion or compressed two-way video, two-way audio

\_\_\_ Internet or on-line courses.

**(Please continue on the next page)**

#### **Part IV Receptivity to Distance Education**

For each of the following indicate YOUR feeling toward the statement by circling your answer on a scale of 1 to 5 where 1 is strongly agree, and 5 is strongly disagree.

12. Distance education is an effective educational method.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
1	2	3	4	5

13. Distance education should be used as part of college or university academic programs.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
1	2	3	4	5

14. Distance education courses should be offered for college credit.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
1	2	3	4	5

15. Distance education courses are appropriate in YOUR academic area.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
1	2	3	4	5

16. I would like to use distance education for my courses.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
1	2	3	4	5

#### **Part V. Media and Methods in Distance Education**

Please indicate your attitude toward the use of each of the following media\methods when used in college-level for credit instruction by circling the number which corresponds to your feeling on a scale of 1 to 5, where 1 is strongly agree and 5 is strongly disagree. If you don't have enough information circle 9.

17. Audio Conferencing (instructional dialogue by telephone) is an effective method of distance education.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	Not Informed Enough
1	2	3	4	5	9

**(Please continue on the next page)**

18. Video Conferencing (Live one-way video instruction with two-way audio dialogue) is an effective method of distance education.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	Not Informed Enough
1	2	3	4	5	9

19. Computer Conferencing (instructional dialogue by computer, with one-way delivery of electronic messages and text) is an effective method of distance education.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	Not Informed Enough
1	2	3	4	5	9

20. Audiographics (Computer conferencing combined with audio conferencing) is an effective method of distance education.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	Not Informed Enough
1	2	3	4	5	9

21. Tele-courses (Video programs combined with print media using one of many delivery methods, including videocassettes) are an effective method of distance education.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	Not Informed Enough
1	2	3	4	5	9

22. Correspondence Study (instruction by mail, characterized by heavy use of print media and audio cassettes) is an effective method of distance education.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	Not Informed Enough
1	2	3	4	5	9

23. Full two-way video, two-way audio is an effective method of distance education.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	Not Informed Enough
1	2	3	4	5	9

24. Internet on line courses is an effective method of distance education.

Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree	Not Informed Enough
1	2	3	4	5	9

**(Please continue on the next page)**

**Part VI. Your Views.** The following questions give you the opportunity to express your opinion concerning selected distance education issues. Please answer all of those questions about which you have an opinion. If necessary, attach additional sheets to fully express your views.

25. Do you like the concept of "distance education"? Why or why not?

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26. What barriers exist that prevent faculty from accepting distance education as an effective form of education?

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27. If you have taught a distance education course, were you adequately trained for the experience?

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**(Please continue on the next page)**

**Part VII. Respondent Characteristics**

28. What is your academic rank?

- Full professor
- Associate professor
- Assistant professor
- Lecturer/Instructor

29. Are you tenured?

- Yes
- No

30. Are you currently serving in any of the following administrative capacities? Mark the one that applies.

- Dean
- Associate Dean
- Department Chair
- Assistant Department Chair
- Sequence Head
- Other \_\_\_\_\_
- None of the above

31. List your Academic Area

- Arts & Letters
- Business
- Communication
- Education
- Medicine
- Science
- Social Science
- Other-Please List \_\_\_\_\_

32. How many years of College Teaching experience do you have? You may count graduate teaching experience. Please Round to the nearest whole number.

\_\_\_\_\_

**(Please continue on the next page)**

33. Please check your current age group.

- Below 25  
 25-34  
 35-44  
 45-54  
 55-64  
 65 or older

34. Gender

- Male  
 Female

35. Which of these faculty duties do you prefer? Please rank with 1 representing YOUR MOST preferred duty and 3 representing YOUR LEAST preferred duty.

- \_\_\_ Teaching  
\_\_\_ Research/scholarly pursuits  
\_\_\_ Service activities

Thank you for taking the time to complete this survey. Your answers will be kept strictly confidential. The survey is number coded to allow for return verification.

**Please return it in the enclosed envelope to:**

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## OPEN RESPONSE ITEMS

## ITEM 25: DO YOU LIKE THE CONCEPT OF DISTANCE EDUCATION?

## WHY OR WHY NOT?

1. Only a few students benefit from it. Most think of it like watching T.V. and unless they are motivated they will not do well.
2. It can be appropriately applied to make education services available to students when they would otherwise have had to do without.  
  
Unfortunately, many students lack the self discipline to succeed well in this. Also teacher/student interaction is impeded by the logistics of the system. Even dire audio/video feed (2 way) is time consuming and often reduces content possible to teach. Also fear that administrators or legislators will see it as panacea for reducing per student costs and reduce offerings of live classes.
3. Yes. It serves a population that otherwise would go unserved.
4. It does not give socialization. When used as the only means of study. Students need interaction with different views and socioeconomic groups.
5. Distance education for certain classes makes sense. Classes that are large or rely on much hands-on discussion are not suited for distance education. Distance ed should be used to provide access to low enrollment courses that are largely lecture based. There is no reason to offer general ed or

distance ed since it is almost as cost effective to have an instructor at the remote sites.

6. Yes, reach people who otherwise would not receive an education.
7. I like the concept because it provides opportunities for education at remote sites.
8. No response.
9. Yes, but it is too expensive to justify.
10. I recently finished m Masters level program with distance learning. It gives many people increased availability to educators without having to be in the city where universities are. Exciting use of technology and emerging media.
11. Yes, on a limited basis it can provide an opportunity for people in remote locations to further their education. However, I am not convinced that we should offer baccalaureate and graduate degrees in certain subjects through distance education.
12. Yes, people in remote locations can receive education.
13. Yes, because people in the remote areas will get their education.  
No, because the productivity of the instructors drops down by 50% and the quality of education is lost.
14. Yes. Gives remote areas a chance to learn.
15. Yes, it provides access to quality programs and courses that otherwise would not be available due to distance or personal limitations.

16. I do not like this concept. I feel a need for close one-on-one interaction in a classroom between the instructor and the students. Since most of the classes I teach are major classes, they are all context driven. I have to make sure I cover all of the material since these are also university transfer classes.
17. Quality and the college experience should be taught.
18. Blanding is very rural. Distance ed allows more students to pursue a degree while remaining family centered.
19. Yes. To provide educational opportunities to students in distant areas where nothing else is available.
20. No response.
21. Yes, it can help those who cannot get to a traditional campus. Plus I have been in numerous productions of movies and videos.
22. It seems we're going in that direction but for my area of teaching it may not be the best method.
23. No. I'm a teacher, not a television personality.
24. It has great potential in southern Utah.
25. It could be very advantageous. Even outlying areas could have the opportunity to study under outstanding teachers.
26. I think it has some value, but limited.

27. I like the idea, but think for many subjected topics it is not appropriate as the sole method for delivery. In teaching nursing, distance learning would still require clinical time and supervision.
28. Yes, it makes high quality education to a world wide population.
29. No: impersonal, lack of access to campus facilities, cultural events, student interaction.
30. It is great for shut-ins, or those with other problems. Nothing can replace the face to face institution. Never will.
31. Yes and no. I think it is a great idea for rural communities. When it is done improperly the student loses out. One of the important and necessary parts of a college education is the interchange of ideas that comes about because of class discussion and the exposure to new ideas.
32. It is liberating for remote areas, but it is not as rich as on campus opportunities.
33. Yes, allows nontraditional students the opportunity for an education.
34. Yes, it gives individuals the opportunity to get a college education that otherwise would not have that chance. I prefer the students to be in the classroom and it seems to me that communicating is difficult enough without adding to the problems with displaced individuals.
35. Yes. Accommodates schedule of students; logistics.
36. No. Students do not have the opportunity to interact with instructor and learn from instructor's expertise. Also when courses are taught they are

usually condensed which I believe does not help students. Students are not able to interact with other students.

37. Most of my courses are practiced hands-on type courses and difficult to teach by video, etc.
38. Advantages need to be widened both ways to be effective in physical education skill classes.
39. Distance learning allows an opportunity to those that are unable to leave home & travel long distances to still receive an education and /or degree. I am taking a class over ednet (two-way-video) that might not be ideal, but is the only available option. I am learning a lot (good and bad) from the class, both the material and means of delivery.
40. I like it only for certain audiences--those who cannot come to campus because they are too far away or are employed full-time. I do not believe distance education is as effective, on the whole, as in-class experiences, especially for 18 to 24 year old students.
41. I would not have my masters degree if it were not for distance education. We had instructors come from Utah State and that was great. But to finish I took classes on the Internet system. If the course is well developed it is a great way for people in small communities to finish their degrees.
42. Distance education serves an important purpose but does not take the place of an on-campus experience. For students isolated from learning centers

distance learning is a good alternative. However, the research material and interaction between faculty and peers is so limited at the distant sites.

43. Yes it makes education accessible to a wider range of people. It enables nontraditional students to come back to school in a more affordable and easier manner.
44. Students in outlying areas need access to education, but it must be seasonal, using a telephone and a campus trip.
45. No! Face to face, personal interaction between student and teacher, and student to student is important as a motivating factor and as a source of learning.
46. I feel that distance education may become a necessary evil! Works pretty good for highly motivated students.
47. Yes. Distance education gives people who are "geographically disadvantaged" an opportunity to take advantage of additional education.
48. Yes. Allows students in outlying areas the opportunity to take classes without relocating. Allows working people to do telecourses in times to work with their schedules (whenever they can) and not on a scheduled basis.
49. I am not convinced the "face to face" format of the classroom can be replaced by distance learning. The really interaction between teacher and student is too important. Having used two-way video-audio interactive

teaching, I find it to have short comings. The technical barrier does reduce effectiveness.

50. Success is determined by the student. It works great for the motivated student (as does anything) and won't for others.
51. If it is the only way to provide the course it may suffice, but normal classroom instruction is better.
52. Yes. In rural areas it is often the only viable option for resident.
53. No, although it may on occasion be necessary.
54. I think it is bunk. It is extremely expensive and no one is counting the cost. The cost of all the hardware is extremely high and once installed is under utilized.
55. Yes, individuals who do not have the opportunity of attending a nearby institution can still take classes and improve their education.
56. It can reach the widest range of students. Provide opportunities to people who would not otherwise have access to education.
57. No. Education is not just transferring knowledge. It is an ongoing dialogue. Where will the dialogue be when the teacher and student are at different places?
58. No response.
59. Yes and no. Yes because it offers students the opportunity to take classes when they can't be on campus. No because I feel we are losing the human touch. Unless the distance learning is interaction, students don't have the

opportunity to ask questions and get immediate feedback. Testing is a problem.

60. Yes, for many fields of study it is acceptable. I feel that in the trades areas it is impossible to give quality instruction because of the amount of hands-on and over the shoulder training that is needed.
61. No. It eliminates the direct presence of the teacher.
62. Being program coordinator over the only lineman program in the state, I work with many municipalities border to border. We have used correspondence study for years with success. However, technology has advanced to the point that maybe there is something better.
63. It is important to provide a method of learning for students at distance locations. But not every student can handle distance learning. Some students need personal tutoring, immediate feedback and also need the interaction that happens in a real classroom. For self-motivated, high achievers, a self-paced independent course could work.
64. I believe distance education as an alternative source is possible. I believe it lacks many of the interactive opportunities of the classroom.
65. Very difficult in the area of science and physical education classes. Needs more hands-on experience.
66. No response.



67. No. The administration wants distance learning teachers to grade English composition work and papers for 125 students and be paid for teaching one section.
68. Yes, because it offers educational opportunities to many who would otherwise be excluded. It should not be seen as an inexpensive alternative for education generally.
69. Limited. Some classes, like writing, lend themselves to interaction. Student attrition is a problem with everything but Internet.
70. No. Spontaneous interaction important.
71. Equality issue.
72. Yes, allows for more flexibility in time and method of delivery.
73. I feel there is a need for distance learning in the educational experience of today. However I feel that the excitement of this technology has given some people the elusion that all forms of education can be served by this method of delivery. This I feel is a mistake as there are some classes that will never prepare the student for his career when presented in distance format. I have watched televised courses and placed myself as a student, and I still felt that I was removed from the learning environment to some extent. However this may be the only option and will meet the needs that the individual has.

74. Not in the arena of traditional education. However, in the modern world of education it has to be used because of the numbers of students needing or wanting a degree.
75. Distance education allows students to be the controllers of the access of education.
76. Distance education allows students to be the controllers of the penny.
77. No response.
78. Rural application. Better access to current resources
79. Overall, I think it has its place in today's teacher-of-information society. Some classes might adopt nicely to this method-i.e. math. I teach Human Sexuality, Interpersonal Communications, and other classes where classroom experience with other students is critical. I am a licensed, practicing psycho therapist and I have serious concerns on the possible lack of interaction with this method of learning. I have concerns about quality supervised testing situations.
80. Yes. It allows students to access the educational system where they would, otherwise, have no access.
81. I think it is acceptable for some students, usually those who are self-motivated or self-directed, because the instructor is not present.
82. Success stories, technicians of foods (that increase likelihood of success), etc.

83. If it is being used to accommodate a student who cannot reach the campus, I am in favor of distance learning. If it is used to simply show-off the latest technology, or to replace the teacher in the classroom, I will not support it. I strongly feel that the personal one-on-one experience is important in the learning process.
84. The concept is a good attempt at finding a new shot in the arm for education, but it doesn't work. To have a possibility of success, there must be a lot of very good multimedia to keep the couch potato awake.
85. No, I do not. Humankind learns how to be human by live interactions; personal identities are a reflection of our interactions one with another. Isolation via any medium--phone, tv, radio, computer, VCR--creates insensitivity which may create alienation, which may create selfish behavior rather than good behavior.
86. I see the value of distance education to be greatest when: (1) Distance from an educational institution is too great for commuting; (2) Time constraints make attending traditional classes impossible; (3) It is a supplement to traditional education.
87. Only as a supplement.
88. Our governor is sold on the concept. With no bricks or mortar, it's here!
89. I like the concept in some courses. I do not believe it works in vocational courses. Hand on experience would be difficult in distance education.
90. No response.

91. I may work for general ed/lower division courses. Distance education tends to 'water down' subject matter.
92. I like it but find little application to dance at this point.
93. Yes I do like the concept of distance ed. I am presently teaching a highly technical class on the Internet and the students seem to be receiving it well.
94. Not enough information/knowledge on this subject.
95. 1) A lack of motivation on the part of students. 2) A lack of interaction between student and teacher.
96. When there is no other means for student and teacher to connect, yes. But I have seen the Governor (Leavitt) push for distance learning where I feel it is not appropriate. It won't relieve overcrowding if the students are already on campus. We had a student taking classes on campus who left campus in the middle of the day to drive 20 miles and watch his instructor on TV, then came back to campus.
97. It extends the educational experience.
98. No response.
99. No.
100. No.
101. Yes. Access to education.
102. I do like the concept of distance learning. It has the capacity to broaden the classroom to include students that might not be able to study otherwise. But even more important, a distance course taught through or with

computer technology could and should be instructionally designed to take advantage of technology. For instance, a single CD rom, designed for and used with a distance course could contain hundreds of books and hours of video. It broadens the information available to one student.

103. I feel that it is effective in teaching some types of learners, but not for all learners.
104. Some classes will never work. Some beginning general classes will work
105. Yes, because it does assist those who are self-motivated, cannot come regularly to campus and it reduces gridlock.
106. Opportunity for rural restricted individuals. Opportunity for physically disadvantaged people.
107. No. I'm too old fashioned!
108. No response.
109. Yes, distance education allows for more students to be educated with less expense for classrooms. Distance education could solve some traffic problems and parking problems as well.
110. Not as a replacement for classroom learning where immediate questions/response is available or where workshops can provide direction and/or help for students. Also some students are and some are not comfortable with technology. I see technology as a resource to enhance the classroom and not a way to avoid it.

111. Overall, the concept is a good one. However, I am concerned that people in charge of budgets and FTE's see this as a way to teach more students with less faculty. In order to be effective a distance learning class will require as much if not more faculty effort than a traditional class. Also, this distance format will require a more disciplined approach from the student. I am concerned about retention in these classes.
112. Yes. Student centered, active learning, flexible for students and faculty.
113. No response.
114. No, I do not. Students need the classroom, in person, to get the most out of the course. Students learn not only from the professor's instruction but from other students.
115. No response.
116. Yes, due to accessibility to remote, rural areas.
117. I consider it an alternate method of instruction since it can stand in the way of interactive problem solving which I consider essential to real teaching and learning.
118. It should be used as an alternative method, not the preferred way just to save costs.
119. Suitable for remote areas or situations where students can't attend regular classes.

120. I think it is very important to reach the people who work in our field, but don't have access to our type of program, but the nature of our work as interpreting does not lend itself easily to distance education.
121. Yes. Open access philosophy helps many who would not have the opportunity unless distance learning were provided.
122. Not appropriate for my discipline.
123. There are some problems that need to be addressed in distance education. I think use of distance education as an alternative method of delivery is fine. It will work for some students.
124. No response.
125. I feel that distance education is important for a few students. In other words students who are unable to attend regular class should have an opportunity to gain an education.
126. I like the idea of distance education access to learning.
127. No, something is lost when education is not conducted in a face-to-face manner.
128. Yes, the time has come. Not enough room or resources to continue present pattern. Rural areas especially need it for college education. Health sciences really need distance learning to reach rural areas.
129. Distance education is better than no education but might not be as effective as a live classroom, especially for the disciplines which require a lot of interaction, teacher/student but also student to student. Group work is

essential in my classes and I see myself as a guide on the side, not a sage on the stage. How can the individual contact be maintained in distance education?

130. It has its place. Not all classes will work, but on the whole I support it.
131. I'm not sure. I need to be convinced, but am willing to try anything.
132. No. I simply do not believe it is a student/faculty interaction or a student/student interaction in class.
133. I think it would be great if it works. Great if it is set up properly.
134. No. Perhaps distance ed works in lower level math courses, although I doubt the quality is there. Especially not for calculus and above.
135. No response.
136. No response.
137. No. I like the interaction with students all together; interpersonal experience. I distrust the motives of government pushing D. E.. I foresee major downsizing, homogenization, flattening of curriculum ideas.
138. It has its place, I do not see it taking place of the classroom. Some subjects will always need teacher/student one-on-one.
139. No response.
140. I believe interaction between students and other students is very important as well as interaction between students and teacher.



141. Yes. It saves student time and money due to travel. It is as effective as being in class. Allows the student to learn courses in spite of family or work scheduling.
142. No. I believe learning takes place best when there is interaction in a classroom.
143. It is a necessary evil when factors like physical distance and/or economics comes into play. Mostly, however, I believe students are better served in classrooms. Also, much of this discussion concerning distance ed fails like this survey, to take into account the differences between disciplines and courses when we talk about 's application. A telecourse about the Vietnam war maybe viable, but a telecourse on other D. E. courses may be much less effective when it isn't talking about interpreting literature (Shakespeare, etc.) or learning to write.
144. Yes, to extend the reach of educational services and to provide education in a way that better meets individual schedules and individual learning needs.
145. It has its place. I do not see it taking the place of the classroom. Some subjects will always need teacher, student one-on-one.
146. My negative attitude towards distance learning stems from my opposition to Governor Leavitt's 'virtual' university concept. A university graduate would be much more thoroughly educated than a graduate of a distance learning institution even if both had been exposed to the same set of

lecture notes. Would you want your kid's college education experience to be reduced to staring at a TV monitor from a prone position on his bed. I think not!

147. No response.
148. No response.
149. Obviously there are pros and cons. On the pro side if distance education provides educational opportunities to students in remote areas that would otherwise be lost, then it is better than nothing. On the other hand, I believe there is simply no substitute for real person-to-person interaction between teachers and students. Also, I would anticipate a certain amount of technical difficulties with equipment, etc.
150. No. No hands-on experiences. Difficult to effectively convey difficult concepts.
151. For many disciplines it is good. Others it is impossible.
152. To a degree. I need to see the pros and cons after it has been in use in order to formalize an opinion.
153. Not for my classes of art. Too much visual work to teach on video.
154. It is more effective in some disciplines than others. It is probably more effective in general education than specialized courses. How do you teach lab sections via distance learning? I teach culinary arts, except for purchasing, to beverages management and computers in food service, so this would be a hard curriculum to teach with distance education methods.

155. Not particularly effective for many of the courses taught in the art department. Requires one-on-one studio instruction.
156. No. I watch other teachers. Students are bored. Terrible way to teach.
157. Yes, too expensive for some people to gain more education using the present systems.
158. It allows students in rural areas to access quality programs.
159. It is okay. It can be very helpful to people who are impaired by distance or for other reasons from reaching a higher education facility. But I think DE has its limitations and these should be recognized. For example, there is no substitute for a biology lab to hands-on experience and interaction with instructors. Labs involving sciences should not be taught by DE.
160. Provide access for rural residents. Provide access for students away from campus (expand class availability).
161. I feel it is important and needed, but I do not enjoy teaching technical courses over distance education in an audio environment.
162. Can be effective, but often is not. Too much of it focuses on delivery of info, not learning and testing. Time and cost at developing good distance instruction discourages continued course revision required for good instruction. As a result, courses become static and eventually outdated.  
Gov. Leavitt confuses certification at prior learning with actual education.

163. Yes, but it is important to recognize that it is a tool which is not suited to all forms of higher education. Many upper division courses in the sciences include lab components that simply cannot be done through distance ed.
164. Theoretically, I like the idea especially in Utah of getting higher ed out into rural areas. I supervise student teachers and you must have the direct relationship between students and instructor.
165. No. It is hard to duplicate the learning that goes on in a face-to-face classroom. University's cannot meet all of society's demands.
166. No matter what media you use it will never replace person-to-person.
167. I don't know what you mean. If we view teaching (many of its teachers) are not very excited. Very interested if we can overcome limitations of net.
168. Yes, but only as part of a total program which includes on-site attendance at a university on college. The students miss a lot of social interaction and development of inter-personal skills if they don't attend a campus.
169. No. It is distance training. Education is a larger, more comprehensive approach and cannot be delivered at a distance. Quit fooling yourself.
170. Yes.
171. No!! You cannot offer science laboratory experiences via distance education.
172. It helps people who can't come to campus.

173. Yes, because it accesses learning to those otherwise unable to benefit. No, because my experience has been that it is of much less benefit given the limitations of the technology.
174. Yes. Cost effective, helps those who cannot move to a campus.
175. Yes, it allows us to reach a wider, more diverse set of students. Clearly, not all courses are candidates for distance ed but a large number are. I also feel if USU does not push distance education we will lose a market share of students to institutions that do.
176. I like it in appropriate settings but courses with labs are less likely to be appropriate. Distance education should be part, a modest part, of an on-campus experience. Distance Ed requires a mature serious student. Western Governors University is a fraud. We should be embarrassed to be associated with it.
177. Yes. It forces you to rethink education and become a better teacher. But it is not a replacement for a traditional university experience. It is of value primarily to those who cannot access a university because of geographical distances.
178. Not really. In teacher education we need to focus on direct interaction between students and instructor.
179. No, not good enough substitute for normal methods.
180. Distance education is irrelevant. It is here and we have to use it.
181. No. Impossible to teach a course with laboratory techniques.

182. There has not been enough study done on its effectiveness. What has been done is instructive & anecdotal. It appears to be best suited to memorization material or to highly, advanced course work with highly motivated students such as graduate courses. The typical undergraduate course or lab course is not well suited to the current technology.
183. Yes. Many general courses are well suited to Reaches a broader audience.
184. Not really. I believe that, at present, it is primarily a way to grant credit without truly educating and certainly without developing an education attitude. This may improve with advancing technology but at present it is quite clear that distance technology does not equal distance education.
185. Yes to attract students that would otherwise have limited access to learning for variety of socioeconomic reasons. No for first encounter of post-high school students.
186. For some subjects, and for those who can't attend a real class.
187. Yes. It provides educational opportunities to people who otherwise might not be able to get a college education. Electronic delivery is clearly not as good as an instructor in person. But it is a good compromise
188. I don't like it in most cases. It removes immediately from the classroom students which may be less motivated. It might be useful in some instances where students absolutely can't make it to the classroom because of other obligations.

189. For limited well defined purposes. Full degree loses, provide a dump down approach to education. There is more to education than the requiring of an hour of text book material.
190. I believe standards have already been lowered to the point that many degrees are meaningless. Faculty are encouraged to push all students through and I often get the feeling that higher education has become a big business with the bottom line being more important than education itself. Distance learning seems to me to be one more step to the seeming eventuality of students handing over checks and schools handing back degrees.
191. Yes, offers courses to more who cannot be at the major institution.  
Women especially!
192. Yes, provides students an opportunity to get an education that might not otherwise have the chance.
193. Mixed feelings. When well designed, distance education can offer education to those otherwise denied education because of distance or work schedule. To be successful, instruction must be well designed and conditions are often not optional. Politicians view education merely as information dissemination and certification. Politically motivated distance ed rests on poor pedagogy and is designed to reduce costs and faculty control of instruction.
194. No. Too low inter-student interaction and stimulation.

195. Yes. Allows people to gain knowledge without having to be on a campus as some are not able to do.
196. I worry about it. In my field there is a great need for 'hands-on' experience.
197. No. But perhaps fills some need in statewide education for the public at large.
198. I do because it is becoming necessary. Not as good as the classroom.
199. I like it because it is increasingly necessary and likely cost effective. It is important to reach widely dispersed populations of the west.
200. It's a pain to prepare for and needs to be more organized. Also, usually takes place in the afternoon or night.
201. As long as it is educationally sound and appropriate, distance education is viable. When it happens as a result of a political decision, then I question what will probably happen educationally. If we're using distance education because we don't want to employ more faculty or build buildings, then I think the education of students may suffer.
202. Yes, it gives access to training to those in rural areas.
203. Yes, it makes it easier for those who cannot make it to a university.
204. As a supplement to traditional classroom I would say yes because it increases accessibility for students. I am strongly opposed to it as a replacement for traditional education.



205. Yes. 1) Access for rural based students. 2) Access for CEU for rural students.
- No. 1) Not conducive to technical or scientific context. 2) Minimizes impact of professional socialization and professional thrust of education.
- 3) Diminishes impact of collaborative learning and peers.
206. Yes. I think it opens the door of education to a larger group of students.
207. No. Dilutes the quality of instruction when you get in live classroom.
208. I like the concept, but I do not believe it solves many educational issues appropriately. It is a technology and should be treated as such--no more--no less.
209. Not in my field of physical education. There needs to be a continual process of critical evaluation, feedback, practice that you just don't get by way of the suggested methods.
210. Yes. Allows those who cannot come to class to advance education, professional abilities.
211. For my area, teacher education, there are some classes that would profit from distance learning such as foundations of education. Educational Psychology, etc. However for the classes that I personally teach it would be highly ineffective. I hated the classes I had to take using distance learning. I need a personal connection (warm body) with my instructors. That is my learning style. I don't believe in certain cultures that distance learning is the answer such as Latinos and native Americans.

212. I would like to see some empirical evidence in its support. In my opinion the connection between learning and any specific teaching method has yet to be established.
213. No. In foreign languages which develop a social skill, it is important to work with other people in a variety of settings. I don't like the idea that it is imposed on us by legislators who want nothing more than to save money. I am opposed to complete degree programs being available on line exclusively; this diminishes quality control in a myriad of ways.
214. It meets learning needs in rural areas and special conditions.
215. It does expand the range of students I can teach. It makes me become more innovative. Personal contact is limited. Hands-on lab experience is more difficult.
216. Yes. Greater flexibility for students on time demands.
217. The concept is good in that remote areas would have the opportunity to educate the populace. I still struggle with the student/teacher relationship and communication. I also am cautious because of the cost. It seems very expensive for equipment, communication links, and course development. Does the cost justify the added value?
218. Yes. Distance education is a necessary method of delivering education to those in areas where they would normally not be able to participate.
219. Yes. For some classes. Most of the classes that I teach utilize some type of lab. This would prove difficult with distance learning.

220. Yes. I taught a distant education course on site.
221. I do like the concept to accommodate those students who cannot come on campus for their education. However, I do not think it is as effective as classroom teaching with teacher, students, present in the same room.
222. For select, highly motivated students who work or live in rural areas certain kinds of classes could be beneficial. It will not replace the classroom for most students.
223. It's O.K. because of its versatility and because it can reach students who would otherwise not be educated, but I think it is much less effective for most students than instruction at a campus.
224. Yes. It provides education to persons living outside of university areas. Provides education on level of student needs and meets criteria of time, money and convenience.
225. Yes and I loved it!
226. I believe that an in-class (in-person) interaction is always better, but although Distance education may not be entirely effective it may be better than the alternative of no learning at all
227. Provides students another option. Time commitment flexible.
228. Yes. Allows access to classes/course work that may otherwise be unavailable to students, and also allows for contact/interaction between students in a variety of settings and communities, enriching exposure to cultural and environmental differences.

229. Yes, we can reach people otherwise not able to attend regular school.
230. Yes, it reaches students who otherwise would not have access.
231. Yes, it provides students in rural areas opportunities to enhance their education.
232. It provides opportunity for people who would otherwise have no chance. A type you have overlooked - courses taught in conjunction with work. I have seen good success where student engineers working with engineers are taught in an apprentice mode but earn college credit for specific classes. What better way to learn then from someone practicing in their field!!!
233. Distance education is only as strong and effective as the teacher. A good instructor can control the variable in a classroom. I'm not sure how this is done in a distance learning environment.
234. It is a good approach in some circumstances. It's still not as good as a live classroom.
235. Yes. It provides opportunity for students who otherwise might not be able to study. No. Inadequate personal contact. Difficult to not waste students.
236. It can reach students who cannot come to regular classes.

237. Yes. Because it is another way of educating students who may not be able to attend the traditional university. It also causes one to view his/her discipline from a new perspective.
238. The real motivation frequently seems to be not improved instructors, but reduced cost, it also tends not to consider answers but questions. On line feedback and/or web sites can be useful for local issues, in my experience, but not for large questions which can typically be in the classroom.
239. Not the way the state or this survey is pushing it. Videos, home study, two-way conferencing has not worked in the past, and nothing has changed that will make it succeed now. Just copying books and putting them on the Internet is absurd. It would be much cheaper to just mail books out rather than web pages, but then it is the same old ineffective correspondence training. The full capabilities of multimedia information must be developed and new learning technology needs to be designed or this will not work.
240. Yes, but not as the complete instructional package. It is a convenient way to package what can be packaged in instruction as video documentaries have shown. But tutorials, endorsement, consultations, etc., cannot be packaged through technology as easily.
241. In general I do not believe D. E. to be nearly as effective as live class room for my discipline (English). In fact giving disciplines can be more effective than books alone, perhaps about as effective as large impersonal lectures which may resemble video presentations.

242. Yes, but not as a replacement for regular classroom instruction, only as a necessary supplement for those who can't attend classes.
243. Strong proponent. As a dept. chair, I provide opportunities for faculty & students to use this media. It is a healthy change for both. It provides access and convenience for both.
244. Yes, more and more, given the slate and availability of technology, this may enroll as an option to the traditional educational scene.
245. Students gain much more than a body of information from a university experience. They learn from the professor, other students, ambiance for the classroom.
246. I'm not completely convinced it is an effective method of teaching. I fear that interaction between students will get lost. Students learn from each other. It also limits some of the teaching strategies available: small group work, debates, class discussions, etc.
247. Yes, access to information is greatly enhanced and facilitates life-long learning.
248. Yes. Reduce road travel time for faculty and students.
249. Yes. Appropriate for today's education.
250. Why? To give remote students an opportunity for an education? Expand our possible clientele? No, I like the one-on-one, face-to-face contact with students.

251. No. There are some major keys to successful university learning that are missing. 1) browsing access to a university library - it is a myth that the net can replace this. Some of my best learning went on serendipity there as well as in doing research papers. 2) Personal access to caring professors, conversations, borrowed books - really knowing them (and them me) so they could evaluate me for references, recommendations. 3) Communication with other students as we worked out what was important, how different classes fit together, etc.
252. Yes. Allows those who are not in close proximity to an educational center to benefit in educational courses, programs, degrees.
253. Only as necessary. Often it is technology driven, get whiz, high tech gadgetry that has not been justified in terms of necessity of effectiveness.
254. Yes, it gives some people a chance for an education, that may not be possible likewise (multiple of reasons). I do believe that close interactions, one-on-one are necessary for the most effective learning.
255. Sometimes - as the last resort, it can be effective. However, students gain many things in traditional settings such as social skills and leadership skills. Many types of distance learning (e. g. Correspondence courses) rely on students to be self-motivated. Many are not and then have a poor experience.
256. Yes, some students require it to finish their degrees.
257. Yes, some students require it so they can make it to school.

258. For some of the degree course work it's O. K. But not for the whole curriculum.
259. Of course it benefits an under served group of students, provides flexibility in a busy world.
260. Yes, because it increases access for students.
261. Yes. It is independent of geographic proximity and immediate availability of physical resources or facilities. Lends itself well to self-paced, independent study.
262. I do for under-served/rural access to programs with limited exposure in areas. I am not, however, accepting of virtual university except in areas where access is limited. It is appalling that students can retrieve a college degree without interacting with a teacher. The format discredits that interaction and discredits the role of the teacher. Utah has a respiratory therapy program for the state and distance ed certainly assists in it's program.
263. Yes, as long as it is not used by governors or legislators as a panacea for curing the expense of higher education and not an alternative to the traditional college environment.
264. Yes, provides students who cannot attend university to continue learning in their own geographical setting.
265. Generally dislike because the immediacy and nonverbal aspects are missing.



266. No. In my area of music--voice teaching primarily--it is mandatory that you teach in person. I cannot see it ever working in distance teaching.
267. I like it in a limited role, to give people in remote areas greater access to education or to give working adults access to training. I don't like it for providing a liberal education or for those who can otherwise avail themselves of traditional education.
268. For some courses, but I fear that its overuse will diminish the university experience which is so much more.
269. No response.
270. Yes. But it is very difficult to use once you get past introductory courses, especially in the sciences where a lab (hands on) component is needed.
271. I do not like it. More dehumanizing of the education program and fragmented learning. Knowing process is diminished to no contact electronics.
272. Seems O.K. to me. The important part is the outcome, is it effective?
273. No. It is my evaluation that the use of time is only a way to have the government of Utah and the governor not pay the costs for a real education because it seems less expensive.
274. No response.
275. No. A major portion of the learning experience is the show. You need to capture the student's attention and then teach. I'm merely concerned about boredom/mind wandering on the student's part. On our parts, the

feedback of looking at the clay and judging your comprehension etc. is crucial. I feel most of this will be lost.

276. Yes. It gives more people access to higher education, saves resources, and makes maximum use of university resources.
277. Advantages: can reduce the need for campuses and commuting.  
Disadvantages: less personal involvement between students and faculty and less sense of community. Library access not handy. Too new to have a track record of success. Labs in science courses are impossible in our present form.
278. Don't like the idea that it promotes which believes it is a substitute rather than a tool.
279. It offers more choices and this is always good.
280. No, I do not like it! Distance education is not education. It can be job training or a money making enterprise.
281. It depends on the topic. Many technology topics could be taught this way but some hands on applications could suffer.
282. Generally, no. I think it's a gimmick to try to cut costs by increasing student/faculty ratios. However, I do think distance education can be effective on a small scale for certain select groups of students.
283. Not generally. It is too easy to water down course context and then students fail.
284. No response.

285. I think distance education has a place in higher education. However, I do not want it as a substitute for the conventional class room experience. Students need the interaction with the professor and their peers. An important aspect of higher education is the maturing process that goes on in a campus situation. "Distance Learning" should be a supplement and not a substitute for the classroom.
286. No. Eye contact, even a few in the room are helpful to me. Just after & before class conversations are valuable. I can't do that on distance. Many students must be encouraged privately during student sessions in class. Can't do that on distance.
287. Yes, it enables those who would otherwise be unable to receive college education to receive some.
288. Yes, I like the concept. I like the idea of being able to take courses that cannot be found locally. I like the selection/variety that should be available by this method and I like the idea of taking classes from a school with a strong or unique program without having to physically attend.
289. I believe it has its place and can be a useful adjunct method.
290. No, only in some.
291. I have an unarticulated knee-jack response against it, for the reasons I'm not sure of, entirely. Perhaps just a primal fear of technology often inherent in distance education,. Somehow causing an unbridgeable barrier, on howsoever subtle a basis, between parties. On the other hand, I've

experienced enough of it in various roles myself to understand that such fears are largely--I won't say entirely--groundless. Overall I think a well designed, supported, and executed distance learning course can prove quite successful.

292. No response.
293. No! Nothing will ever replace the student and the teacher in the classroom. The distant learning program is a waster of taxpayer dollars.
294. I do. I believe it offers a viable alternative for many G. E. courses and perhaps for some advanced courses. Cost is also a factor.
295. Yes, I like it. Distance education makes it possible for nontraditional students to complete course work and training that they might not otherwise be able to get.
296. I checked unsure on many items on the previous page. This is because I've not seen comparative studies of learning via these methods compared to a traditional classroom setting. An answer to its effectiveness would help me here. My gut reaction is somewhat negative because I'm not sure students learn as well. I'd like to know more.
297. It may be appropriate for some courses.
298. No the teacher/pupil interaction is lost and to me this is a cheating way to take a class.
299. Yes, I am highly supportive of distance education for select audiences, those who are more highly motivated students, generally older and more

mature, and those whose learning styles are oriented to distance education delivery. Also useful for training in business and industry, but not as useful for less motivated students.

300. Yes. Distance education makes available a variety of learning options, especially for nontraditional learners. I've worked in correspondence study and in ednet, partly because I want to see college level instruction available to a larger segment of society. Distance education is ultimately a more democratic form of education.
301. Yes because it can reach students who couldn't otherwise take college classes. No because a lot goes on in a classroom that just can't take place by distance learning. Some classes (chemistry labs) just need hands-on time.
302. For students who need one more class to graduate but works at some distance it is great. It's incomplete in that no class discussion with peers is possible, input from many in a group is what enriches a student's experience in art courses, learning from the successes and failures of others.
303. Yes, I have more technology to present materials. If the class needs to be taught in a rural area without needed equipment, I don't have to worry because I can still present my material with a distance ed set-up. Distant sites receive better instruction. I don't have to waste time driving 2- 4 hours to teach a class. Multiple areas can be taught at once.

304. Only as a last resort. Learning requires an atmosphere/surroundings conducive to learning. Interaction with peers and other instructors is as important as direct classroom experience. Science especially requires exploration of materials. I have not been an effective model which provides this environment at a distance.
305. It is O. K. for self-motivated students. Too many distractions is a problem such as a mother with children at home must take care of immediate demands on her time.
306. No response.
307. It might be used along with other methods. Education is not just gaining knowledge or skills. Education is a visual experience. Interpersonal communication is needed. Important. Distance education cannot give it.
308. It seems to be more of a get on the boat (do it) or get left being. I don't think it's the best way to get an education but if we don't do it, someone else will.
309. No. I really prefer the classroom.
310. Omits most of the special skill development for students.
311. In some limited situations, yes. If students are unable to physically get to a school or there are not enough interested students to a single location. Overall, though, I am strongly opposed to most distance learning. Every cognitive development perspective stresses interaction as a critical element in learning, and many focus on student/student interaction as more

important than student/instructor interaction. Electronic interaction hasn't the scope and scale of human interaction--many of the subtle nonverbal cues are lost. From my perspective, this is not learning.

312. It has its place - but not everywhere.
313. It's O.K. but you need good, well qualified teachers to do it otherwise it will be a disaster.
314. I don't think this is a solution to make higher education cheaper.
315. Yes, because it provides opportunities for more people to receive an education.
316. No, I went into teaching to teach and be with students..
317. Under the current situation I don't like it. It is cumbersome--students having to pass around the microphone, microphones that don't work not being able to see the students very well, etc. It is unnatural and hinders the process of mentoring. Once it is at the point where it enhances the dialogue and rapport between teacher and student, I will like it better.
318. Yes. It reduces travel and housing costs.
319. I do not think it will ever be superior to in-person teaching, but I see it as a potentially cost effective way to educating the masses--particularly in a canned video format (i.e.: not 2-way interactive), over cable TV or satellite as that way every home would have access to it.

320. Not very much. I have never had a TV program, no matter how excellent the teacher, impact my life the way an in the flesh teacher has. I don't believe that a box with an image on it can compare with a human being.
321. I have never been involved with teaching a course this way so I don't have much of an opinion. My wife was involved with a video conference and was not very impressed by the method.
322. Yes. Makes learning possible for a greater number of students.
323. Somewhat. For learning information I see it as valuable. For methods and skills, not as effective without teacher feedback. To get the academic experience I believe all students need to be on campus for at least one full year. They need to use research facilities on campus, etc.
324. If limited to circumstances where students cannot get to campus or for special courses.
325. Yes. Provides an opportunity for access to courses not available in rural areas.
326. Generally no. It reduces learning to skills development and information transfer without teaching judgment and perspective.
327. No. Personal interaction is too important in teaching/learning. Otherwise just go read the books. In my area (hands-on lab experience) distance education is difficult to say the least.
328. I do not like the concept because the interaction between students and teacher is an important part of learning.



329. Although I think distance education should be an option for students who could not otherwise pursue a college degree, I do not like the concept because it makes it difficult for students to engage in knowledge making discussions in communities of learners.
330. Yes, access, acceptable quality.
331. There are a few courses that are lecture intensive and those courses have a better chance of being successful using distance education.
332. Do you like the concept of distance education? Why or why not? I do not like either the concept or the practice of distance education. When I was in junior high school and high school, I was required to take a number of television classes. I had seventh and eighth grade math, sophomore English, and junior year American history — all by television. The classes each numbered about 350 students, and each class was monitored and supervised by a teacher and a number of aides. This was considered a way to cut costs through the entire county system. The system was too impersonal and restricted student questions and comments. From what I have observed as a university professor since then, including experimental distance learning and conferencing at other universities, the new concepts and practices for distance learning offer a little substantive improvement over the television classes that were tried and discarded almost a generation ago.
333. Lack of interaction with students is a decided negative.

334. No response.
335. I have no evidence that students can learn as much as they do in a regular lecture format, on the contrary, it is clear from the telecourses I have been involved with, that the level of learning is far more shallow in a telecourse. I would guess that similar things happen in other forms of distance learning.
336. No response.
337. It seems like it is becoming the wave of the future. We either jump on the wagon or we miss the boat. But I think it may be an alienating experience for many and may result in a group of young people who are at odds with society. Nothing can take the place of one-to-one interaction between warm bodies!
338. No response.
339. No. It is not education only credit accumulation.
340. No. I'm not sure anyone can be adequately sure of distance education until they are put in the situation. I have a 'theoretical' look into video courses during my first few years. It wasn't as good as it is now and that definitely didn't help.
341. No.
342. Not at all!
343. No response.

344. No. I'm not really sure anyone can be adequately prepared to teach distance ed until they are put in the situation. Perhaps it will turn out good for those who cannot make it to a college or university.
345. No response.
346. No.
347. No response.
348. I had questions on a class I taught once that made the class more difficult; however, I felt the class went well.
349. N/A
350. No response.
351. No one knows it all. The technology is evolving too rapidly. I just spend a lot of time reading, going to conferences, testing new tools, and trying to keep up.
352. No response.
353. N/A
354. Politicians think distance education is going to save them money. Money is the bottom line for them. Yet they are willing to spend millions on technology, which constantly needs to be updated, there is no end to the money needed to keep up! They are forgetting the essential, it is the people who make the difference. Good teachers who produce good students. Quality education produces quality people.
355. N/A

356. Exposure and experience with it, adequate technical support.
- In my opinion, a student should be part of a larger college, university, or educational community. The best educational experiences do not begin and end in the classroom. Excellence in education, including a broad undergraduate liberal arts experience, should continue to have the highest priority in our society. Sacrificing the tradition of excellence in American education for an inexpensive, utilitarian and impersonal (and isolated) learning experience would be a mistake.
357. No response.
358. N/A
359. The beauty and necessity of many (teachers and students) to feed off of and respond to the interaction of both parties (teacher & students) being in one room. Also some subjects are more appropriate to a nonpersonal method of teaching.
360. It's a bad way to teach.
361. No answer.
362. Lack of Knowledge.
363. Students and faculty acceptance are both influenced by past experience.
- Very few educators have taken such a course, in my estimation.
364. Attitude, lack of understanding, politics.
365. Faculty are selected for traits other than their abilities to act (as on stage).
- Many of us are not performers--rather scholars. Our department presently

does not purchase or support computers (or at least IBM clones)for faculty. I doubt they would in the future. Therefore, any technical problems that arise would fall on individual faculty. Had we wanted to become experts in computer technology, our degrees would have been in that field. I am unwilling to sacrifice my devotion to my field in order to become a specialist in computer able performance.

366. To do it correctly takes a great deal of work with minimal rewards.
367. Time & resources to learn about it.
- 368 Faculty care about their students.
369. We are all conservative and hate to change. We all think that the way we do it now is best. I like very much to interact personally with the students in the class, and to try to get them to interact with me. I think that wold be much more difficult in any of the distance education modes I have heard about.
370. Lots. Traditional biases count a lot, but so does common sense, as well as (to my mind) skepticism toward the political and economic agendas of those politicians and administrators pushing their ideas.
371. The very real fear that it will reduce the number of faculty jobs and diminish the quality of education.
372. Most professors I know still highly value the give-and-take of the classroom, which is compromised to some extent by distance learning! For our lecture classes in large classrooms, distance learning might be

appropriate--especially if the most skilled teachers are used. For courses requiring considerable intercourse between students and the teacher, e.g. case courses, I think it would be difficult.

373. In my particular field, having opportunity to access and respond to personal interactions is very important---not sure if this would be applicable with distance
374. Significant as well as justified suspicion if the notions of those who are pushing the idea the hardest.
375. No response.
376. Yes. Life long education and numerous changes in careers require that all people in all areas (rural, remote) have access to educational courses.
377. No response.
378. Not sure. Can be nice for the student, especially those with small children, etc. Can be a burden for the instructor.
379. It is harder in medicine. It almost always requires hands-on experience.
380. No response.
381. No, not according to some concepts. Too global.
382. I do not like the concept of "distance education." I do not think it would work. Education is not one-way traffic. The main problems in education are not the way to deliver, rather what to deliver. Unless I have good feedback from immediate interactions in classroom, I would have no idea about

whether what I have just taught was well received by students and about what to teach next time.

383. No. Education is in a big part being on campus and away from home.
384. No response.
385. Yes. Simply because it increases availability of educational opportunities.
386. Can be a very effective means to interact with referring physicians in rural areas.
387. I am not overwhelmed with distance learning. I believe direct contact between student and instructor is too important to make me enthusiastic about distance ed.
388. Not really--as dept chair--we have offered several classes on ednet---and the instructors seemed to like it--but extra preparation was needed. Testing was awkward and misunderstandings more likely to happen.
389. Whether I like it or not seems less important than better. I think it could be used wisely in meeting the needs of students in exceptional circumstances. That possibility certainly exists, in some restricted cases. In my opinion, we're not likely to come any closer to exploring that option as a result of a survey as candid as yours.
390. In theory and limited practice I do, however, feel it is unfortunately being used by a number of political and business leaders (Western Governors University, e.g.) as an opening wedge to dilute, define and inflate our higher education and ultimately destroy it in its traditional meaning.

391. Most faculty like to work with students on a personal basis, but for those who cannot attend college it seems like a good answer.
392. It depends on the subject and level of the class. In my field, distance education can be effective for graduate engineers who are trying to keep up with current developments. For undergraduate students trying to understand (not just memorize) the basic concepts of math, science, and engineering, I believe it will be a very poor substitute for an actual live discussion. I can only interact with a fixed number of students at a time. It doesn't matter where they are.
393. No response.
394. I hesitate as I believe direct and immediate.
395. Student feedback is important.
396. I do not like the concept for academic credit because without seeing each other, it seems that instructor to trainee communication is poor. It seems poor for the trainees.
397. No response.
398. There is a moral and spiritual aspect of education that is undermined by distance education. I would find it impossible to recommend highly to others a student with whom I did not have total confidence.
399. Yes. We need to take education to our students whenever possible.



400. Not in my field of physical education. There needs to be a continual process of critical evaluation, feedback, and practice that you just don't get by way of the suggested methods.
401. Distance education meets learning needs in a rural setting.
402. Yes. Greater flexibility for student on time demands. (Still need hands-on clinical for demonstration of info learned.)
403. Yes. I taught a distant education course on site.
404. I do like the concept to accommodate those students who cannot come on campus for their education. However, I do not think it is as effective as classroom teaching with teacher, students, present in the same room.
405. Yes. Greater flexibility for students in time, travel, etc.
406. Yes. It provides education to persons living outside of university areas. Provides education on level of student needs and meets criteria of time, money and convenience.
407. I believe that an in-class (in-person) interaction is always better but although Distance education may not be entirely effective, it may be better than the alternative, no learning at all.
408. Provides students another option. Time commitment flexible.
409. No response.
410. Yes. Allows access to classes/course work that may otherwise be unavailable to students, and allows for contact/interaction between students

in a variety of settings and communities, enriching exposure to cultural and environmental differences.

411. Yes, it reaches students who otherwise would not have access.
412. No response.
413. Yes. Provides students in rural areas opportunities to enhance their education. They would not have this kind of education otherwise.
414. It provides opportunity for people who would otherwise have no chance. A type you have overlooked - courses taught in conjunction with work. I have seen good success where student engineers working with engineers are taught in an apprentice mode but earn college credit for specific classes. I cannot think of a better way to train.
415. It is a good approach in some circumstances. It's still not as good as instruction in a live classroom. Distance education is only as strong and effective as the teacher. A good instructor can control the variable in a classroom . I'm not sure how this is done in a distance learning environment.
416. Yes. It provides opportunity for students who otherwise might not be able to study. No. Inadequate personal contact.
417. Yes. Because it is another way of educating students who may not be able to attend the traditional university. It also causes one to view his/her discipline from a new perspective.

418. The real motivation frequently seems to be not improved instructors, but reduced cost, it also tends not to consider answers but questions. On line feedback and/or web sites can be useful for local issues, in my experience, but not for large questions which can typically be in the classroom.
419. No response.
420. Videos, home study, two-way conferencing has not worked in the past, and nothing has changed that will make it succeed now. The full capabilities of multimedia information must be developed and new learning technology needs to be designed or this will not work.
421. No response.

**ITEM 26: WHAT BARRIERS EXIST THAT PREVENT FACULTY FROM ACCEPTING DISTANCE EDUCATION AS AN EFFECTIVE FORM OF EDUCATION?**

1. It takes more work. There are problems at the other end, the reasoning end. It takes longer to correct work of students. There are many reasons.
2. It takes a huge amount of time to prepare courses, the student feedback is marginal, some kinds of students do poorly, with D. E. Huge class size can present overwhelming paper work leads for teachers.
3.
  - 1) The perceived lack of rapport with students.
  - 2) The constant problems with the technology (partly underlying “losing” a site).

4. Some of us want a more personal approach to teaching - going one-on-one with a student.
5. Lack of communication, equipment failures. Emphasis on flash over substance is the multimedia.
6. Faculty ability to be on stage.
7. It is difficult to get the personal interaction needed for excellent learning to take place.
8. No response.
9. The equipment and technology is not really ready. Something is always "down" which means your lesson plans are not effective to all sites at all times.
10. Unfamiliar with it. Lack of motivation to change. Need to revise /relearn delivery methods.
11. The technology is still limited, in that it cannot provide a true classroom experience. Often technology can be cumbersome and get in the way of effective teaching.
12. Having enough technology - limits of available space.
13. No personal contact.
14. Money.
15. 1) Lack of familiarity with system, 2) lack of confidence inconsistency of technology, 3) lack of curriculum developed for use, 4) lack of personal contact with students.

16. Technological support brings inadequate coverage. Cannot cover enough material. Unqualified monitors at the remote sites. No help available to students at the remote sites. System going down too much. Inadequate preparation of students at some remote sites.
17. Over crowded classrooms.
18. Unreliable technology.
19. Can involve too many students per class.
20. No response.
21. Already we have full teaching loads and are busy with committee workloads because of so many part time people.
22. Training is adequate. We need more direction and more education using these methods.
23. Diminishes the role of faculty.
24. Availability of equipment in teaching area. We have equipment in one or two locations on our college campus.
25. Probably because many of us are not familiar with it. We haven't had the experience.
26. There are missing components (tone of voice, nonverbal communication, other students, before and after class chatting, etc.).
27. Lack of info about it. Lack of experience using it. Need for hands-on or psychomotor learning required in particular areas/topics/courses.

28. Horrendous time in development. Loss of copyright privileges.  
Administrative team support both financially and production.
29. Fear of being replaced by canned presentations.
30. None here (hindered by fear).
31. Lack of time to explore and information about distance education. Fear that it might mean loss of our jobs or students.
32. It takes more work to prepare a distance education course. We need to find more visual material.
33. Additional prep time. Unfamiliarity with equipment/technology.
34. Faculty perceive this as a cost cutting measure and a way to keep from hiring new faculty or building new buildings. We fear that education will be evaluated as a business and not as its role of influencing young minds and making them better well-rounded citizens. You can certainly become a diploma mill with this concept. It does not lend itself to laboratory.
35. Experience. No one is more receptive to change than I am. Many don't want to leave their comfort zones. I know that my courses are not as effective when I give them on video.
36. Lack of an adequate tech support - Lack of personal contact - difficult timely feedback, etc.
37. Facilities, equipment and training. But mostly a union. Why are we doing this? Who are we serving?
38. Technophobia.

39. Because information/education needs to be the best we can give and sometimes it is not with technology.
40. Lack of knowledge about how & how well distance ed can work. Speaking only for myself, lack of knowledge of how much demand there is, or isn't, for distance ed. Seeing some fairly lame distance ed telecourses on cable TV. Ignorance of the different teacher/student dynamics involved. Need to rely on technology to deliver the goods. The classroom arguably provides more immediate, less technology-dependent feedback from students (i.e., if there's a technology crash on a given day, is the whole day a wash? Are there contingency plans for keeping a class on schedule?).
41. No response.
42. Distance learning is an insult to faculty members.
43. Administrative leadership - budget, training/support, follow-up supervision.
44. Concern over the possibility that cheating may occur unless a system of monitoring is in place.
45. The belief that students don't learn as well; inability to conduct labs and other hands-on activities.
46. More difficult to teach effectively. Poor library in receptive areas.
47. Money and time. There is a lot of extra time that is involved.
48. The lack of opportunity for experience, training, and motivation. The faculty must also be convinced that the state will continue to support

financially such efforts. Some forms of such classes may be more conducive to selected faculty and teaching styles just as it is to students and student's learning styles.

49. Our worries that WGU (and political micro-management) will supplant traditional education. Leavitt has applied political principles to educational concerns and has failed to support higher education to meet the state's needs. WGU will not be a panacea.
50. It's new (some people don't want to change). Time consuming to prepare. Lack of interaction with students (can't get a feel of what students do/do not understand).
51. The need to physically demonstrate techniques. You can't learn to fire a kiln without being there! Nor to make a pot. But designs, principles and exercises can be taught this way.
52. Fear of the technology, lack of time for preparation, having to be an entertainer.
53. Lack of knowledge for effective strategies. Lack of support--in terms of money and time--especially for developing and teaching courses at this university, it is in addition to existing course.
54. One-on-one, face-to-face learning clarifies many questions. This can never be something positive.
55. Time.
56. Too much extra work.



57. Time to do the whistles so interest will be maintained.
58. Change of accustomed ways is sometimes difficult. Lack of knowledge with this technology.
59. In the true sense of effective teaching, I don't think it is as effective as traditional classrooms.
60. Fear of change, fear of technology, the lack of funds to really make it work (inadequate disks, not enough microphones, etc.)
61. Courses which stress hands-on activities, such as the one I teach, are difficult to provide. Some of us are nervous in front of a television camera. Reliance on technology for delivery is scary because it is prone to break down.
62. It is more time consuming to prepare. I deal with the students. It is scary to have all your mistakes sent out to potential huge audiences. It is harder to manage than in the classroom and keep everybody engaged. Testing and grading are complicated because of delays. The time lag involved in coming over to the student is distracting.
63. Fear of unknown. Cost of equipment. Complete dependence on technology.
64. No response.
65. No response.
66. Lack of training, lack of prep time, limited interaction with students.

67. Intimidation by technology. Lack of continuing education personnel to understand concept of academic rigor. Lack of technology skills. Self-consciousness in front of cameras.
68. It is not traditional. More work, more difficult to get high student evaluations.
69. No response.
70. Lack of knowledge about how to facilitate learning and teach using this method.
71. No response.
72. Resources (time and money and equipment and training) to develop an honest educational experience for students vs. just throwing together an inferior product that satisfies the mandate.
73. We're old stick in the muds. We're afraid for our jobs. We think we're really effective in the classroom as teachers.
74. The biggest barrier is the wall itself. If there is a physical wall and/or many miles between the student and teacher it is much more difficult for caring to take place.
75. Lack of compensation, salary or course load. The difficulty of making interaction effective for the student.
76. No response.
77. Time for prep of courses, effort, perhaps not the same quality of collegial relationship between teacher and student. Tough to have my face on T.V.

- for my courses. Computer technology, there are no sites (either send or receive) with equipment.
78. 1) Basic knowledge of its use. 2) Development of videos, media of all kinds that would be appropriate. 3) Teachers who believe (as I do) that their courses need to have interactive activities. Even after basic lecture I feel that students need to have an active, application level assignment, thus a need for on-site facilitator.
79. What barriers exist that prevent faculty from accepting distance education as an effective form of education? Education, especially higher education, is about interaction between students and professors. I do not feel that in distance education, even with remote monitors and two-way electronic communications, this can be accomplished. I currently teach music 101 (introductory music appreciation). I have approximately 80 students in my class each quarter. Even with close physical proximity, and immediate visual and nonverbal student feedback (both of which are difficult if not impossible to obtain in distance learning) I find it difficult to reach every student in the classroom. In many disciplines, such as mine, where learning involves listening and understanding not only verbal concepts but musical themes, rhythms, harmonic structure and textures, a teacher must be able to see and sense student reactions. Distance ed should be replaced with a more effective means.
80. No response.

81. The theory of distance education. It is very time consuming. It is not as effective as other methods. It deprives professor and student very important part of education process, eye-to-eye and face-to-face contact.
82. Legal matters, effectiveness of education.
83. Experience. Preferences.
84. Lack of interest. Not made to do it.
85. For me, most of the barriers are technological. There is some resistance to fear of the unknown technologies, new fear for unknown learning apparatus. But most of my barriers are located in the newness of the electronic including my classes, are interaction--entered because I have found this to enhance student learning. I don't get paid enough to approach this simply as a job. It has a more profound meaning to me. This a biased question - assuming instructors are somehow resisting the marked difference between televised reactions and direct personal reactions. For example, recently televised trials have shown a marked difference between the impressions of those who were physically present and those who saw the trial on a screen. Having the full spectrum of student reactions is vital to successful teaching in music. After more than 25 years of university teaching, it has become very clear that teaching effectiveness becomes increasingly more difficult with larger and larger classes. Moreover, student attention spans have decreased, and combating this decrease requires more and more attention on the part of the teacher--

an attention not possible when student reactions are masked and delayed by electronic "filters." Even assuming that the electronic feedback was perfect, the size alone of the distance learning classes contemplated would greatly reduce the effectiveness of the education theoretically promised. Thus, the biggest barrier is that, in practice, the quality of education is less. Teaching any form of applied music effectively--whether instrumental, choral, or vocal, requires intensive hands-on and direct involvement and communication by the professor. This is equally true for the majority of the arts.

86. Touch, intimacy of setting.
87. No response.
88. Do we get paid more to be producers? Aside from compensation, many teach because of the personal satisfaction derived from seeing others learn. Distance education makes that sort of gratification rather remote, doesn't it?
89. No response.
90. Unwillingness to changes from the status quo.
91. I don't know.
92. Time.
93. Inability to communicate with students and have them hear from instructor's expertise.
94. No release to actually be able to teach additional courses.

95. Cost, equipment and time.
96. I think there is an intimidation factor with the technology, one that is overcome. There are very few problems that can't be surpassed.
97. Clear research results showing it is effective seem to be absent or unpublicized. Teachers like to see the light bulb flash in people's brains; that is difficult to do in most forms of distance education. Distance ed is less efficient in that it is more work than traditional methods.
98. Bad classes that aren't well put together and don't expect enough work to learn what you need to learn.
99. Resources primarily. Using ednet for instance is limited by the fact a given site can receive one course at a time (scheduling). Educating students (or potential students) that distance learning is an effective learning method is also limiting.
100. The one-on-one contact, I think. Most, as do I, think that student/teacher interaction in distant ed is extraordinarily imperfect. As technology progresses though, that will probably not be an issue.
101. No response.
102. Students are put in passive situations, so that their world is narrowed, not broadened, when they are placed in front of screen. They develop too narrow a set of skills, and the skills are primarily corporate & office.
103. Personal interaction and communication. Student and teacher are isolated.

104. Not good for courses like chemistry and physics that should have a strong hands-on component.
105. Familiarity with & training for effective use of equipment. For me--fear of video. I do not like being on video.
106. The impersonal factor of the whole thing.
107. No response.
108. Their intelligence.
109. Knowledge of how to do it.
110. The above mentioned concern (knowledge of how to do it) is one. Having time to do adequate preparation for such a course is certainly another.
111. No time to develop. I don't see enough motivated students.
112. Time to prepare materials needed.
113. Fear. Discomfort with the technology.
114. No response.
115. No response.
116. Our institution is excellent at providing support, help and release time for faculty to participate. However, it is still a matter of time. Faculty are busy people and media can only work with a few at a time.
117. Not familiar with or access to necessary equipment, hardware, cost.
118. How in the world is a professor going to offer a biology or chemistry lab via distance education?
119. Poor understanding.

120. Training! The instructor needs some information and training before he/she starts the class. Back-up support must be trained and efficient.
121. I would have to say the preparation needed, the compensation not being good enough, and the stipulations put on the instructor.
122. It is impersonal. Distance learning is merely an attempt on the part of the state to spend less money on constructing classrooms!
123. Fear of the unknown; not familiar with options.
124. Not compensated adequately for huge development time. Not compensated adequately for sharing of final product (repeated showing). Our course doesn't have a high enough enrollment to merit money given to distance course development.
125. Training in the process. Time to develop course. Technical assistance lacking.
126. 1) Belief that it can work in our area. 2) Training. 3) Needs of students, teachers and student interaction. 4) Time needed with students.
127. No response.
128. Not sufficient class size control.
129. Lack of experience. Those who have been involved in distance education generally find that it works surprisingly well, at least for the motivated student.



130. Change. No graduation evaluation data are available that measures student attrition, performance, etc. Faculty need to know whether students will be served well.
131. Impersonal.
132. Ignorance.
133. Preparation time required, training, support staff, monetary incentives.
134. I would not call what I see happening as barriers. The problem I see is just what this question projects. That is that distance learning is in fact an effective form of education and problems occur by not acting immediately when there is a problem with the instructor. Distance learning is, in my opinion, still proving its effectiveness and I am studying carefully how or how much it could work in my field of expertise. Most of the instructors that I know are acting cautiously as well, while some professors are looking at an easy way out of addressing student needs. Just as the FDA evaluates new drugs on the market we should look at students thus far to see how to proceed in the future.
135. The lack of two-way resources. Not wanting to have a permanent record of procedures. Lack of training. Lack of confidence in its effectiveness.
136. There is a great deal of work involved with creating a quality product and distance ed is that way.
137. No response.
138. No response.

139. Evaluation of student. Nonverbal cues.
140. Adequate training, financial compensation for the added training and time.  
Lack of experience and expertise with the classroom setting.
141. Cost. Lack of access. Lack of experience.
142. Success stories and exchanges of tools that increase likelihood of success.
143. Proper training, funds, release time to develop the course. Some areas are not suited to teach distance education classes. Drafting technology is one of these examples.
144. Statistics that tell us that distance learning is very ineffective.
145. Educators are social animals - we teach by interacting and not by machine.  
It is the live interchange among students, students and faculty that enhances learning.
146. Part of the problem is the use of the word "effective." Effective at what level? Memorization of facts does not require an interactive classroom.  
Most teachers believe a great deal of learning takes place simultaneously in a classroom because of the dialogue that takes place. This is severely restricted in most distance learning paradigms.
147. Accountability. Who really took the test? Who really did the assignments?
148. Education and training. Expense of equipment and back bone. Curriculum development.
149. Lack of information.

150. The time to develop the courses. I've worked on a CD Rom course. I've spent hundreds of hours developing this course and still have not completed it.
151. No response.
152. Compensation and technology.
153. Time constraints, preparation time, technical appreciation.
154. If such barriers exist, they could include general lack of familiarity on the subject, the large amount of work that the class may appear to have and not wanting to step out of their comfort zone and try something new.
155. No response.
156. Indifferent.
157. The fear of 200 students in a single section, with help promised but never received. Also, fear of rival colleagues on other (competing) campuses, watching your telecourse for sport. Mostly, fear of the unknown.
158. Lack of information.
159. Money.
160. No response.
161. No response.
162. Money.
163. It is my perception that many feel somehow threatened by the concept. The technology is not widely understood or appreciated. I think many feel their role as teacher is somehow diminished by distance learning.

164. The work load involved. There will need to be compensation.
165. Current technology doesn't ( at current prices) allow mimicking of full time real speed interaction. Example: typing on a keyboard is slower than verbal instructions or feedback, and often lacks the assistance of graphic, video or audio of times which can help clarify or exemplify certain concepts.
166. No response.
167. Many of us are too old! We've grown-up (literally and as academicians) in a world of campus classroom teaching.
168. No response.
169. In my field very difficult hands-on skills cannot be handled at a distance, but many theory and lecture classes could. Two-way communication and hands-on classes would be a part of the distance education format in my educational area.
170. It isn't appropriate in all disciplines and is being sold as the new way of teaching everything. Time and money to train faculty, time and money to develop courses for distance ed.
171. Lack of knowledge, fear of change and technology. A true commitment to face-to-face interaction for most effective learning environment.
172. They don't understand how powerful the tools are, how many students want the option, and they fear it will leave out marginal students. (This is true in my opinion.) So, we need to keep on-campus courses too.

173. No response.
174. It is not as effective a way of teaching as traditional teaching. Students need more than getting a grade. Are they really learning?
175. No response.
176. The time to develop the courses.
177. My colleagues and I accept distance education as a manageable alternate method but we hold numerous reservations about appropriate feedback of student's body language, learning styles and collaborative efforts.
178. They see themselves working themselves out of a job.
179. The perception, with which I agree, that communication over distance will never be as effective as direct communication in the same room or environment. (How can you reward a good response with an M & V?)
180. Unfamiliarity to technological.
181. 1) Their philosophy. 2) Their past experiences (negative). 3) Need for two-way communication. 4) Need for group interaction with the class.
182. Lack of student interaction. If done correctly, distance education requires more time and energy to develop and teach. There are issues of load and compensation. Lack of information about distance education.
183. No response.
184. Perhaps a lack of knowledge and instruction prevent faculty from accepting distance education. However, faculty who have taught these programs seem somewhat negative and are not seeing effect and outcome.

185. Theory would be O.K. Unable to do clinical.
186. Faculty desire quality and the interaction that occurs in the classroom.
187. Lack of information. Getting started needs mentors! I have been trying to get a class started for a year and have made no progress! Even though I am on the distance learning committee, I need someone to take me by the hand the first time and help me get started.
188. There is a general scepticism among faculty concerning technology as a replacement for humans. Education, if it means learning a mechanical skill, can be done through machines. Technology can actually help a lot in skill building. But the ability to interact with others is part of what makes us humans. The most stimulating and challenging part of my education experience was the exchange of ideas with other students.
189. 1) Gun shy. 2) Subject matter has to have labs.
190. We don't know enough about how to make it work.
191. Their techno-computer background. Distrust of motives behind distance learning.
192. 1) Unknown factors. Don't understand it and how it works. 2) Old traditions. 3) Fear of themselves being filmed or taped.
193. N/A
194. Communicating with the students.
195. Quality!
196. No response.

197. No response.
198. Two way communication, as soon as possible.
199. No response.
200. No response.
201. No response.
202. 1) It's not appropriate to all disciplines or courses. 2). It's been devised as a cost-cutting strategy which means that the priority might not be on quality of education but simply upon having students through the system. 3) The incentives to get a course on-line, or into a hi-tech classroom are not very appealing unless you want to do a lot of work on your own time for no pay. 4) There's a lot of fear of course in a con, meaning that teachers may have their livelihoods threatened.
203. Lack of knowledge or familiarity with forms of distance ed. Believing the incompatibility of distance ed with subject matter, or teaching/learning styles.
204. Vocational education needs the hands-on one-on-one between teacher and student. Watching videos helps, but must be followed by on-hands experience.
205. Distance learning must involve a teacher at the other end and a formal class setting. I was in charge at this end of a televised engineering course offered by the University of Utah. The professor was excellent. The five students here at Dixie diligently wrote down everything the professor

wrote on the blackboard. But the real learning came from the discussions the students had among themselves and with me. Like the blind man encountering an elephant each of a piece of the whole from the lecture but needs subsequent discussions to see the whole picture.

- 206. No response.
- 207. No response.
- 208. Interaction needed until the student grabs hold of the class and ideas.
- 209. No response.
- 210. No.
- 211. Perhaps unfamiliarity with available technology. The opinion that distance education is less effective than conventional methods. The desire to have real person-to-person interaction with student. Being self conscious about being taped (video and for audio).
- 212. No response.
- 213. When it is a hands-on type subject matter.
- 214. No.
- 215. They need to be convinced that it is a good teaching method. Obviously, they need to be trained. They need to learn how to prepare computer audio visuals.
- 216. N/A
- 217. Not for my classes of art. Too much visual work to teach on video.



218. To communicate with a student I need to know about them. Distance education is more than miles.
219. No response.
220. Most by the fact that faculty dislike change.
221. Technical equipment in number sufficient to the courses.
222. Correspondence only. No training and not needed.
223. No interaction with students.
224. First of all I would not teach one. No interaction with students.
225. Too time consuming to develop presentations.
226. N/A
227. It allows students in rural areas to access quality programs.
228. Quality practicum supervision. Delay of presentation. Technical problems.
229. I will in the future.
230. Loss of personal contact and interaction with students.
231. N/A
232. They haven't used it. The student quality may be lower for some students participating.
233. Somewhat.
234. Lack of student-faculty contact. The nonverbal communication is needed for me to feel comfortable. I rely on nonverbal communication in my class.
235. Yes, based on the system that was used.
236. No response.

237. Little training. Time required to prepare good material. Little money for purchases and development of material and often a short assignment rather than central part of role. Spending time on research yields more rewards than time spent in developing distance materials. Limited interaction with students. Many students lack motivation to benefit from distance ed.
238. I have observed very little training.
239. Limits in existing technology at each institution.
240. No response.
241. Technology often fails interrupting instruction.
242. The loss of the student/instructor relationship.
243. No.
244. No response.
245. Distance.
246. Time to develop materials and change course format.
247. Yes, if it can be worked out and without barriers.
248. No response.
249. It eliminates informal interaction during students and faculty especially at the graduate level. The informal interaction, assistantship, etc. probably more important than the classes. I tell graduate students, don't let class work get in the way of your education. A bunch of classes do not education make.
250. I'm an instructional technologist/designer. I hope it will work.

251. No response.
252. No response.
253. It is not effective at educating, it is a training tool.
254. Yes, but the course was not effective.
255. Evaluation, cost.
256. No.
257. Belief in spontaneous presence-interaction.
258. No response.
259. The pay is ridiculously low. If they want good faculty to accept distance education assignments then the pay should be equivalent to teaching a course on campus.
260. No response.
261. Ignorance. I base my assumptions on my experience several years ago when technology was much less than it is today.
262. No, I learned as the course progressed.
263. Workload. No skills in technology.
264. Somewhat.
265. More video/audio conferencing capabilities (hardware) and time. Development of online or CBT- type modules takes considerable time up front. Payoffs are later.
266. No response.

267. Blatant and foolish over-representation by politicians and business men. Many other pressures on faculty. Lack of proper support, equipment, compensation for efforts. Correct perceptions by faculty that distance education lowers standards.
268. Yes. Don't worry about me. Do something to train Mike Leavitt!!
269. No funding. It is very time consuming and expensive to get started. As far as I can tell there has been no new funding and I don't think I have ever seen a real cost benefit analysis of traditional vs. distance education. Our experience has been that traditional students write very negative class evaluations of P. E. courses, while place-bound students. Conservation of efforts could indicate a need to develop one course to satisfy book audiences, but this is difficult when you know you will get poor reviews if you use distance ed on campus. Poor reviews are a great disincentive.
270. Somewhat. There is a very steep learning curve no matter how much you prepare. The training was self-taught with help from mentors. No formal training.
271. Poor implementation of technology.
272. N/A
273. No response.
274. Not sure of the method's usefulness.
275. N/A

276. There is a lot of interaction in the classroom between instruction and student. That doesn't help with distance education.
277. Yes, no.
278. Lab course or direct hands-on lab exercises which complement lectures.
279. No.
280. Incentives such as financial, release time, promotion/tenure, etc. Lack of understanding of the difficulty of converting face-to-face interactive classes by those promoting the distance education form. Lack of support infrastructure for example: trained TA's, facilities, for group and team work, library facilities, grading help, etc.
281. No.
282. Funding.
283. Yes.
284. There is a lack of interaction with students. Lack of control over evaluation, lack of resources (library, etc.) at distance locations. The result is a watered down course. It is often really a joke. Students want breaks because it is too hard to find the stuff. Lack of immediate feedback to students.
285. No. But I'm not sure what would have been adequate.
286. Lack of statistics that show effectiveness of this form of education. Lack of training.
287. N/A

288. Unfamiliarity with the technology.
289. Yes.
290. No response.
291. Believe it is inferior for certain subjects.
292. No response.
293. Research proving it as effective. Lack of knowledge as skill. Comfortable w/prior methods.
294. N/A
295. There is a value in a student actually seeing and interacting with a professor on a one-to-one basis. This is not possible using the technology, partly which I have not expedited. There is more to a higher education than suffering through a series of classes. For example, interaction with present faculty, participation in research experiences, use of research sources, etc.
296. No.
297. No response.
298. Cost of computer, screens, equipment. Have to prepare a different type of course.
299. No response.
300. No response.
301. Time to develop good courses to deliver.
302. Yes.

303. Little training lacks budgets and support personnel to create well designed instruction. Usually viewed by administration as an adjunct role rather than as professors primary role. Little reward for good distance ed. Lack of student motivation and educational preparation. Unreliable technology. Difficult to use most effective instructional methods with distance technology.
304. At our university there is little or no training offered.
305. None that I know of.
306. N/A
307. No response.
308. Little feedback causes low self-satisfaction.
309. No special training.
310. Time limitations for the "up-front" demands.
311. No response.
312. Lack of personal contact between student and instructor.
313. N/A
314. One-on-one. Talking to groups create teaching opportunities. In a classroom you can be more spontaneous because of interaction of a group. Questions and answers that could benefit everyone.
315. Yes, but I didn't really enjoy it. Sometimes takes a lot of extra time and effort. Communicate better eye-to-eye with a real person. Art can be demonstrated but it is difficult to talk about.

316. I do not have much free time to explore it's utility, nor am I "forced" to consider using it. Therefore, these are barriers.
317. N/A
318. To much additional work with no additional compensation.
319. Same barriers that equate with the understanding of something new and unfamiliar.
320. No response.
321. 1) Travel demands. 2) Poor support resources in distance sites. 3) Diminished academic rigor and students without resources available.
322. I think a lack of technology limits the amount of distance learning and in general a feeling of comfort in traditional methods.
323. Lack of sensitive people who understand that some of us aren't enamored with technology. Some decent training/exposure would help.
324. Many believe it will replace them and for these faculty it very well may. Also, training--it takes a large deal of time to learn and implement. It may be that there are other issues and areas of interest outside of technologies.
325. Equipment/supplies. Willingness to change ways of instruction that have been successful. Why change for the sake of change.
326. We think we're the only ones who can teach when in reality students teach themselves, we just point direction. Add classification and structure, in higher ed especially.



327. I again believe that if we value and honor different cultural ways of learning, diversity in learning styles, etc., we have to recognize that distance learning may only meet certain learning styles. I feel that it is an important issue here also concerning the quality of the process as well as who is the licensor agent? I'd much rather watch Shakespeare at SUU than read it in a book or watch it on TV.
328. Training and experience.
329. The idea that the governor has expressed that only super stars would be teaching. What is a star teacher anyway and who comes up with the definition? The idea of a competitive market of courses is suspect because it compromises the integrity of the teaching process. The governor's emphasis on skills is problematic for many courses which are not skill oriented. The nature of many courses would have to be changed, or subverted, for them to be put on the Internet.
330. Inability to accept change.
331. Tradition. Belief that teachers are more effective as people than as actors or typists.
332. Need active return demonstration of knowledge from students. Can be done with videos from students but would still need line clinical in nursing.
333. The technology can be intimidating. Overcoming traditional delivery systems can hinder the process. The fact that faculty may not be secure in

believing that this is effective methodology or which of the many methods is most effective.

- 334. No response.
- 335. Probably understanding it more, letting go of the traditional methods and labs.
- 336. Direct contact with students.
- 337. The separation between students and teacher. I spend a lot of time with my students one-on-one helping them outside of class in my office. That does not happen in distance learning. I don't like the distance between student and teacher that comes with distance learning.
- 338. In many cases it will not be effective--students lose the value of discussion, interaction, use of feedback, and hands-on experience. Although possibly beneficial to a few, it will all in all be a weaker educational experience.
- 339. Everyone needs to actually try it in order to know whether to accept it.
- 340. No response.
- 341. None that I know of. Although some still like the in-class power thing.
- 342. Persuasive evidence that it is effective, confidence that it will not merely increase work load with no corresponding increase in learning or compensation.
- 343. Lack of knowledge, lack of preparation, concern for change, concern for their professions
- 344. No response.

345. Unfamiliarity with equipment techniques.
346. Time and money.
347. Intimidation with new technology, lack of experience with new ways of teaching.
348. Having to manipulate the equipment as well as teach in a specific discipline.  
Too many things to do while trying to teach.
349. Fear of cameras.
350. The threat of failing on a college campus. The moving and active classroom.
351. Lack of equipment, lack of training, no interest.
352. Lack of personal contact with students.
353. Unknown how effective it is. Need to learn new technology, acquire specialized equipment. Many signal a lesser need for live teachers as a long term trend.
354. There are several, in my opinion. First, too many faculty are too entrenched in their traditional teaching practices. Second, they are not ready to train themselves to be instructed with new technology out of fear or ignorance or pride!! Third, they are too busy doing other academic chores and don't have the time. Fourth, there is no support of staff to guide them in the use of distance learning.
355. No response.

356. A lot of faculty are too set in conventional teaching methods for this to work. This form of education will not happen over night. I estimate, if it does not fail, that it will take at least 10 years before it is effective. Information presentation must be structured similar to computer games that effectively present very complex sets of information.
357. More work. Less immediate feedback. Bad scheduling.
358. Fair.
359. Understanding the technology. Also, if registration credit is given to extension departments, then academic departments get no credit for this method of delivery.
360. Minimally.
361. Course work is only one part of instruction. Advisement is best done-face to-face.
362. Barriers are resistance to change, inadequate competence with technology and inadequate technology. Additionally, for many types of teaching, almost all types except information giving, the effort required for D. E. and the costs are enormously higher than for conventional classrooms.
363. It's different. The answer to 25 above. It is probably not as good as a regular class (and I know of no other data stating otherwise). The students who want to do distance education are (a lot of the time) exactly those who cannot handle learning as much on their own as required of this form of learning.

364. For instructors who see the classroom as an interactive and “personal” environment, the use of some media seems to be limiting and even nonpersonal (impersonal).
365. All faculty in my department support the two-way video/audio and Internet methods strongly.
366. Nothing much really. Perhaps media and tradition and fear of technology may prove to be a barrier initially.
367. Ideas of what an educated person is like and should gain.
368. Change is hard and often threatening. Lack of outcome measures. Lack of training and expertise.
369. Traditional in-class contact delivery. Familiar with (or lack of) equipment. Electronic disturbances (power outages during crucial time).
370. Fear of new things.
371. 1) Habit, new way technology. 2) Teachers enjoy personal contact with students. 3) If it adds to their workload as faculty.
372. We recognize the role of factors such as those above in creating meaningful higher education and do not see practical ways of getting around them. Yet we fear that the Legislature and Board of Regents will mandate this inferior grade of education simply because it is cheap and politically trendy without a moment’s consideration of the poor, pretend education it would give. Utah students and therefore the state’s future is ill-served by this direction.

- 373. Technological know-how.
- 374. It's excessive cost which seems to take funding away from traditional courses
- 375. Shouldn't be any!
- 376. Fright of the unknown, recording of (unknown) lecture.
- 377. Hands-on science labs are difficult to conduct and virtual labs are not sufficient.
- 378. No response.
- 379. Unwillingness to change.
- 380. Very time-intensive. Much more so than traditional classes
- 381. Access to technology and training.
- 382. Administration support for funding for computers and technology to enhance teaching training.
- 383. Know-how of designing the course and feeling comfortable with the technology.
- 384. Familiarity of the discovery of distance education. Most instructors are unaware of distance opportunities.
- 385. Suspicion that Legislators expect canned education to reach more students with less cost and maintain an ill-defined Utah standard. Use of , rather proposed use of , as a way to reduce the cost of H.E. by syphoning funds from traditional campuses. Accreditation, programs, determining

competencies of students in courses, and the expense of technical maintenance are additional.

- 386. Fear of change.
- 387. No response.
- 388. Except for perhaps 2 courses in our department, we need to be in the classroom with the student.
- 389. It is too impersonal, too mechanical and I can see it complicating and increasing the work load for each individual student tremendously.
- 390. It can be time consuming to teach and to learn via distance means. Lack of exposure and experience. Belief that technology will get in the way of effective interpersonal communication and relationship. Takes away the human side; the direct interaction and chance to see people grow and develop in front of you. Difficult to explain on subtle concepts and to make sure that the student is following. Students have limited chance to learn from each other.
- 391. No response.
- 392. No response.
- 393. No response.
- 394. No response.
- 395. Lack of equipment, time, money.
- 396. The opportunity for the one-on-one interaction.

397. Some barriers that will prevent you from teaching your kids about life through computers. We need to be in some classroom/lab with our students.
398. 1) Outcome assessment. 2) Time demands.
399. No response.
400. No response.
401. Effective evaluations of end product is: how do instructors evaluate student gains on each topic? Why not just give credit for reading the newspaper and watching T.V.?
402. No response.
403. Change is always difficult. Especially if computer equipment is not their thing. They think that younger faculty would be more open, but I am a younger faculty and I am not too excited about it. It seems to lose the personable side and I feel it is so important to pull the students in.
404. Increased work loads with no additional compensation or additional prep time.
405. Tradition. Much too much work to establish and maintain courses for the benefits of a few students.
406. Faculty have to be convinced it is effective on what they are doing now. Science folks are very skeptical about no-hands-on, no-field work courses.
407. Not informed well enough and fear of the unknown.
408. No response.



- 409. Intelligence of faculty and students.
- 410. Most faculty are lazy and unwilling to be innovative.
- 411. No response.
- 412. No response.
- 413. No response.
- 414. No response.
- 415. It is not how they have always done things.
- 416. I've never seen evidence that it works except in very specialized small enrollment courses. In fact, I've seen good evidence that for effective learning, class sizes must be smaller for a distance education course than for an on-site course.
- 417. Fear of technology. Loss of interpersonal relationships between student and instructor.
- 418. Training (workshops); money for facilities; assessment instruments.
- 419. Money for time away from normal job. Teaching expectations for adequate development of a model that might work. Wow. Put the money into the one that needs to be fixed. We have not had the funding base to update our campus classrooms and labs with state of the art instructional equipment, hardware, software, and now, another of the new innovations, something that will solve our problems before the ones we have could have been solved.

420. There is general knowledge on telecourses, etc., but we are all ignorant on how Internet courses would work. From what we can glean so far it looks very time consuming. Also, many of us teach because of the human interaction and the joy teaching brings. Take that away and much of the joy would be gone.
421. No barriers exist. What prevents us from accepting distance education as an effective form of education is the teaching experience of many years which tells us that distance education would not work. Distance education may be better than nothing, but I do not believe it could be an effective form of education.

**ITEM 27: IF YOU HAVE TAUGHT A DISTANCE EDUCATION COURSE,  
WERE YOU ADEQUATELY TRAINED FOR THE EXPERIENCE?**

1. Fair, but the best is doing it.
2. Only a few students benefit from it. Most think of it like watching T.V. unless they are motivated they will not do well.
3. Definitely.
4. Yes. However, the instruction I received at one institution involved a full day's orientation. At another institution, the training lasted about 30 minutes.
5. Obviously, a longer orientation is much more effective than a short one.
6. No response.

7. No response
8. Yes, but could have been better.
9. Partially.
10. No response.
11. Yes.
12. N/A
13. I was somewhat prepared or trained for it but I am constantly trying new things and learning what works.
14. Yes.
15. No response.
16. Yes, numerous workshops and curriculum development. Time.
17. I have not taught any.
18. No response.
19. N/A
20. No response.
21. I have not taught a course but other faculty in my department have and they were trained well.
22. No response.
23. I haven't, and I won't unless my job is threatened due to my not agreeing to teach one.
24. No. I haven't.

25. **No! Because I was not. I don't want the videos to go out. It is a loss of money for the college. Videos are now in the library for student use.**
26. **I have not.**
27. **N/A**
28. **No response.**
29. **N/A**
30. **N/A**
31. **No response.**
32. **No response.**
33. **N/A**
34. **No, probably not. It was much more work than I'd anticipated.**
35. **N/A**
36. **No response.**
37. **No response.**
38. **No response.**
39. **I have not had the opportunity to trace distance education.**
40. **Never did it.**
41. **No response.**
42. **I have not taught a class using this method.**
43. **None.**
44. **None.**
45. **N/A**

46. None.

47. I didn't get to teach the course, but was scheduled to teach one on ednet.

There were communication and scheduling problems. The class was listed as being taught at three different times in different publications. I received no training, but was promised training. I did write the course outline and syllabus without knowing what I was going to do.

48. Not really.

49. Yes.

50. None

51. None

52. None.

53. Fairly well--as well as could be expected. A week of ednet training.

54. Accounting and math. In each case I would say the training was excellent.

The accounting course was/is being taught using the ednet system and I have found the training I received prior to this to be very well done and helpful.

55. N/A

56. Yes.

57. N/A

58. Yes. Not that you did not ask if I would participate; you pressured me to do so by saying that Dr. Foxley supported this. This pressure is common practice for people involved in this area.

- 59. N/A
- 60. N/A
- 61. N/A
- 62. Yes.
- 63. No response.
- 64. Telecourse - not much training.
- 65. Yes. After 3 sessions.
- 66. No.
- 67. No response.
- 68. No response.
- 69. I hope my job won't be threatened.
- 70. I have taught a course but other faculty in my department have not.
- 71. No response.
- 72. Yes and no. Yes because it offers students the opportunity to take classes when they can't be on campus. No because I feel we are losing the human touch. Unless the distance learning is interaction, students don't have the opportunity to ask questions and get immediate feedback. Testing is a problem.
- 73. No! Because I was not. Videos are now in library for student use.
- 74. No I have not.
- 75. N/A
- 76. N/A

77. N/A
78. N/A
79. N/A
80. No response.
81. No response.
82. No response.
83. No response.
84. No response.
85. N/A
86. N/A
87. No. It was just expected that I would know what to do.
88. No, but I was one of the first ones through. We have greatly improved our training.
89. No response.
90. No response.
91. No response.
92. No.
93. I have not but several in my department have with mixed response.  
Money, training, inadequate supervision at distance site, cheating and lack of preparation of high school students. I most adamantly oppose the introduction of this technology between UVSC and the rural high schools

as a primary focus. Our high school students are, overall, poorly prepared for rigorous college work. Why are we now doing even more of the work?

94. No response.
95. I have not taught a class but I attended one. It had its drawbacks.
96. No response.
97. I was trained, but haven't taught yet.
98. No response.
99. Yes. Like any teaching experience, you find your own strengths and methods.
100. N/A
101. N/A
102. No response
103. No response.
104. No response.
105. No response.
106. No response.
107. No I was not, and I'm still learning.
108. No response.
109. No response.
110. No. I'm not sure anyone can be adequately trained until they are put in the situation. Since my first course, however, I have attended subsequent



training which was much better. I had a lot of "theoretical" training, with nothing "hands-on" during my first training. That definitely didn't help.

- 111. No.
- 112. Not at all!
- 113. No response.
- 114. No.
- 115. No training, but already prepared.
- 116. No response.
- 117. No.
- 118. No response.
- 119. No, training was short lived. I had questions that made the class more difficult; however, I felt the class went well.
- 120. N/A
- 121. I have not taught one but am preparing to teach one next fall. I have not been too far into the process but I do feel that I will not receive much training. I will basically be on my own.
- 122. No one knows it all. The technology is evolving too rapidly. I just spend a lot of time reading, going to conferences, testing new tools, and trying to keep up.
- 123. No response.
- 124. N/A
- 125. No response.

126. N/A
127. No response.
128. N/A
129. N/A
130. N/A
131. Never taught.
132. N/A
133. N/A
134. N/A
135. No response.
136. No response.
137. N/A
138. N/A
139. N/A
140. N/A.
141. Politicians think distance education is going to save them money. Money is the bottom line for them. Yet they are willing to spend millions on technology, which constantly needs to be updated, there is no end to the money needed to keep up! They are forgetting the essential; it is the people who make the difference. Good teachers produce good students; quality education produces quality people.
142. Haven't taught.

- 143. Significant. Also have tech help readily (in minutes most times) available.
- 144. N/A
- 145. Taught correspondence. No.
- 146. Never have done it.
- 147. No response.
- 148. No response.
- 149. No response.
- 150. I have not taught one.
- 151. No response.
- 152. No response.
- 153. No response.
- 154. No response.
- 155. No response.
- 157. No.
- 158. No.
- 159. No.
- 160. No.
- 161. No.
- 162. N/A
- 163. No response.
- 164. No response.
- 165. No response.

- 166. Correspondence only. No training and not needed.
- 167. First of all I would not teach one. No interaction with students.
- 168. N/A
- 169. I will in the future.
- 170. N/A
- 171. Somewhat.
- 172. Yes, based on the system that was used.
- 173. No response.
- 174. I have observed very little training.
- 175. No response.
- 176. No response.
- 177. No response.
- 178. I'm an instructional technologist/designer. I hope I will be able to teach it.
- 179. No response.
- 180. No response.
- 181. Yes, but the course was not effective.
- 182. No response.
- 183. No response.
- 184. No.
- 185. No response.
- 186. No response.
- 187. No response.

188. No, I learned as the course progressed.
189. No response.
190. Somewhat.
191. No response.
192. No response.
193. No response.
194. Yes. Don't worry about me. Do something to train Mike Leavitt!!
195. Somewhat. There is a very steep learning curve no matter how much you prepare. The training was self-taught with help from mentors. No formal training.
196. N/A
197. No response.
198. N/A
199. No.
200. No.
201. Yes, no.
202. Yes.
203. No. But I'm not sure what would have been adequate.
204. N/A
205. Yes.
206. No response.
207. No response.

- 208. N/A
- 209. N/A
- 210. No.
- 211. No response.
- 212. No response.
- 213. No response.
- 214. No response.
- 215. No response.
- 216. Yes.
- 217. **At our university there is little or no training offered.**
- 218. N/A
- 219. No response.
- 220. **Special training.**
- 221. No response.
- 222. N/A
- 223. **Yes, but I didn't really enjoy it. Sometimes it takes a lot of extra time and effort. Communicate better eye-to-eye with a real person. Art can be demonstrated but it is difficult to talk about.**
- 224. N/A
- 225. Fair.
- 226. Minimally.
- 227. **Yes, but was not given additional time for the extra work load.**

228. No response.
229. No response.
230. No.
231. I would say that I taught myself along the way.
232. No I haven't.
233. No really. But more to the point--I'm not sure I want to be. I prefer the classroom.
234. Only correspondence courses.
235. Yes.
236. My strengths come from a background of public school teaching where group interaction is the goal. That's hard to achieve over television. Any training - no.
237. N/A
238. Yes. One problem that has never been addressed is the issue of cheating. The television instructor has no way of knowing who is really entering the dates, the fraternity? The spouse, the sister, the mother, the friend, the paid helper, etc.? Even if you can see someone on the prompter it may not be the person who is registered. The whole scheme is part of a larger effort to micro-manage education by increasing work loads, doing away with tenure, forcing semesters on us, refusing to let faculty have an effective voice in higher education. We should be very careful.
239. Yes.

240. Yes.
241. No.
242. N/A
243. Not really. I was taught how to use the cameras but received no training on what comprises an effective distance course. I always had trouble hearing the student responses because equipment was somewhat faulty or not adjusted appropriately. I felt I never had the warm feeling and relationship that I have in a regular classroom (with the students).
244. Yes.
245. I have taught on ednet. I was very well trained as far as I am concerned.
246. I've never taught a distance learning course.
247. Yes. Because of my background. No. Because I needed more information on some technologies used.
248. No response.
249. No response.
250. No response
251. No response.
252. No response.
253. Yes and I loved it!
254. No response.
255. N/A
256. N/A



257. No response.
258. Somewhat.
259. Yes, with television. Internet was self-learned. Face-to-face teaching a block with nontraditional students was also self-taught.
260. N/A
261. No.
262. Yes.
263. No response.
264. No response.
265. No response.
266. No, however, I sought out individuals who had some knowledge and brought myself up-to-speed. I also did a lot of research on my own and was willing to experiment to see what worked and what didn't.
267. No response.
268. No, but learned a lot in the natural progression of the courses.
269. N/A
270. Have not taught distance courses.
271. No response.
272. No. The time to train, (reach technical competence as well as acquiring new strategies) is far greater than those proposing Distance Ed calculate and is certainly much more costly than is ever likely to be adequately funded.

273. N/A
274. Yes.
275. Yes. All faculty are trained ahead of time.
276. I've not taught one.
277. I haven't wanted to teach one.
278. No response.
279. No response.
280. Yes, but have only done correspondence course work. 80 minute classes required.
281. Somewhat.
282. No response.
283. N/A
284. No response.
285. N/A
286. No response.
287. I think so. You must be flexible and have multi-versatility.
288. No response.
289. No response.
290. No response.
291. Not at first.
292. Haven't taught one.
293. Yes, because I was interested enough and confident enough to train myself.

294. No. It is trial and error computer support not coordination.
295. No response.
296. No, I was in a two-day teaching Internet workshop and set about a classroom to teach. I have subsequently taken courses and completed a master's degree in secondary education (B.S. Zoology and worked as a respiratory therapist) and am currently working on a doctoral degree in teaching and computer strategies and educational studies from the University of Utah. I feel better prepared at this point.
297. No response.
298. No, but I learned quickly to develop better course materials.
299. No response.
300. N/A
301. No response.
302. No response.
303. No response.
304. Yes.
305. I had the chance. I do not want it.
306. N/A
307. No.
308. No response.
309. N/A
310. N/A

- 311. N/A
- 312. Yes. Training was never a problem.
- 313. No response.
- 314. No response.
- 315. No response.
- 316. No response.
- 317. No.
- 318. Yes, as much as any other college professor is adequately trained for their job.
- 319. N/A
- 320. None.
- 321. N/A
- 322. N/A
- 323. No response.
- 324. No.
- 325. N/A
- 326. No response.
- 327. N/A
- 328. No response.
- 329. No response.
- 330. No. But it came out O.K.
- 331. N/A

332. N/A
333. N/A
334. N/A
335. No response.
336. I have not taught a distance education course.
337. N/A
338. N/A
339. N/A
340. N/A
341. No response.
342. N/A
343. N/A
344. N/A
345. If asked to do so, I would leave.
346. N/A
347. Not applicable.
348. Yes. I had a very good training seminar.
349. No response.
350. I have not taught a distance education class because I do have a television performance and reduction background. I have repeated but declined the opportunity because the sparse budgets for distance education classes

assure that only a minimum standard can be achieved. Quality PE classes require budgets most systems can't begin to provide.

351. 1) Large amount of time and effort required to be effective. 2) Lack of professional help. 3) Lack of professional productions people. 4) Inadequate equipment. 5) Unrealistic expectations by state officials.
352. No response.
353. No response.
354. No. I lecture.
355. N/A
356. No.
357. Does not apply to me.
358. Yes.
359. Yes, I would say.
360. N/A
361. No response.
362. N/A
363. No.
364. No response.
365. N/A
366. No response.
367. No response.
368. N/A

369. No response.
370. N/A
371. N/A
372. No, I am not interested.
373. No response.
374. N/A
375. I taught a telecourse. The materials, test reality, were prepared for me, as were the assignments. My participation in the course was minimal.
376. N/A
377. No response.
378. No response.
379. Yes, but most of the real training came when I was teaching the course.
380. No response.
381. I have not taught this type of course.
382. I have not had the opportunity to each distance ed yet, but I am sure I will.
383. I have taught EDNET and I think I had adequate training for the most part.
384. No response.
385. No response.
386. Yes, but you have to learn some things on your own.
387. No response.
388. N/A
389. N/A

390. N/A
391. Yes.
392. I believe I will be able to do so.
393. Mainly worked as a facilitator on site to coordinate group work and collect papers, correct and mail. Person teaching class at main site had training.
394. N/A
395. I trained myself by reading and by discussing with colleagues.
396. No, I winged it mostly assisted by other professors.
397. Fifteen years ago I taught part of a course with two-way interaction (3-5 different sites). The technology has improved significantly. I'm certain I would need some brush-up training. All of my overheads and media was taken care of by a secretary. We found that an on-site coordinator or facilitator was crucial. We developed training for these folks and we talked with them for 10 minutes before the course began. Sometimes we did it right on line and by phone. Not applicable.
398. No. Just relied on my wits.
399. No response.
400. It would not work with my classes.
401. Perhaps we could get the state officials to slow this down until we get it more workable.
402. No response.
403. N/A



- 404. No response.
- 405. No response.
- 406. No response.
- 407. Yes, I would like to try my hand at teaching distance education.
- 408. No.
- 409. N/A
- 410. I am going to try.
- 411. Yes.
- 412. I think it will work out at our college.
- 413. No.
- 414. No response.
- 415. No response.
- 416. N/A
- 417. Yes.
- 418. Yes.
- 419. No response.
- 420. No response.
- 421. No response.

DATE: July 14, 1997

TO: Art Challis  
M/S 3002 (EDL)

FROM: *W. Schulze*  
Dr. William E. Schulze, Director  
*for* Office of Sponsored Programs (X1357)

RE: Status of Human Subject Protocol Entitled:  
"Faculty Attitudes Toward Distance Teaching"

OSP #303s0797-049e

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The protocol for the project referenced above has been reviewed by the Office of Sponsored Programs and it has been determined that it meets the criteria for exemption from full review by the UNLV human subjects Institutional Review Board. This protocol is approved for a period of one year from the date of this notification and work on the project may proceed.

Should the use of human subjects described in this protocol continue beyond a year from the date of this notification, it will be necessary to request an extension.

If you have any questions regarding this information, please contact Marsha Green in the Office of Sponsored Programs at 895-1357.

cc: A. Saville (EDL-3002)  
OSP File

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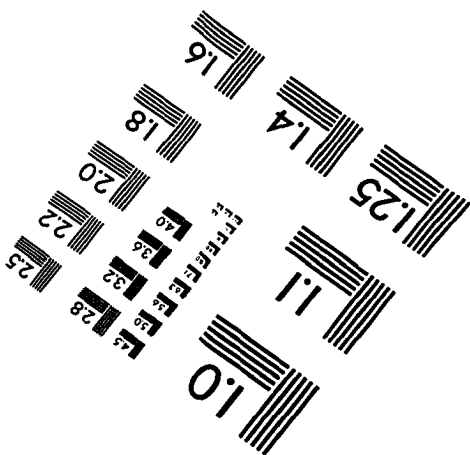
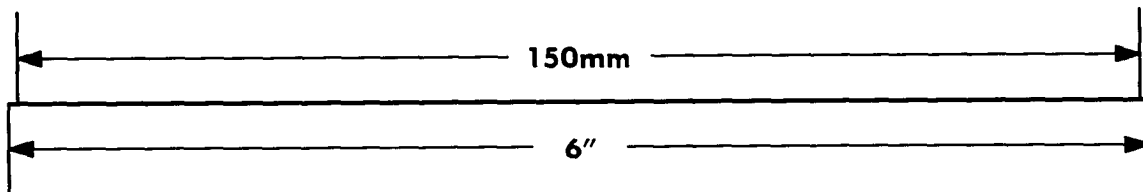
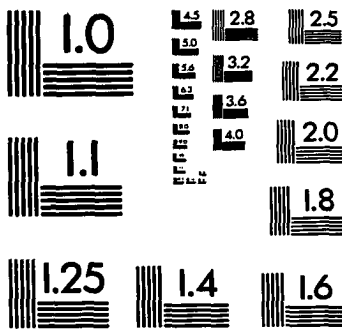
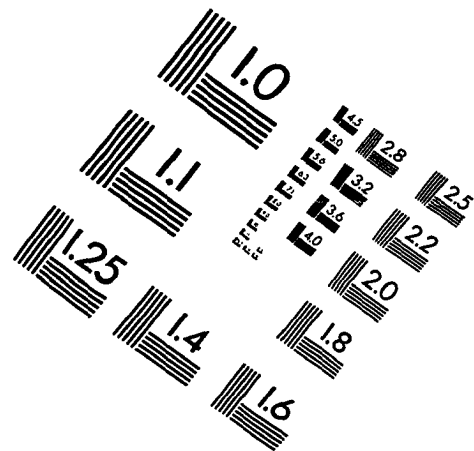
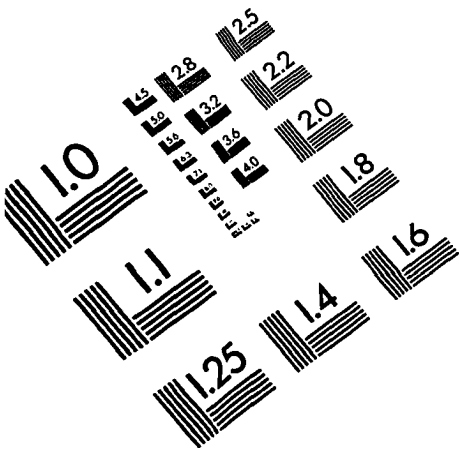
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