This evaluation of the LearnerNet Project at Utah State University focuses on teacher reactions to instruction using an expanded syllabus over an electronic system and the effects of such instructional methods on faculty members and their teaching. It is noted that interviewing and qualitative analysis were chosen as the research methods both because the number of instructors involved was small, and because the study describes opinions, judgments, perceptions, and activities. Data from the interviews were categorized, and are discussed in this report as they relate to five major areas: (1) teaching techniques and strategies; (2) perceptions about students and their achievements; (3) perceptions about the electronic delivery system; (4) motivations; and (5) other perceptions. Analyses of the data indicated that the faculty judged the project a success; the distance students learned and generally performed as well as on-campus students; and, even though some of the students were under-prepared, their experience and motivation seemed to overcome such shortcomings. Limitations in the electronic and support systems are also noted. It was also found that faculty were generally pleased with the system's capacity to carry discussions, convey humor, and augment directed learning, but that more preparation was required to provide highly structured learning experiences that would compensate for the limited discussion time and geographic separation. (EW)
AN EXAMINATION OF PERCEPTIONS AND MOTIVATIONS OF FACULTY PARTICIPATING IN A DISTANCE EDUCATION PROJECT

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This study was conducted as an evaluation of the LearnerNet Project at Utah State University. It is an in depth look at teacher reactions to instruction using an expanded syllabus over an electronic system and the effects of such upon faculty members and their teaching.

Because the number of instructors involved was small and because this study describes opinions, judgments, perceptions, and activities of instructors; interviewing and qualitative analysis were chosen as research methods. Conversational interviews were conducted with all but one instructor in the LearnerNet Project. Two additional interviews were held with instructors who taught over the electronic system but were not part of the LearnerNet Project. They served as a comparison group and brought the total number of interviews to ten.

Data from the interviews were categorized into five major areas: (1) teaching techniques and strategies; (2) perceptions about students and their achievements; (3) perceptions about the electronic delivery system; (4) motivations; and (5) other perceptions.

Teaching Techniques

This section describes the course and class session preparation, the instructional intent, and instructional activities of the professors involved in the project. It also offers evidence that teaching in this project affected traditional face to face teaching in a positive way.

The overall course preparation was extensive, resulting in the publication of detailed syllabi which contained explanatory material, review questions, assignments, and points for discussion for each course. These syllabi were well constructed and intended to aid independent learners in a systematic study of specific content areas within the humanities. Various professors made the following observations about course preparation. "I had done a syllabus for this class for three years [in a face to face mode]. But this course required me to work out conceptual gaps". Another professor was forced into heavy course organization. Yet another took a month to develop a textbook-like syllabus. Still another included 20 newly researched articles in his syllabus. These kinds of efforts resulted in courses that were perceived to be "the best thought out class I ever taught" and ones that were highly structured. The interviewees seemed to welcome the chance to think through an entire course in a highly disciplined manner. Course preparation for this project required more effort than a regular on-campus course.
Weekly preparation took longer for these classes than the traditional face to face class. Four to six hours preparation time was reported for distance education classes. This kind of preparation time when combined with consistent system failures caused various concerns for one professor who invested hours of work only to see his preparation time wasted.

Some unique instructional strategies were used in teaching these classes. One professor required students to submit journals. Another "rode the circuit" of remote sites originating lectures from those sites thus, she felt, helping promote interaction over the system. One instructor noted that distance learning forced students to interact with documents and other learning materials more than they would in a traditional class.

Instructors felt as though student/instructor interaction was enhanced by site visits and that these visits helped cut the drop-out rate. While some instructors felt that the frequency of interaction was more in distance education classes than in traditional face to face classes; another instructor felt that students asked questions of him face to face that they did not ask over the system.

An interesting phenomenon was the transfer of distance education techniques to face to face classes. The journal mentioned earlier was used in a face to face class. One instructor noted that in an upcoming sabbatical leave he would develop a course based on his experiences dealing with distance education for a traditional face to face class. Another noted "I felt tremendously under-prepared in my on-campus classes. This course had a very strong structure. I find myself becoming more structured. I used to make outlines on 3 x 5 cards and laundry lists. I feel more uneasy if I don't have that laid out before me than I ever did before." Another developed a sense of what needs to be accomplished on a "week to week basis" rather than a "test-to-test basis".

There was interchange among project faculty some of which was dysfunctional. Six instructors indicated that they had discussed the project among their department colleagues. There was a "kind of passing on the lore". Advice on how to help the students and expected system malfunctions were two major topics discussed. Some instructors were warned of problems that did not occur. Misinformation about the system's inability to convey humor was given.

All of the humanities faculty agreed that their respective subjects could be taught, understood, and felt at a distance. One instructor noted that distance education forces the student to interact with the materials more so than face to face instruction.

Generally, professors reported that their classes are now better planned and organized.

Students and Their Achievements

This section reports professors' perception about the nature of the adults taking their courses and how well they thought the adult student performed. Students in this project were viewed as
highly motivated individuals. Instructors were impressed with student eagerness to learn, synthesize, and integrate new information. The instructors preferred teaching the distant students. This was not due to distance but rather to the students' adult characteristics. Even though two instructors felt that distant students were unprepared and under-prepared for their courses, they noted that they did preform at similar levels of achievement as face to face students. Other instructors felt that the distant students performed as well or better than on-campus students in tests and assignments. One instructor noted that distant students were often mechanically precise" in answering questions and completing assignments. Such students were viewed as not extending themselves or trying new ideas.

The Electronic and Human Delivery Systems

The system is an audio graphic system capable of sending frozen images in black and white at 30 second intervals two ways, plus an electronic writing board and two way audio. The system was rather archaic by today's standards but it is highly cost effective. It has been improved as devices have been improved.

Instructors felt that the system had more potential than was actually realized during the project. One person used the term "medieval" to describe the freeze frame technology. Another noted that the freeze frame and microphone buttons were "deaders" which inhibited instruction. Some instructors were frightened by the medium, but this fright left after the first few class sessions were experienced. All instructors reported some degree of comfort with the system at the end of the course. The system was initially thought not to humanize nor transmit feedback. But one instructor was pleased to find that feedback could be transmitted. Minimal "air time" may be a contributor to the perceived lack of humanization, because instructors felt pressured to deliver as much content as possible and as a result did not use the time consuming two-way transmission capability of the system. This resulted in lecturing as a major teaching technique and minimized other more humanizing techniques such as discussion and questions and answers.

Problems with the system were generally thought to be with the human side of the system. For example, unskilled technicians contributed to system shortcomings because they lacked a sense of what instructors were trying to convey. The most competent and accomplished instructor could be confined to the campus studio by untrained technicians. Sending and receiving course materials was a problem. Student advisement was thought to be inadequate. And the abrupt cut off of class time without the chance to extend especially interesting discussions was felt to be a problem.

Negative comments dealt with specific technical problems, while positive comments dealt with the promise of educational availability for, heretofore, unserved sectors of society and educational cost effectiveness. One instructor thought it would be like having a two-year college close to home. Another thought the system could alleviate the admissions "crunch" facing higher education. Still another thought it would provide educational
opportunity to people in remote sites and other non-traditional students.

Motivations

Instructors provided different reasons for their involvement. With only ten interviews it is impossible to generalize the motivations presented here to other individuals, however they may form a basis for a broader study of instructor motivations in distance education.

Five of the ten respondents indicated that their motivations were altruistic. One instructor noted that distance education provided educational opportunity for people in remote locations. Another has a long history of extension education and wanted to be involved in a "good idea". Yet another felt "it would mean much to non-traditional students." Still another had an interest in getting his subject matter out to the people. The fifth instructor felt that distance education provided the "ability to serve small numbers of remote sites with the finest instructors."

Three instructors expressed an institutional motivation. One noted that distance education had the potential to "alleviate the admissions crunch." The second felt as thought the specific project provided an opportunity to acquire materials that would last beyond the class. The third responded to requests for certification from students in remote locations.

Two instructors provided a pecuniary motivation. Both mentioned the money involved. Although in each case it was expressed in conjunction with experimentation motivations. One instructor noted that "...it paid. Secondly, I like the idea of the process". The other instructor noted "I enjoyed the subject and wanted to share it".

A final category of motivation might be labeled traditional extension involvement. One instructor noted that he had a "history of extension education", and another labeled himself as an "experienced extension educator".

These motivations provide a basis for additional research. They should be tested and expanded. In effect students were at an advantaged position when compared to the faculty.

Other Perceptions

Instructors were asked if their participation in the project had affected their status with colleagues or administrators. Three did not know. The others thought that because of changes in emphasis of priority of extension and teaching within the university, there would be no effect at all. Their comments show some frustration with the situation as they perceive it. One professor stated: "As near as I can tell, extension does not have the same priority that it has had in the past. I don't think that this experience will count for anything with administrators. I think it may count in extension. I think they have been appreciative of it. However, those people have nothing to do with salary recommendations or with other things that affect me." The other professor stated: "As far as status goes,
as you know, we've gotten a new provost and a new dean, and they seem to be giving us signals to the effect that teaching doesn't count for much anymore, that only research counts. That being the case, no matter how good of a job I did in this course, I don't expect that it will affect my status."

Some faculty expressed a concern for projects that last for one cycle and then are abandoned. This concern exists because of the amount of effort expended initially and because of a desire to improve the project based upon what was learned and what could be profitably changed.

A final observation that should be made is that even though the project courses were a first-time experience for the faculty each quarter, it was not so for the students. Faculty teaching after the first quarter realized that their students were socialized to the system and the project, and they did not need to use as much class time in explaining the structure of the course as did their predecessors.

Conclusion

From the perspective of the faculty, the project was a success. Students learned and generally performed as well as on-campus students. Even though some were under-prepared, their experience and motivation seemed to overcome such shortcomings. The electronic and support systems have limitations; however, they are problems that can be addressed through making some changes. Faculty were generally pleased with the system's capacity to carry discussions, convey humor, and augment directed learning.

The outstanding characteristic of distance education was the amount of preparation by the faculty. Because of limited discussion time and geographical separation, faculty felt compelled to provide highly structured learning experiences. This characteristic resulted from dedication to providing a learning experience that was equivalent to an on-campus five-hour class. This experience with designing a highly structured class has had carry over to on-campus instruction.

Faculty development and production of quality learning experiences were major results from the project. Other results included: providing well mediated independent study courses, collecting audio/visual materials, use of new technologies in delivering humanities courses, and testing the use of and extensive course syllabus with a decrease in meeting time.

A number of questions that lend themselves to research projects have been raised. One is, "Do the characteristics of adult learners play a significant role in student performance?" Another is, "How much, if any, effect does the medium have on class discussions?" Still another is, "What perceptions of the distance education do students have and how do they correlate to faculty perceptions?". Answers to these questions will serve to make distance education more effective.