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ABSTRACT

Telelearning, Project Outreach, a Louisiana school for Mathematics, Science, and the Arts distance education program has been in operation for 7 years. An incomplete evaluation conducted in 1990-91 was compared to a completed 1991-92 evaluation to demonstrate that evaluations of the same program from different approaches can yield similar results. In 1990-91, 81 schools received 10 subjects, and in 1991-92, 113 schools received 13 high school courses, serving 942 students. The program uses audiographics, a distance education technology that includes a personal computer, an electronic penpad, an audio convener, a modem, and a high resolution monitor. The 1990-91 study was student-focused and student-outcome oriented. The 1991-92 study was teacher-focused and process oriented. The 1990-91 evaluation focused on the effectiveness of the project as perceived by students, who evaluated the delivery system, perceptions of course quality, and teacher effectiveness. The 1991-92 study focused on 15 full-time and 8 part-time teachers and the teaching processes. Both studies used a student attitudinal survey, incorporated on-site student interviews, and emphasized the key role of local proctors. In the second evaluation, teachers were also interviewed. Both studies indicate that students were very positive about the system and comfortable with the technology. Student outcomes and teacher processes highlight the Telelearning project's advantages. (SLD)

TELELEARNING: A SECOND LOOK

1990 - 1991
1991 - 1992

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I. TELELEARNING - A SECOND LOOK

Although Telelearning has been operational in the State of Louisiana for seven years, the program has been formally evaluated only during the last two school years. The first evaluation commissioned for the 1990-91 school year was not completed by the original contract evaluator. The second formal evaluation was done for the school year 1991-92. A comparison and contrast of the two evaluations contains a ironic twist. Even though the evaluations looked at different objectives using different designs and different methods, the results and recommendations were similar.

Both of the evaluations were conducted to " determine the degree of effectiveness of the Statewide Distance Learning Program - Telelearning." Even though they both had the same mission, the objectives of each evaluation were different. The focus of the first evaluation was student-oriented. The three goals dealt mainly with the students' acceptance, level of performance and extent of enhancement Telelearning had on producing students eligible for Louisiana scholarships and college. The focus of the second evaluation was teacher-oriented. The three goals were assessed by using both student and teacher perceptions of the effectiveness of the Telelearning delivery system, quality of the Telelearning courses as delivered by the teachers and the effectiveness of the teachers.

This paper will look at the similarities and differences in the two evaluations. The purpose of this paper is to validate the fact that two evaluations of the same program, using different approaches can yield the same results. The idea for the paper came about when one evaluator, who worked on both projects, put the recommendations side by side and realized that the same findings occurred virtually in both studies.

This paper is divided into three sections. The first section describes the Telelearning project; the second section describes the 1990-91 evaluation design and the 1991-92 evaluation design and then contrasts and compares the two designs; the third section describes the conclusions and

recommendation of the 1990-91 eva'uation and the 1991-92 conclusions and recommendation and then contrasts and compares the two findings.

II. BACKGROUND RELATED TO TELELEARNING

A. Description of the Telelearning Program

Telelearning, Project Outreach, a Louisiana School for Math, Science and the Arts distance education program, is in its seventh year. In 1986, a two school network was created to test the feasibility of teaching Calculus and Survey of the Arts to schools using audiographics technology. The State Department of Education in conjunction with the Board of Elementary and Secondary Education with 8g Quality Education funds approved an expansion of the system to reach as many as 114 rural schools in Louisiana. For 1990-91 the actual network size was 81 schools receiving ten subjects (French I, II, III, Spanish I, II, III, Advanced Mathematics, Calculus, Physics and Survey of the Arts.) Courses were taught by seven (7) full-time and eight (8) adjunct teachers. Most of the participating schools offer two courses through the Telelearning network. Thirteen courses were offered through this program during the 1991-92 school year to 113 schools within 44 school districts, serving 942. The additional courses were German I, Latin I, and Computer Science. Courses were taught by fifteen (15) full-time and eight (8) part-time teachers.

This program utilizes audiographics, a unique distance education technology that includes a personal computer, electronic penpad, audio convener, modem and high resolution monitor. The system is a computer based, interactive audio and graphics system that incorporates graphics and single frame video images stored in and utilized by a special patented software package that operates the program and its peripherals. In addition, a common telephone line is used to deliver the audio component of the system and digitized computer information. The PC controls the system through a modem that separates speech from the computer data. The teacher communicates with the class via an audio convener that processes the sound by sending the teacher's conversation or student's responses

via the phone line. The teacher has a bank of computer images stored in a special directory and created with special graphics package stored in the operating software. The software also includes a video component that allows the user to capture and store any video image provided from a NTSC video signal (ex.: video camera, VCR, video disk). Besides the keyboard, a second peripheral is the penpad. This component serves as an "electronic chalkboard" to write or receive written information between the participating schools. The penpad is also the source device for creating graphics used by the teacher for instruction.

A typical Telelearning class includes four schools plus the teaching site with five to seven students per school. This duplicates a regular classroom in size. The students receive instruction via computer three days per week and work independently the other two days. Each station has up to five microphones to provide voice contact between teacher and students. The system encourages interaction between the teacher and students. Each participating school provides a proctor to facilitate the class by taking roll and administering materials,

assignments and exams.

III. DESCRIPTION OF THE 1990-91 EVALUATION STUDY

A. Purposes of the Evaluation

The purpose of this project was to evaluate student acceptance, student performance, and curriculum enhancement of the Louisiana School Distance Learning Program as it delivers certain courses (required by the Taylor Scholarship Plan [TAP] and for admission to Louisiana State University) to small and remote rural schools throughout Louisiana.

In order to determine the relative success of Telelearning in promoting student learning, the enhancement of rural high schools in Louisiana and the student preparation for scholarships--a variety of strategies were applied to this study. Telephone interviews, survey information, demographic

information, on-site interviews, LSU bridge observations and grades were employed to identify the Telelearning user.

B. **Evaluation Objectives for 1990-91**

The objectives for this project as derived from the evaluability assessment are:

1. To assess the degree of acceptance of the Telelearning program by participating students.

2. To determine the level of performance of students in various courses offered through the Telelearning Program.

3. To assess the extent of enhancement the Telelearning program has had on producing students eligible for Louisiana scholarship programs and college entrance.

C. **Evaluation Design for 1990-91**

At the onset of the evaluation on January 25, 1991, the coordinators of the evaluation met with the evaluation team to explain the purpose of the evaluation and to solicit their support on the project.

Telephone interviews were conducted with the project director and the funding agency manager. Visits were then made to Louisiana School for Math, Science and Arts for personal interviews with project director. Sampling procedures were decided, the questionnaire was designed and the mid-term grades were requested. Visits to 16 sample schools were made for class observations and interviews with students, proctors and principals. Schools that could not be visited in person were "observed" at the LSU bridge site, which is actually a Baton Rouge Telelearning station. Nine classes were observed for thirty minutes in each of the three content areas. Also members of the evaluation team observed different schools on different days while different subjects were being taught, in order to collect data from many varied situations, circumstances and perceptions of Telelearning users.

Another method of collecting data was through responses to the student attitudinal survey. It identified student satisfaction in terms of delivery mechanism, convenience of use, time effectiveness of the system, perceptions regarding the instructor, communication patterns (interactions between

students and teachers) and the effects of having a proctor, parent or teacher in the class. Interviews with students gave additional indication of student's level of acceptance.

Mid-term and final grades were collected and used to assess student performance. Grades were slow being reported and were not systematically recorded. In fact, phone calls to the Telelearning office were made in order to have missing grades sent to the evaluation team. Missing grades were extremely valuable in that they identified program drop-outs.

The three content areas were investigated separately: a) Foreign Languages Courses; b) Math and Physics Courses; and c) Arts Courses. For each of these three areas a total of nine samples of thirty minutes each were observed. Three of these were on-site and six were randomly selected such that the six sessions did not cover the same teacher, same topic, or the same time of day. The three on-site sessions were in three different cities. The locations were selected at random from the sixteen sample sites. The twenty-seven observations lasted through May 17th, the last day of the Telelearning broadcast. Student profile information was collected to identify students, courses, demographic information, sex, classification, schools, parishes, teachers, age and mid-term grades. This data was entered into a computer program so that matching was accomplished easily. Final grades and college plans were collected at the end of the school year.

During late May and early June, telephone interviews were conducted to obtain essentially the same information from students who dropped out of the program and were not reached through the written surveys. Non-respondents were also contacted through this medium.

In order to assess the effectiveness of the Telelearning Program in producing students eligible for Louisiana scholarship programs, information about student records of grades, college applications, scholarship applications, and the survey results were utilized. This process produced a Telelearning student profile which indicated those students who are eligible for Louisiana Scholarship Programs according to the set standards. Guidance counselors at the participating schools were valuable contacts

for information about students receiving scholarships. The survey identified student satisfaction in terms of delivery mechanism, convenience of use, time effectiveness of the system, perceptions regarding instructor, communication patterns (interactions between students and teachers), and the effects of having a proctor, parent, or teacher in the class. Observations and informal interviews with students during on-site visits gave an additional indication of student's level of acceptance. Drop-outs and non-respondents contributed vital information to this process.

IV. DESCRIPTION OF THE 1991-92 EVALUATION STUDY

A. Purposes of the Evaluation

The purpose of the evaluation was to determine the degree of effectiveness of the Telelearning Project by focusing on students' perceptions of the actual delivery system, students' perceptions of course quality as delivered through the system and Telelearning teacher effectiveness.

B. Evaluation Objectives for 1991-92

The following objectives were based on the determination that student perceptions of the system itself, the quality of courses offered and teacher effectiveness had not been extensively explored and needed to be addressed:

1. To assess student perceptions of the effectiveness of the Telelearning delivery system.
2. To assess student perceptions of the quality of the Telelearning courses
3. To assess the effectiveness of the teachers' delivery of the courses.

C. Evaluation Design for 1991-92

Meetings were conducted with Louisiana State Department of Education program directors to finalize agreement on investigatory procedures. A combination of quantitative and qualitative approaches were used to evaluate the program. The designed consisted of: (1) student attitudinal survey, (2) on-site student interviews, (3) teacher observations via a telecommunications bridge, (4) on-site teacher interviews and (5) comparison of student achievement and attitude.

The student attitudinal instrument developed by the program evaluators used on previous student surveys sent out by LSMSA's Telelearning project in an effort to demonstrate continuity " in the eyes of participants schools" and to assure LSMSA Telelearning faculty and staff of the evaluation teams's desire to work cooperatively with them for the purpose of program involvement.

On site one-on-one interviews were conducted by a member of the evaluation team at randomly selected schools sites. A total of fifty-nine students were interviewed in eight of the forty-four member parishes. The evaluation team member conducted interviews on-line and off-line days and therefore had an opportunity to witness class activities under a variety of circumstances. The student interview instrument mirrored several of the questions posed in the Student Telelearning Survey and were intended to probe for in-depth responses.

The Telelearning teacher's ability to effectively convey course content through the Telelearning system is crucial to its success. An observation instrument was developed to observe individual teachers instruction by means of a telecommunications bridge simultaneously linking program observers with multi-site class sessions. Thirteen(13) three member teams, each composed of: (10 a pedagogical observer, (2) a subject-specific observer and (3) a generalist observer well versed in oral communications observed thirty-nine (39) fifty- minute individual observations in total.

Interviews with all full-time and part-time Telelearning teachers were conducted at the Louisiana School for Math, Science and the Arts. Teachers were asked to respond to thirteen questions categorized as eight open-ended and five "yes/no" response-type questions. Teachers were asked to supply numerical ratings on a 1-10 scale to rate the current Telelearning system and to rate the proctor's importance within the instructional structure.

Telelearning teachers' written self-evaluations were also provided unexpectedly to the evaluator during the visit. The self-evaluations provided additional qualitative data which lended to the overall impression of the program, but were not used in the analysis of the program.

Program evaluators requested and were provided with a list of grades for all students by LSMSA. Of the 813 completed and returned Student Attitudinal Surveys, 799 were matched with final grades. A statistical analysis was performed to determine the relationship of student grades and student attitudes.

V. COMPARISON AND CONTRAST OF THE DESIGN OF THE TWO TELELEARNING STUDIES

Interestingly enough, although the findings of both evaluations studies were very similar, the focus, objectives and evaluation procedures contrasted in several ways. The 1990-91 study was student-focused and student-outcome oriented, while the 1991-92 study was teacher-focused and process oriented.

Both studies incorporated a student attitudinal survey. The 1990-91 used the LSMSA survey with additions, the 1991-92 used an original survey in similar design which included a few of the LSMSA survey items. The procedure for dispersement and collection of surveys was also dissimilar in that the 1990-91 study sent our and received all surveys through LSMSA. The 1991-92 survey was sent out and returned directly to program evaluators.

Both studies incorporated on-site student interviews. The 1990-91 study concentrated in one central location; the 1991-92 study used a geographical spread. Similarly, the evaluation team member interviewed during on-line and off-line days, formally and informally, in both studies. Interview focus was dissimilar to great extent, in that the 1990-91 study was probing for further "student opinion, goals and grade" data and the 1991-92 study was probing further "student opinion of the delivery system and teacher delivery" data. Student access problems were the same for both studies and involved careful scheduling of interview appointments to insure data collection, which included a cross-section of student courses, course delivery times and a variety of classroom situations. Consideration for regular student schedules, testing, school holidays, etc. were necessary for successful implementation of both studies.

The 1990-91 study continued to focus on student outcome by determining correlations between student attitude and achievement by content areas and further probing for scholarship eligibility data as a result of taking Telelearning courses. The 1991-92 study compared student attitude and achievement by individual courses, but did not investigate beyond that.

Similarly, both studies used the LSU telecommunication bridge site to "observe" on-line classes. The focus for the 1990-91 study was student-teacher interaction; the focus for the 1991-92 study was teacher performance and delivery of the curriculum through the system.

Direct involvement with LSMSA teachers was limited to an on-site observation at the LSMSA by evaluation team members for the 1990-91 study. Dissimilarly, the teacher-focused 1991-92 study included on-site observations and in-depth one-on-one interviews of program teachers, faculty and staff.

VI. CONCLUSIONS AND RECOMMENDATIONS OF THE 1990-91 EVALUATION

A. Conclusions of the Evaluation

This project set out to evaluate three areas of Telelearning: student acceptance of Telelearning, student performance in Telelearning classes, and curriculum enhancement necessary for college bound students. The report contains quantitative and qualitative analysis of data to determine the effectiveness of the program.

The degree of acceptance of the Telelearning program by participating students was high. The level of performance of students in various courses offered through the Telelearning program was above average. The extent of enhancement the Telelearning program had on producing students eligible for Louisiana scholarships and college entrance was also significant.

According to the questionnaire and interviews most students were satisfied with Telelearning distance education as a means of receiving instruction. Student recruitment, types of proctors, course format and late start-up were major influences toward student attitude. Prior to the evaluation, the

general thought was that the Survey of the Arts course would lend itself to the Telelearning system with greater student satisfaction. The Survey of the Arts class is mainly visual, whereas foreign language is largely oral in format. The math courses are a combination of both oral and visual learning.

The findings of this evaluation showed that student satisfaction with Telelearning was greater in the math and foreign language areas, not the Survey of the Arts as had been anticipated. These findings, however, do not suggest that Survey of the Arts is not appropriate for the Telelearning system. The Survey students were satisfied, just not as much as the language and math students. There were many qualified reasons for the lesser success and satisfaction of the Survey students. Student dissatisfaction resulted from students being "forced" to take the Telelearning course or the way in which the course was presented. The Pearson Correlation Coefficient indicated extremely high correlations between student attitudes toward teacher, equipment/delivery system and the courses/subject/class with satisfaction being the highest in the course category. Negative comments also came from students who did not have trained proctors in the Telelearning Classes. Students not being monitored were not encouraged to take the courses seriously or to be conscientious students. The math subject group reported the most positive attitude and greatest satisfaction with Telelearning.

Students enjoyed the class meeting only three days a week and having two days to complete assignments. The equipment and delivery system seemed to fascinate students, as today's students are geared toward computers.

Another important aspect of the program concerned student performance. The students who completed Telelearning courses generally had above average grades. Those students who did not perform well either were not prepared for the course, did not want to be in the class or did not have a class proctor. Again, it was not the Telelearning program which prevented grades from being high. The math subject areas had the highest grades, indicating courses which were more adaptable and

appropriate to Telelearning as a means of instructing. The students in the other subject areas, foreign language and survey of the arts, similarly had high grades. With proper teacher training in the use of the Telelearning system the courses can be more "natural" for students, that is, more like being in a traditional class. An important factor accounting for such overall high grades was that a large number of students with low grades dropped out of the program and the majority of these students were in the Survey of the Arts class. The average grades would have been much lower had these students remained in the program.

Telelearning did produce some students who met Louisiana college entrance requirements and who were qualified for Louisiana scholarships. The questionnaire identified 207 students who were taking Telelearning courses for these reasons. However, in the interviews it became apparent that many students were not aware of such scholarships or the Taylor Plan. Student recruitment then became a key issue. The Louisiana State Department of Education identified twice the number of students in Louisiana who needed certain courses to be eligible for college entrance or Louisiana Scholarships as were enrolled in the Telelearning program during 1990-1991 Finally, the program's greatest strengths and successes concerned the potential impact of Telelearning. Because of curriculum enhancements courses necessary for students to be eligible for college entrance or a scholarship were available at no additional fee.

This novel teaching/learning system provides high quality instruction to rural, academically deprived students in Louisiana who might not have courses available to them.

Thus, the Telelearning experience can change the entire future for the students who take advantage of this educational opportunity.

B. <u>Recommendations of the 1990-91 Evaluation</u>

Quantitative data were obtained from the student survey and grades. Qualitative data came from interviews, observations, and the student questionnaire.

Several recommendations emerged from the evaluation.

1. Continue to use the Louisiana School as the distributor of Telelearning. The staff and faculty are dedicated to producing a successful program.

2. Recruit students that need this program for college and scholarship purposes. The primary reason the program was funded was to encourage more Louisiana students to attend college.

3. Telelearning equipment should be used for pre-service and in-service during off-days. Additional uses of the equipment, such as for professional development, should be permitted.

4. The Telelearning teachers and proctors should be trained in using the equipment, capabilities and techniques of distance education. This would increase effectiveness of this method of instruction.

5. Schedule and plan the program so that all classes start up at the same time. Adopt a Telelearning calendar for participants to follow and post before start-up.

6. Coordinate and present each course in a logical manner. Class sessions must be organized and follow a logical and long range plan.

7. Locate classes in a space that is large enough for the equipment and the students. Proper facilities and location are essential and conducive to the Telelearning success.

8. Provide compatible software and working equipment for each class. Clear telephone lines and quick repair/replacement of equipment are critical.

9. Administer evaluation questionnaires earlier and provide make up classes to make more effective use of time.

10. Computerize records and grades. Accuracy of information and easy access to the information is needed.

VII. CONCLUSIONS AND RECOMMENDATIONS OF THE 1991-92 EVALUATION

A. Conclusions of the Evaluation

This evaluation of the Telelearning Project addressed three specific issues:

Student perceptions of the effectiveness of the Telelearning delivery system.

Student perceptions of the quality of the Telelearning courses.

Effectiveness of the teachers delivering the Telelearning courses.

Evidence gathered by means of a written survey instrument, on-site interviews, teaching observations and final grade analyses served to produce the findings presented below.

B. Student Perceptions of the Effectiveness of the Telelearning Delivery System

Students were very positive about learning by means of the Telelearning system. They were pleased to have the opportunity to take courses which were previously unavailable to them, they were intrigued by the technology which provided a change from the traditional classroom situation, and the majority of them enjoyed being-on-line with students from other areas of the state as long as they were "compatible".

Most students were comfortable with the technology and handled equipment with ease. Technical problems affecting the effectiveness of the system were predominately caused by "pulled" wires on school site-microphones and telephone line static. Enhancement of communication skills was a natural by-product of this delivery system. Final grade averages for all courses reflected average-and-above scores for all courses with a statistically significant relationship between grades and attitudes noted.

Result of the analyses of all evaluation instruments indicated a very positive perception of the effectiveness of the Telelearning delivery system by students.

C. Student Perceptions of the Quality of the Telelearning Courses

Results of the analyses of the attitudinal survey instrument and on-site student interviews indicated that students were pleased with the quality of the courses they were receiving through Telelearning. They felt they were receiving "college-level" instruction from "college-level" teachers. Students in foreign language courses generally indicated frustration because of the lack of a visual element to the system - a particularly important element in teaching a language. A positive response of 80.7% by students indicated that they learned more in their Telelearning class than they would have in a traditional class. The Monday/Wednesday/Friday on-line schedule with Tuesday/Thursday

scheduled off-line days, fostered independence, with more responsibility being placed on the student to "get the job don". For that reason, the maturity level of the student should be one of the major determinants for enrollment in Telelearning courses.

D. **Effectiveness of the Teachers Delivering the Telelearning Courses**

Results of teachers observations and interviews were generally positive. Teachers were knowledgeable in their respective areas and were generally able to convey that knowledge to students via audiographics.

A lack of personal contact and visual feedback were cited by Telelearning teachers and students alike as being the major drawbacks of this type of system. Teachers generally connected the "personal contact issue" with their effectiveness as teachers. They also express concern regarding timely feedback to students and acknowledged without reservation that the classroom proctor was a major component of the effectiveness formula.

E. **Recommendations of the 1991-1992 Evaluation**

Consideration should be given to the following points as recommendations for the purpose of maintenance and improvement of the quality of the Telelearning Program and are based on the findings of the evaluation.

Special attention should be given by those audiences identified at the end of each recommendation.

Audience Identification Key

TD = Telelearning Director

TF = Telelearning Faculty

SD = State Department Staff

1. Provide a summary of course descriptions to students prior to enrollment so that they understand the scope of the course. **(TD,TF)**

2. Avoid excessive coverage of content particularly in lecture-type classes. **(TF)**

3. Establish a visual cue for students's questions to teachers for the purpose of more effective communication. **(TD,TF)**

4. Increase the use of visuals during on-line instructional time to maintain student interest. **(TF)**

5. Revitalize the 1-800 "homework line" for use as a student resource. **(TD,TF)**

6. Develop a consistent grading criteria among Survey of the Arts teachers across all courses within that area. **(TF)**

7. Coordinate the teaching of "eras" among Survey of the Arts courses to allow for easier transition from one course to the other and to provide overall continuity to the course. **(TF)**

8. Increase effective faculty communication by providing regularly scheduled meetings.**(TD)**

9. Provide formal technical training for new teachers to the Telelearning system. **(TD)**

10. Provide training in teaching methodology for new teachers to the Telelearning system. **(TD)**

11. Expand the use of the Telelearning system by providing inservices, workshops, etc. for the purpose of professional development. **(SD,TD)**

12. Provide timely notification of all Telelearning events to appropriate State Department Staff. **(TD)**

13. Visit Telelearning school sites to conduct on-line classes, particularly those schools considered to have instruction-related problems. **(TF)**

14. Provide a Spring event for students as a follow-up to the Fall orientation. **(TD,TF)**

15. Provide faculty and class pictures on screen and in print to all Telelearning classes. **(TD,TF)**

16. Study the role of the proctor more closely because of its key position within the Telelearning structure**(SD)**

VIII. CONTRAST AND COMPARISON OF THE 1990-91 AND 1991-92 EVALUATION RESULTS AND RECOMMENDATIONS

Although objectives were dissimilar and different implementation procedures were employed, both studies concluded with similar findings. For both studies:

1. There was a high correlation between student achievement and attitude.
2. Student opinions of the system were similar.
3. Classroom proctors were found to be an extremely important component of the system, at times, being the crucial determinant of student success or failure of the course.
4. Foreign language courses were found to be the most difficult to teach through the system because of lack of visual feedback.

Again, recommendations for the 1990-91 and the 1991-92 studies parallelled. Similar recommendations included the following:

1. Provide inservice training for teachers and proctors in the use of equipment and method of instruction through this type of system.
2. Expand the use of the system for professional development during off-line days.
3. Develop course continuity through coordinated planning efforts by the faculty.
4. Due to the nature of the medium, local schools should strongly consider student preparation and maturity level when scheduling Telelearning courses, particularly foreign languages.
5. Provide a spring event for students as a follow-up to the Fall orientation.
6. Increase the use of visuals during on-line instruction time to maintain student interest.
7. Revitalize the 1-800 homework line for use as a student resource.

IX. SUMMARY

The purpose of both the 1990-91 informal study and the 1991-92 formal study was to provide an overall evaluation of the Louisiana Telelearning Program. Although the focus of each study was

different, the results were very similar, providing multiple confirmation of findings. Similarities included:

1. Students were very positive about learning by means of the Telelearning system.
2. Students were comfortable with the technology.
3. Technical problems were predominately related to minor microphone wiring difficulties at local school sites and telephone line static during inclement weather.
4. Students enjoyed the independent college-type atmosphere created by having on-line instruction and off-line independent study.
5. Student level of maturity was a major determinant of successful course completion.
6. Proctors played a key role in successful program implementation.

The previous list is a fairly comprehensive evaluation of the Telelearning program and all of these results were found in both evaluations. The 1991-92 evaluation was more in-depth compared to the 1990-91. The 1991-92 evaluation had a response rate of 98% on surveys and was more global in scope of interviews. All teachers were formally interviewed and a wider area of the state was covered in the student interviews in 1991-92. The contrast is important, but the interesting aspect is that the findings so closely paralleled each other. Many of the recommendations of the 1990-91 study were written in narrative form and expressed the same suggestions that the 1991-92 recommendations numerically listed.

The findings of the 1990-91 study were not formally presented to the State funding agency nor the LSMSA. Therefore, the agency nor the school benefitted from the complete findings. Some of the results were made known to the LSMSA via telephone conversations. It is evident that the suggestion to computerize the record system was implemented for the 1991-92 school year, because the evaluation for that year used the computerized records to track surveys. The next evaluation of the

Teleleaming program should provide insight into whether the recommendations made by the 1991-92 study will be implemented.

Whether looking at student outcomes or teacher processes, the findings remain the same for this educational program. An overall description of the programs strengths an weaknesses can sometimes surface from an evaluation no matter the method or the design.