

## DOCUMENT RESUME

ED 375 999

RC 019 834

AUTHOR King, Joel; And Others  
 TITLE Preparing Rural Special Educators. Report on the Rural Special Educator Project.  
 INSTITUTION Maine Univ., Farmington.  
 PUB DATE [94]  
 NOTE 40p.  
 PUB TYPE Reports - Evaluative/Feasibility (142) -- Tests/Evaluation Instruments (160)

EDRS PRICE MF01/PC02 Plus Postage.  
 DESCRIPTORS \*Distance Education; Elementary Secondary Education; Higher Education; Mentors; Program Evaluation; Questionnaires; \*Rural Education; Special Education; \*Special Education Teachers; Student Attitudes; Teacher Aides; Teacher Attitudes; \*Teacher Education Programs; \*Teacher Shortage  
 IDENTIFIERS \*Maine; University of Maine

## ABSTRACT

This report evaluates a program developed to address the shortage of qualified special education teachers in rural school districts in Maine. The goal of the program is to offer accessible special education training at the baccalaureate degree level to transitionally and conditionally certified special education teachers and to educational technicians who assist in special education classrooms. Course work is based on the curriculum of the special education degree at the University of Maine at Farmington and includes on-campus summer classes and distance education classes offered through the interactive television system, a two-way audio, one-way video system that broadcasts to approximately 90 sites throughout the state. In addition, teacher-mentors in participating schools received training in the supervision of student practica and on current issues in special education. Trained mentors evaluated the program positively and disclosed that training helped clarify their function and provided skills necessary for their roles as mentors. Student evaluations of the program viewed the use of distance learning favorably. Additionally, students responded positively to questions evaluating planning, the learning environment, tests, and assignments. Students indicated they believed that courses were of comparable difficulty to others they had taken. More than 77 percent of students received a grade of B or better, and no one received a grade lower than C plus. Included are tables summarizing responses to mentor training workshops and student evaluations; descriptive information on course participants; reported grades from courses; student profile questionnaire; student course evaluation; and program questionnaire. (LP)

\*\*\*\*\*  
 \* Reproductions supplied by EDRS are the best that can be made \*  
 \* from the original document. \*  
 \*\*\*\*\*

Report on the Rural Special Educator Project

Joel King

Linda Gamble

Department of Psychology

Department of Education

Phyllis Fischer

Department of Special Education

University of Maine at Farmington

U.S. DEPARTMENT OF EDUCATION  
Office of Educational Research and Improvement  
EDUCATIONAL RESOURCES INFORMATION  
CENTER (ERIC)

This document has been reproduced as  
received from the person or organization  
originating it.

Minor changes have been made to improve  
reproduction quality.

• Points of view or opinions stated in this docu-  
ment do not necessarily represent official  
OERI position or policy.

"PERMISSION TO REPRODUCE THIS  
MATERIAL HAS BEEN GRANTED BY

Joel King

TO THE EDUCATIONAL RESOURCES  
INFORMATION CENTER (ERIC) "

PREPARING RURAL SPECIAL EDUCATORS

## Abstract

This paper is an initial report of the evaluation data collected in Year I and Year II of the Rural Special Educator Project. The need for knowledgeable, trained special educators is critical in Maine. In December 1990, there were 22 personnel vacancies in special education. Many more classrooms are staffed with teachers holding emergency certification, some of whom have had only one course in special education. The number of students graduating in-state in special education is not high enough to fill existing vacancies, and each year more special education teachers leave the field. One factor contributing to this acute shortage is unrealistically large caseloads which result from the inability of school districts to hire enough qualified, certified teachers. Paraprofessionals are hired as teacher aides to help alleviate the problem. There are over 900 special education paraprofessionals working in Maine public schools. The state has instituted a recruitment level certification for these para-professionals who are called educational technicians. Although "ed techs" make it possible to increase class size, children are not being served by fully trained special educators. The size, geography and poverty of Maine contribute to the personnel shortage by making it difficult for people who might otherwise seek college degrees to do so. Only one of the seven campuses of the University of Maine System (UMS) — the University of Maine at Farmington (UMF) — offers undergraduate courses and degrees in

special education. The result of such limited accessibility to training is that potential degree students must relocate in order to prepare for careers in special education. The project will make special education training at the baccalaureate degree level available and accessible to persons who are currently indigenous to and/or employed in rural Maine. The program will be delivered in remote regions of the state through the use of the University of Maine Interactive Television System (ITV). Minimal coursework on the UMF campus during summer sessions will complete degree requirements for working students. The need for a knowledge base that includes information on working with children and youth with a variety of disabilities as well as issues specific to rural education will be met through UMF courses and degree program design. The goal of the project is to assure that the best possible education is available to rural children with disabilities. It will increase by more than one hundred the number of fully qualified special education personnel by offering a degree program and courses for certification through the use of interactive television; develop materials specifically designed for use in distance learning formats, pilot an innovative model for making quality practica experiences in remote settings by training mentor/supervising teachers; and disseminate the delivery model, instructional content, and materials to a broader audience of rural special educators.

## Preparing Rural Special Educators Using Distance Learning Technology

### Introduction and Objectives

Testifying before the Senate Subcommittee on the Handicapped and the House Subcommittee on Select Education, Dr. William Carriker noted, "According to figures released by the U.S. Department of Education, the number of special education teachers that were needed have been steadily increasing over the last decade with the shortage growing by more than 10,000 between 1984 and 1986." Furthermore, the National Center for Education Statistics reports a 35% decline in special educators graduating from personnel preparation programs in the decade just ending. (Reprinted from *News & Notes*, 1989.)

Rural schools experience severe shortages and high turnover rates in special education. A summary of these problems is provided by Helge (1984) as a result of a survey of 200 special education administrators from rural LEAs in all 50 states. Respondents reported that difficulties recruiting and retaining qualified staff were the two most serious problems following funding inadequacies. Sixty-six percent said they had difficulties recruiting staff, while only 17% said they had an adequate number of personnel. Most (92%) of the respondents said that emergency certification was used frequently. Given that many rural special education teachers have little or no training in special education and or/rural life, it is little wonder that national attrition rates of 30% to 50% are the norm in rural districts.

There is evidence that the need for more special educators is critical in Maine, as well as in the nation as a whole. In 1989-90, 28,233 Maine students ages 3-21 received special education and related services (a 1% increase from 1988-89).

Children with special needs represented 13.3% of the school-age (5-17) population (Kierstead and Gray-Hanc, 1991, p.1). The 1990-91 data from the Office of Certification in Maine's Department of Education show that there were 22 special education teacher vacancies in Maine's public schools, plus another 25 speech/language vacancies. The 1989 Maine Special Education Data Summary Report indicates that in 1986-87, 15 special education positions were never filled, and in 1987-88, 20 positions were never filled.

Vacancies have risen dramatically over the past several years, even though school administrators will hire people who do not have degrees in special education or are not fully certified in special education. The need for improvement in the quality of personnel providing special education services has become acute. The State Data Summary Report indicates that 98 special education teachers held either conditional or transitional certificates in 1986-87; 118 teachers held these certificates in 1987-88. Data from the Maine Department of Education, Division of Special Education, show that 107 teachers were conditionally or transitionally certified as of fall, 1990. Conditionally certified teachers hold baccalaureate degrees in fields other than education and are taking courses to earn their teacher certification. Transitionally certified teachers hold either elementary or secondary certification and are working toward their endorsement in special education. In either case, they often have had little or no training in special education.

Unmanageably large case loads are one of the most often cited reasons for teachers leaving special education. Although the student to teacher ratio has dropped to 15:1 nationally, it remains at 16:1 in Maine. Schools with large special education

caseloads are trying to hire additional special educators, but are unable to do so. Instead, they are attempting to meet their personnel needs by hiring educational technicians to assist certified special education teachers. Although this makes it possible to increase class size, children are not being served by fully trained special educators. The 1989-90 State Data Summary Report indicates that the number of educational technicians needing additional training in order to be minimally qualified rose from 18 in 1986-87 to 35 in 1987-88, and to 64 in fall, 1990.

Economic, geographic and climatic factors also contribute to the shortage of special educators in Maine's LEAs. In documenting the need for an Interactive Television System, Connick and MacBrayne (1988) indicated that real earned income of Maine workers places them 49th in the Nation. Maine ranks last in adults participating in higher education and 48th in high school students seeking postsecondary education. Two-thirds of the population live beyond a reasonable commuting distance of one of the State's seven university campuses (three of those campuses are in towns with populations under 5,000 and only one is in a non-rural county). Many of the people who would traditionally choose careers in education and have the knowledge and skills necessary to live and teach in rural Maine are blocked from such careers by poverty. Others are working or unable to leave their home, families, and communities in order to attend college. Since the only in-state baccalaureate degree program in special education is located at UMF in the Western mountains region of the State, distance further limits access for many potential candidates.

In summary, the need for more special educator with baccalaureate level

training is critical in Maine. Equally critical is the need to train teachers who already have positions in special education but hold conditional or transitional certificates. In addition, training is needed for educational technicians, many of whom could go on to complete baccalaureate degrees. Considering the national shortage of special education teachers, especially teachers prepared to live and work in rural areas, Maine cannot look to other states for candidates to fill vacant positions.

Marrs (1984) found that prospective rural special educators generally fall into three categories:

1. individuals who have grown up in rural communities and are interested in working in special education.
2. individuals who are place-bound in rural areas and are forced into teaching special education by circumstances.
3. individuals who accept positions in rural areas knowing nothing about ruralness.

High attrition rates in the special education staff inhibit the development of stable connections among school staff members and between staff members and parents. The high turnover rate within a program is seen by personnel directors as disruptive to special education programs continuity and planning (Theobald, 1991). Helge and Marrs (1982) found that special educators who have grown up in rural communities, representing group one above, are most likely to remain in rural districts. The researchers argue that this category of special educators have goals, mores, expectations, and lifestyles similar to the families they serve. Theobald (1991) concludes that hiring regular education teachers already in the community as well as

encouraging classified staff members who are already serving handicapped children to become certified in the field is an extremely successful recruitment and retention tool.

The strategy of requiring students to leave their homes, families, and communities to attend college in a four year program in special education, obtain training, then relocate in rural districts, appears ineffective in supplying sufficient trained educators to meet the special education needs of these communities. All over the country educational administrators from elementary to post-secondary levels are being faced with the demands of providing educational equity to students regardless of the students' location. Administrators in increasing numbers are seeking new ways to effectively deliver classes to students and distance learning has become an effective solution (Johnstone, 1991).

### **Conclusion**

Being established in the community and feeling a connection provides a sense of continuity and strength to the school setting. This is true of all educators but often is more important in Special Education, where teachers are dealing with situations that extend beyond the school and impact the life of the student both in and out of school. Our traditional model for educating and upgrading teaching skills, works in direct opposition to the connection with community. We demand that individuals who wish to broaden their skills must leave their community, move to another community, and receive their training and apply what is learned elsewhere. The goal of the project Preparing Rural Special Educators Using Distance Learning Technology is to enhance the educational opportunities for both teachers and students by offering course work,

and a degree program, in an outreach format. Rather than leaving the community, the project forges even tighter bonds between teachers and local schools through applied educational opportunities.

### **Project Design**

The project design is based upon four major goals:

1. Market the UMF program for preparation of personnel for rural special education.
2. Increase the number of fully certified rural special educators.
3. Adapt and develop instructional materials for use in delivering special education courses through interactive television.
4. Disseminate instructional materials and information on effective distance learning for training personnel in rural special education.

The goal of the Rural Special Educator Project (RSEP) is to make special education training at the baccalaureate degree level available and accessible to persons who are currently indigenous to and/or employed in rural Maine. Aside from the primary goal of increasing the number of fully qualified special education teachers; the project will develop materials specifically designed for use in distance learning and pilot a model for making quality practical experiences available in remote settings. Course work offered within the project is based on the curriculum of the Special Education Degree at the University of Maine at Farmington. The sequence of courses to be offered is designed to meet the standards for certification within the state of Maine. Students who currently hold a baccalaureate degree in any field can seek transcript analysis from the State Division of Certification and then take courses that

are offered under the aures of the Rural Special Educator Project. Since the primary target population for these courses are transitionally and conditionally certified teachers, teachers who are currently working in classrooms across the state, classes will require practical classroom application of theories discussed. Most courses will be offered over the Interactive Television System (The Education Network of Maine) which is a two-way audio, one-way video system that broadcasts to approximately ninety sites throughout the state. Students attend classes, much in the same way they would on a campus, and participate in lectures, discussions and activities both within their sites and using a telephone conference system.

Courses are offered during times that best suit working professionals in education: after school and in the evening hours. The grant also permits the exploration of other learning structures including prerecorded video classes with follow-up discussions, on-campus intensive workshops, audio instruction and computer-based instruction. As the project progresses we hope to identify the best delivery method for each course required for certification.

The second target population for the grant is individuals who are educational technicians working in the schools and would like to upgrade their skills and obtain their baccalaureate degree. The grant was written to accommodate thirty-five students and allow them the time to complete their degree requirements. These students will take the same courses as those that are offered conditionally and transitionally certified teachers, and will be expected to apply theories within their school setting. In order to successfully do this, however, it was necessary for these individuals to have the support of the schools in which they work. Therefore, application to the Rural

Special Educator Project was based upon both the desire of the individual to complete this program and the willingness of the school to be supportive of their application. In addition to the completion of the courses required for certification, students who entered the baccalaureate degree program were required to fulfill general education requirements and a concentration in one of several fields. Students are supported in their efforts by the project staff, a faculty advisor and a teacher/mentor from their local school. Since the project is a four-year "experiment" it will be essential that all students make continued progress in their program if they hope to complete the degree in a timely fashion.

The identification of a teacher/mentor in the school is a key component to the success of the project. Individuals who were interested in this role were offered the opportunity to participate in a training program. This program provided them with the tools for supervision of the practica as well as updated them on current issues in Special Education. By acting as a teacher/mentor, it is hoped that these individuals will add to their own knowledge base, can earn necessary recertification credits, and assist in training new personnel in Special Education.

Evaluation Strategies: The project evaluation will consist of both formative and summative components which will examine how the project was implemented, what changes occurred as a result, and whether the project was considered successful by primary stakeholders. Instruments have been developed to evaluate:

- A. students' progress through and attitudes about:
  - 1. the material/training they are receiving
  - 2. the mode by which they are receiving this material/training, i.e. distance

learning through interactive television.

B. faculty perspective on:

1. the perceived success of the students in the course
2. the ability to provide specific special education knowledge/training through  
ITV.

C. the effectiveness of training mentors to work in the field  
with project participants.

A. Student Evaluations

Evaluation of Courses: At the end of each course offered by the RSEP, an evaluation form is filled out by each student. The evaluation form incorporates questions from two previously existing evaluation forms. The first is the form used by the Community College of Maine Instructional Television System (Johnson, 1990). The purpose of this form is to evaluate the student reaction to interactive television. Some examples of these questions are (see Appendix A):

1. (I-D) I learned as much from this course as I would have if it was a traditional live class.
2. (I-H) The video image came through clearly.
3. (I-K) There was sufficient instructor-student interaction.

The second evaluation form is the one adopted by the Special Education Department at the University of Maine at Farmington for the evaluation of all their courses. Using these questions would permit comparisons between previous and concurrent non-interactive television courses with those same courses taught as part of the project. Some examples of these questions are (see Appendix A):

1. (IIIA-1) The instructor clearly specified course outcomes.
2. (IIIC-8) The instructor provided examples to help learners incorporate prior knowledge and experience into present learning.
3. (IIIC-16) Tests and other assignments reflected the course objectives.

The student evaluation form primarily employed Likert-style questions. The last three questions, however, were qualitative, in nature, using an open-ended format to solicit the students' comments and suggestions on improving the course and their own performance.

Evaluation of Student Progress: Student Profile: The project requires the monitoring of two student populations. The first is those who have specifically signed up to be in the project. Demographic information has already been collected on these students and they are being monitored in the RSEP courses. The second group of students are those who are taking the opportunity offered by the project to obtain courses rarely, if ever, offered at a distance, which will finish their certification requirements. This transient population, transient in that they drift in and out of project courses, are an important component of the project. For this reason, at the end of each course, a student profile is completed. This enables the identification of students who are close to completing certification requirements and thus, benefiting from the project resources.

Student Grades: The grades of students in the project are being kept as well as non-project participants of project classes in order to ascertain the relative performance as measured by grades of RSEP participants.

Program Participant Questionnaires: This questionnaire was developed as a formative

evaluation tool in order to see if the project is presently meeting the goal of providing the opportunity for people already living in rural communities and working in the special education field to achieve certification (See Appendix B). In an open-ended format, the questionnaire seeks information concerning 1) what opportunities the program has provided 2) barriers to completing certification 3) points of support 4) desired knowledge 5) effectiveness of the program. This information will be used to adapt the program to the needs of the participants.

#### B. Faculty Perspectives

Faculty Questionnaire: Modeled after the student questionnaire, input was sought from the instructors of the courses concerning their opinions on whether 1) the student performance in this class was comparable to other classes they had taught, 2) the material was amenable to being taught using distance technology, and 3) there were teaching strategies that proved effective or ineffective.

1. Using Likert-style questions, faculty were asked whether students were able to grasp the material presented.

Questions were asked such as:

- a. (B-1) The students in the course were of comparable ability to students I usually teach.
  - b. (C-6) The students have achieved the skills presented in the class as well as students in previous presentations of the class.
2. Instructors were asked their opinions concerning the ITV environment. For example:
    - a. (A-6) I feel this course can be effectively delivered through ITV.

- b. (A-9) The ITV classroom interferes with the learning environment.
3. A series of open-ended questions were asked inquiring about effective teaching strategies that may be used to provide a special education course to distance learners. These included questions concerning unexpected experiences and barriers to success.

### Results

The project is finishing its first year of data collection. To date:

- (1) 35 subjects have been currently enrolled in the project.
  - (2) mentors were identified and received a 2-day training workshop. Evaluations were obtained following this training.
  - (3) Three courses have been taught and evaluations were completed.
    - a. SED 101 - Educating the Exceptional Child
    - b. SED 201 - Curriculum & Instructional Programming for Exceptional Children
    - c. SED 207 - Prevocational Instruction for Students With Disabilities.
1. The thirty-five participants of the RSEP come from fourteen of the sixteen Maine counties attending classes in 35 different sites. The majority of the participants are already in the special education field with the majority holding at least the associate degree and presently employed as educational technicians. The project was not able to enroll any minority candidates, although more than 90% of enrollees are women.
  2. In July 1993, a two-day workshop was held for Mentor/Supervisor teachers participating in the Rural Special Educator Project. Eleven Mentor trainees attended the conference. The purpose of the workshop was two-fold; first, to familiarize the mentors with the Project and its goals and second, to provide information and training

on the role of the mentor in supervising teacher trainees. Table 1 is a summary of the responses of the participants of the workshop on the quality and usefulness of the workshop in meeting their needs. It contains the frequency of responses and the mean score for each objective-style question asked on the questionnaire where (1) represents a low score and (5) represents a high score. The mentors were most positive about the quality of the learning environment (instructor was supportive,  $M=4.9$ ; enthusiastic,  $M=4.9$ ; and accessible,  $M=4.9$ ). The respondents also were positive about the ability of the workshop to clarify the mentor role ( $M=4.3$ ) and help them become aware of the skills necessary for their roles as mentors ( $M=4.6$ ).

In addition to the Likert-style objective questions, the mentor trainees were asked four open-ended questions concerning the organization of the course, improvements that could be made, the skills they had developed, and the training/information they would still like to receive.

**1. What comments/suggestions can you make regarding organization of the course?**

The comments fell into four categories in response to this question. Twenty-seven percent of the trainees would like to see follow-ups built in the course. Suggestions were for "...summary sheets", and "...2-3 meetings per year". Twenty-seven percent of the mentors expressed positive comments both about the materials and the activities. Concerning activities, they felt they "...got people involved", and facilitated "...pulling together/sharing". The materials were "...useful resource" and "...nicely compacted". Thirty-six percent of the respondents expressed general positive comments. The course was "...well done", "thought provoking", and

"rewarding".

## **2. How might the instructor improve the course?**

To improve the course, the mentor trainees suggested concurrent instruction (27%) with mentees, more time together (27%), and additional readings (18%). Another 27% gave positive comments and believed there was no need for improvement.

## **3. Please briefly describe the skills necessary to be a successful mentor/supervisor.**

The mentors' responses fell into six categories.

a. interpersonal skills (55%): in this category were responses such as "good communication skills", "Listening (skills)", "(use of) praise", and "patience".

b. specific techniques (55%): "(ability to) collect objective information" and "...observational strategies" were two of the specific techniques mentioned by mentors.

c. openness (55%): mentors believed that being "open" and "flexible" were two major characteristics of an effective mentor. Included in this was "honest dialogue" and developing a "trusting relationships".

d. collaboration (36%)

e. overall picture (36%): mentors believed the ability to maintain a perspective and see the overall picture was important. Mentors should "understand competencies", "(good) knowledge of courses", and "(be familiar with) "...educational strategies".

f. general skills (73%): a long list of skills were provided by many respondents, including "knowledge", "support", "confidence", and "Objectivity".

## **4. What information/training would you still like?**

a. follow-ups (64%): the majority of participants were interested in follow-up

workshops to help them in their mentor role. They requested follow-ups on "specific topics" and mini-workshops for trouble shooting".

b. support (27%): these respondents would like to see "peer support" and a "place to call to express concerns (and) to celebrate achievements".

c. specifics (18%): these mentors wanted more project specific information such as "criteria for advancement" and "time frame" for the project.

d. no needs (27%): these participants expressed feelings of being "confident (they were) ready to begin" or that it was too soon to really know at this point.

3. A questionnaire was given to all participants of RSEP courses at the end of the course requesting the students to evaluate different aspects of the course: the interactive television system, Personal Approach, Course Organization and Planning, Learning Environment, Instructional Activities, Tests and Assignments, and Student Effort (see appendix A). Information related to subjects in the three courses, SED 101, SED 207, and SED 201 appear in Tables 2 and 3. Table 3 provides descriptive information concerning the students enrolled in the course. Table 2 contains summative measures from the student evaluation weighted by the number of questions used to generate the global variable. The questions which were used to create the variable are identified on the table. The scale was from 1 (strongly disagree) to 5 (strongly agree). In general, the students provided positive opinions concerning ITV. (SED 201, M=3.9; SED 207, M=4.1, SED 101, M=4.1). They rated their own support, motivation, and effort high as recorded by the Personal Approach variable (SED 201, M=4.2; SED 207, M=4.3; and SED 101, M=3.7), and the Student Effort Variable (SED 201, M=4.1; SED 207, M=4.1; and SED 101; M=4.2).

They were less positive about course planning (SED 201; M=3.6; SED 207, M=3.4; SED 101, M=3.8), the learning environment (SED 201, M=3.4; SED 207, M=3.6; and SED 101, M=3.5), and the tests and assignments (SED 201, M=3.4; SED 207, M=3.6; SED 101, M=4.2) although these were still positive responses. The subjects agreed to the statement that the courses were comparable in difficulty to other courses they had taken (SED 201, M=3.4; SED 207, M=3.4; SED 101, M=3.9) and expected to receive grades in the range of B (4.0) and B+ (4.33) (SED 201, M=4.2; SED 207, M=4.4; SED 101, M=4.3).

An analysis was done comparing the responses of RSEP enrollees and others attending the RSEP provided courses. T-tests were done for each summative variable. No significant differences were found for any variable at the .05 level of confidence.

Finally, an analysis was done on the grades received by RSEP enrollees (see Table 4). On the average, enrollees' grades in all three courses were slightly, but not significantly, higher than non-enrollees. Seventy-seven percent, eighty-nine percent, and one-hundred percent of the RSEP participants received grades of B or better in SED201, SED101, and SED207, respectively.

### **Discussion**

As the Rural Special Educator Project completes its second year of funding, it is a crucial time to re-consider the match between the evaluation strategies employed and the goals of the project. The primary goal of the project is to address the problem of shortages of qualified special education teachers in rural districts within the state. The strategy employed is using distance technology in the form of interactive television to train to certification those already working in those districts

within the field of special education but without adequate training. At present, the project reached its target number of enrollees. The participants come from 14 of the 16 Maine counties and the majority are presently employed in the special education field. At present, the project has not been successful in its recruitment strategies concerning minorities. However, women are well represented in the sample. Training has already been provided to mentors who are working directly with these RSEP participants and evaluations have been collected concerning the quality of training. Although there was some apprehension expressed by mentors in facing a brand new role, they reported that the training had helped clarify their function. The purpose of the mentor workshop was to provide a quality training program that would both familiarize mentor trainees with the Rural Special Educator Project and prepare them for their roles as mentor/supervisor. From the responses of the participants of the Mentor Workshop, the two day workshop successfully accomplished both functions. Respondents overwhelmingly agreed that the course organization and planning, the learning environment, and the instructional activities were both helpful in clarifying the mentor role and provided quality training. Trainees were able to identify many of the skills necessary for their roles of mentor: interpersonal skills, collaboration, understanding of the overall picture and an open attitude toward the teacher trainees and their needs. The mentors believed that the project may be improved by providing concurrent instruction, more time for training, and some additional readings. They believed that they would still like to see some form of peer support and continuing follow-ups throughout the time they will serve their role. Three courses have already been offered through the project. The student evaluations

of these courses have been positive. Concerning the issue of distance learning, an issue critical to the success of the project, the students responded favorably. In exploring individual questions used in the creation of the global variables reported in this paper, the mean student response was greater than 4 (i.e. agree with the statement provided) for student-student interaction, clarity of the video and audio image, and the instructor-student interaction. The weighted mean of the questions, "Did the Student enjoy the course?" and "Did the student learn from the course?" was 3.56 and 3.79, respectively, demonstrating a general positive response. In evaluating the individual courses, the means were significantly higher than the middle value of the scale (i.e. 3;) for all three courses.

The only mean response for any of the courses below 3.0 was for the question, "Corrected tests and assignments were returned promptly?" with a mean score of 2.7 received by only one of the courses. Johnson (1991) found variation across courses in the responses to this question in her evaluation of 31 different courses containing more than 2500 students. She concluded that this was not necessarily indicative of the system, but was course specific. To support this, the mean score for the other two courses were 4.5 and 3.5.

The students showed a positive response toward questions addressing the issues of planning, the learning environment, tests, and assignments and believed the majority agreed with the statement that this course was of comparable difficulty to others they had taken. They expressed the opinion that they were working hard, i.e. making an effort to succeed, were supported in this effort, and expected good grades as a result. This was further supported by the actual grades received by the RSEP

participants with more than 77% of the students receiving a grade of B or better and no one receiving a grade lower than C+. More specifics about their experiences will be obtained from the qualitative responses which have yet to be analyzed.

Identifying undertrained, rural special educators, adequately training mentors, and providing quality special education courses, three necessary components to the success of the project, have, in the initial phase of the RSEP, been successful. These efforts will continue throughout the project. To address the goal of the project aimed at identifying specific strategies and techniques by which quality education can be delivered, data have been collected from the faculty teaching the courses but have not been analyzed to date. This Spring, 1994, four more courses are being offered which will increase the number of faculty responses. This information, it is hoped, will prove useful to other educators attempting to address the needs of rural communities to supply their special education students the quality of instruction they need and deserve.

Table 1

Summary of Quantitative Mentor Responses to the Training Workshop

Questions	Strongly Disagree ----->			Strongly Agree		Mean
	1	2	3	4	5	
<b>I. COURSE ORGANIZATION</b>						
A. OUTCOMES CLEARLY SPECIFIED						474.6
B. CLASS TIME USED EFFECT.				2	9	4.8
<b>II. LEARNING ENVIRONMENT</b>						
A. INSTRUCTOR WAS SUPPORTIVE					1	104.9
B. INSTRUCTOR WAS ENTHUSIASTIC				1	10	4.9
C. INSTRUCTOR WAS ACCESSIBLE					1	104.9
<b>III. INSTRUCTIONAL ACTIVITIES</b>						
A. INSTRUCTOR PROVIDED EXAMPLES				2	9	4.8
B. ACTIVITIES ENCOURAGED EVALUATION OF PERSONAL NEEDS AND VALUES				3	8	4.7
C. ACTIVITIES HELPED CLARIFY CONTENT				2	9	4.8
<b>IV. AS A LEARNER</b>						
A. I WOULD TAKE ANOTHER CLASS WITH THIS INSTRUCTOR				1		104.8
B. IT HELPED RELATE NEW INFORMATION TO YOUR LIFE				4	5	4.7
C. IT CLARIFIED THE MENTOR ROLE			1	5	5	4.3
D. MORE AWARE OF MENTOR SKILLS				4	7	4.6

TABLE 2

Summative Measures from the Student Evaluations of SED201, SED207, and SED101

Course	SED201		SED207		SED101	
	mean	s.d.	mean	s.d.	mean	s.d.
1. Positive Responses to ITV Issues (SUM OF QUESTIONS IA TO IK)/11)	3.9	.77	4.1	.74	4.1.73	
2. Personal Approach (Support and Motivation) (II1 + II2 + II3)/3	4.2	.96	4.3	.87	3.7.57	
3. Organization and Planning (SUM OF IIIA1 to IIIA4)/4	3.6	1.03	3.4	.92	3.8.66	
4. Quality of the Learning Environment (Sum of IIIB5 to IIIB7 + Sum of IIIC8 to IIIC12)/8	3.4	.82	3.6	.80	3.5.67	
Course	SED201		SED207		SED101	
	mean	s.d.	mean	s.d.	mean	
s.d5. Tests & Assignments (Sum of IIID13 to IIID17)/5	3.4	.93	3.6	.78	4.2.61	
6. Effort Made by the	4.1	.62	4.1	.70	4.2.62	

Students (Sum of IIF19 to IIF23)/5					
7. Comparable Difficulty to other courses (IIF24)	3.4	.95	3.4	1.05	3.9.95
8. Expected Grade (IIF25)	4.2	.64	4.4	.59	4.3.73
			(B = 4)		

Table 3

Descriptive Information of Course Participants

A. Information	SED201	SED207	SED101
1. Completed Quest.	58	59	53
2. Males	8	3	12
Females	50	56	41
3. Minority	5 other	1 N.A.	0
4. Disabilities	6	3	NA
5. RSEP enrollees	14	21	11
6. Seeking Special Ed. Credential	50	44	NA
7. In degree program	32	32	NA
8. Using transcript analysis	17	10	NA
B. Courses Needed to Complete Certification			
No more courses	0	1	
1 more course	1	0	
2 more courses	0	2	
3 more courses	2	3	
4-6 more courses	15	9	
7-9 more courses	12	2	

Table 4

Reported Grades from the RSEP Courses

Course	Mean for N All stud.	Mean for N	Mean for Non-Part.	N	N
Enrollees					
SED 201	3.18	48	3.15	35	3.2613
SED 101	3.38	44	3.34	35	3.569
SED 207	3.45	50	3.42	33	3.5117
	Range	% with B or better			
SED 201	2.33 to 4.00	77%			
SED 101	2.67 to 4.00	89%			
SED 207	3.00 to 4.00	100%			

## References

- Connick, G.P. & MacBrayne, P. (1988) Educational access and telecommunication in Maine. Unpublished manuscript. University of Maine at Augusta.
- Helge, D.I.(1984a). The state of the art of rural special education. Exceptional Children, 50, 294-305.
- Helge, D.I.(1984b). Technologies as rural special education problem solvers. Exceptional Children,50,351-359.
- Helge, D.I. & Marrs, L.W.(1982). Personnel recruitment and retention in Rural America: A growing problem. The Pointer,26(2),28-33.
- Johnson, J.L.(1990). Evaluation report of Community college of Maine Instructional Television System. University of Southern Maine: Testing and Assessment Center.
- Johnstone, S.M.(1991). Research on telecommunicated learning: Past, present, and future. ANNALS of the American Academy, AAPSS,514,49-57.
- Keirstead, J.T. & Gray-Hanc, D.M. (1989). State data summary report, special education data as reported in 1987-88 for the P.L. 94-142 and P.L. 89-313 programs. Augusta, Maine: Maine Department of Educational and Cultural Services.
- Keirstead, J.T. & Gray-Hanc, D.M. (1991). State data summary report, special education data as reported in 1989-90 for the P.L. 94-142 and P.L. 89-313 programs. Augusta, Maine: Maine Department of Educational and Cultural Services.
- Marrs, L.W. (1988). Interactive technologies and the transformation of the curriculum. ERIC:ED 320 534. Paper presented at the Alliance Conference on External Degree Programs.
- Marrs, L.W. (1984). A bandwagon without music: Preparing rural special educators.

Exceptional Children,50,334-342.

Theobald, N. (1991). A persistent challenge: Staffing special education programs in rural schools. Journal of Research in Rural Education,7(3),39-50.

Appendix A

Student Profile

1. COURSE: \_\_\_\_\_ INSTRUCTOR: \_\_\_\_\_
2. NAME: \_\_\_\_\_
3. SOCIAL SECURITY NUMBER \_\_\_\_\_
4. SEX:            M     F
5. MINORITY STATUS (OPTIONAL):  
(PLEASE CHECK ONE)  
      \_\_\_ WHITE(CAUCASIAN)  
      \_\_\_ BLACK  
      \_\_\_ HISPANIC  
      \_\_\_ NATIVE AMERICAN INDIAN  
      \_\_\_ OTHER
6. DO YOU HAVE A DISABILITY?     \_\_\_ YES    \_\_\_ NO
7. GEOGRAPHIC LOCATION \_\_\_\_\_
8. OCCUPATION: \_\_\_\_\_
9. WHAT IS THE HIGHEST LEVEL OF EDUCATION YOU HAVE COMPLETED?  
      \_\_\_ SOME HIGH SCHOOL            \_\_\_ ASSOCIATE DEGREE  
      \_\_\_ HIGH SCHOOL DIPLOMA        \_\_\_ BACHELOR'S DEGREE  
      \_\_\_ GED                            \_\_\_ SOME GRADUATE WORK  
      \_\_\_ SOME COLLEGE                \_\_\_ MASTER'S DEGREE  
   \_\_\_ OTHER
10. ARE YOU CURRENTLY ENROLLED IN THE RURAL SPECIAL ED PROJECT?  
      \_\_\_ YES                            \_\_\_ NO

11. ARE YOU ACTIVELY PURSUING SPECIAL EDUCATION CERTIFICATION?

YES  NO

12. IF YOU ARE PURSUING SPECIAL EDUCATION CERTIFICATION, ARE YOU CURRENTLY ENROLLED IN A DEGREE PROGRAM?

YES SCHOOL CURRENTLY ENROLLED IN: \_\_\_\_\_

NO I AM DOING THIS INDEPENDENTLY THROUGH TRANSCRIPT

ANALYSIS.

NO EXPLAIN: \_\_\_\_\_

13. IF YOU ARE PURSUING SPECIAL EDUCATION CERTIFICATION, BESIDES STUDENT TEACHING, APPROXIMATELY HOW MANY COURSES DO YOU NEED TO COMPLETE YOUR CERTIFICATION REQUIREMENTS?

NO MORE COURSES. THIS COURSE WILL COMPLETE MY COURSE REQUIREMENTS.

1 MORE COURSE

2 MORE COURSES

3 MORE COURSES

4 TO 6 MORE COURSES

7 TO 9 MORE COURSES

MORE THAN 9 COURSES

Appendix A

Student Course Evaluations

COURSE BEING EVALUATED: \_\_\_\_\_ INSTRUCTOR: \_\_\_\_\_

SITE: \_\_\_\_\_

ENROLLMENT STATUS: (check one)

A. PART OF THE RURAL SPECIAL ED PROJECT? \_\_\_\_\_

B. INDEPENDENTLY SEEKING CREDITS TO A DEGREE? \_\_\_\_\_

HAVE YOU EVER TAKEN AN ITV COURSE BEFORE? YES NO

HOW FAR DID YOU HAVE TO COMMUTE ONE WAY TO GET THIS  
CLASS? \_\_\_\_\_ MILES

HOW FAR WOULD YOU HAVE TO COMMUTE ONE WAY TO GET TO A  
UNIVERSITY CAMPUS? \_\_\_\_\_ MILES

**YOUR RESPONSES WILL ASSIST THE INSTRUCTOR IN EVALUATING AND  
IMPROVING THE COURSE. THE SUMMARIES OF EVALUATIONS, AS WELL AS  
THE EVALUATIONS THEMSELVES, WILL BE GIVEN TO THE INSTRUCTOR  
ONLY AFTER GRADES HAVE BEEN SUBMITTED.**

**I. THE FOLLOWING QUESTIONS REFER TO ISSUES RELATED TO THE  
INTERACTIVE TELEVISION SYSTEM**

PLEASE INDICATE YOUR LEVEL OF AGREEMENT WITH THE FOLLOWING  
STATEMENTS BY CIRCLING THE APPROPRIATE NUMBER.

**1 = STRONGLY DISAGREE      2 = DISAGREE**

**3 = NEITHER DISAGREE/NOR AGREE**

**4 = AGREE                      5 = STRONGLY AGREE**

A. I WAS SATISFIED WITH THE AMOUNT OF STUDENT-  
STUDENT INTERACTION.                      1      2      3      4      5

- B. COURSE MATERIALS AND BOOKS WERE RECEIVED  
IN A TIMELY MANNER. 1 2 3 4 5
- C. CORRECTED TESTS AND ASSIGNMENTS WERE  
RETURNED PROMPTLY. 1 2 3 4 5
- D. I RECEIVED ADEQUATE ACADEMIC  
ASSISTANCE. 1 2 3 4 5
- E. I THINK THAT ITV IS AN EFFECTIVE  
WAY TO TEACH THIS COURSE. 1 2 3 4 5
- F. I ENJOYED THIS COURSE AS MUCH  
AS I WOULD HAVE IF I HAD TAKEN  
IT AS A TRADITIONAL LIVE CLASS. 1 2 3 4 5
- G. I LEARNED AS MUCH FROM THIS  
COURSE AS I WOULD IF IT WAS A  
TRADITIONAL LIVE CLASS. 1 2 3 4 5
- H. THE VIDEO IMAGE CAME THROUGH  
CLEARLY. 1 2 3 4 5
- I. THE AUDIO CAME THROUGH  
CLEARLY AND EASY TO HEAR. 1 2 3 4 5
- J. THE TELEPHONE WAS ADEQUATE  
FOR ASKING QUESTIONS AND  
COMMUNICATING WITH THE  
PROFESSOR. 1 2 3 4 5
- K. THERE WAS SUFFICIENT  
INSTRUCTOR-STUDENT  
INTERACTION. 1 2 3 4 5

**II. PERSONAL APPROACH QUESTIONS**

1. HOW MOTIVATED WERE YOU TO DO WELL IN THIS COURSE?
- |  |               |   |   |   |                |
|--|---------------|---|---|---|----------------|
|  | NOT MOTIVATED |   |   |   | VERY MOTIVATED |
|  | 1             | 2 | 3 | 4 | 5              |
2. HOW SUPPORTIVE WAS YOUR FAMILY/FRIENDS FOR THIS COURSE?
- |  |   |   |   |   |   |
|--|---|---|---|---|---|
|  |   |   |   |   |   |
|  | 1 | 2 | 3 | 4 | 5 |
3. HOW SUPPORTIVE WAS YOUR EMPLOYER FOR THIS COURSE?
- |  |   |   |   |   |   |
|--|---|---|---|---|---|
|  |   |   |   |   |   |
|  | 1 | 2 | 3 | 4 | 5 |

**III. THIS SECTION IS CONCERNED WITH YOUR OPINIONS CONCERNING THE QUALITY OF INSTRUCTION.**

- 1 = STRONGLY DISAGREE                      2 = DISAGREE
- 3 = NEITHER DISAGREE/NOR AGREE
- 4 = AGREE                                      5 = STRONGLY AGREE

**A. COURSE ORGANIZATION AND PLANNING:**

1. THE INSTRUCTOR CLEARLY SPECIFIED COURSE OUTCOMES.
- |  |   |   |   |   |   |
|--|---|---|---|---|---|
|  | 1 | 2 | 3 | 4 | 5 |
|--|---|---|---|---|---|
2. CLASS SESSIONS WERE USED EFFECTIVELY TO ACHIEVE COURSE OUTCOMES.
- |  |   |   |   |   |   |
|--|---|---|---|---|---|
|  | 1 | 2 | 3 | 4 | 5 |
|--|---|---|---|---|---|
3. THE INSTRUCTOR CLEARLY SPECIFIED ASSIGNMENTS.
- |  |   |   |   |   |   |
|--|---|---|---|---|---|
|  | 1 | 2 | 3 | 4 | 5 |
|--|---|---|---|---|---|
4. THE INSTRUCTOR CLEARLY SPECIFIED EVALUATION PROCEDURES.
- |  |   |   |   |   |   |
|--|---|---|---|---|---|
|  | 1 | 2 | 3 | 4 | 5 |
|--|---|---|---|---|---|

**B. LEARNING ENVIRONMENT:**

5. THE INSTRUCTOR PROVIDED A

SUPPORTIVE LEARNING

- |                                     |   |   |   |   |   |   |
|-------------------------------------|---|---|---|---|---|---|
|                                     | ENVIRONMENT.  | 1 | 2 | 3 | 4 | 5 |
| 6.                                  | THE INSTRUCTOR CONVEYED ENTHUSIASM FOR LEARNING/CONTENT.  | 1 | 2 | 3 | 4 | 5 |
| 7.                                  | THE INSTRUCTOR WAS AVAILABLE FOR HELP/CONSULTATION.   | 1 | 2 | 3 | 4 | 5 |
| <b>C. INSTRUCTIONAL ACTIVITIES.</b> |   |   |   |   |   |   |
| 8.                                  | THE INSTRUCTOR PROVIDED EXAMPLES TO HELP LEARNERS INCORPORATE PRIOR KNOWLEDGE AND EXPERIENCE INTO PRESENT LEARNING.                         | 1 | 2 | 3 | 4 | 5 |
| 9.                                  | LEARNING ACTIVITIES ENCOURAGED YOU TO EXAMINE PERSONAL NEEDS AND VALUES AND TO PURSUE PERSONAL LEARNING OUTCOMES APPROPRIATE TO THE COURSE. | 1 | 2 | 3 | 4 | 5 |
| 10.                                 | THE CLASSROOM ACTIVITIES/ASSIGNMENTS CONTRIBUTED TO HELPING YOU UNDERSTAND THE COURSE CONTENT.  | 1 | 2 | 3 | 4 | 5 |
| 11.                                 | REQUIRED COURSE READINGS CONTRIBUTED TO HELPING YOU UNDERSTAND THE COURSE CONTENT.  | 1 | 2 | 3 | 4 | 5 |
| 12.                                 | THE INSTRUCTOR SUGGESTED  |   |   |   |   |   |

WAYS TO IMPROVE PERFORMANCE

ON ASSIGNMENTS. 1 2 3 4 5

**D. TESTS AND ASSIGNMENTS:**

13. LEARNING ACTIVITIES INCLUDED  
ASSIGNMENTS THAT WERE APPROPRIATE  
IN TERMS OF WORKLOAD. 1 2 3 4 5

14. LEARNING ACTIVITIES INCLUDED  
ASSIGNMENTS THAT WERE APPRO-  
PRIATE IN TERMS OF LEVEL OF  
DIFFICULTY. 1 2 3 4 5

15. THE TESTS AND OTHER ASSIGNMENTS  
USED AS FORMS OF EVALUATION  
WERE ADEQUATE TO HELP YOU  
MEASURE YOUR PROGRESS. 1 2 3 4 5

16. TESTS AND OTHER ASSIGNMENTS  
REFLECTED THE COURSE  
OBJECTIVES. 1 2 3 4 5

17. TESTS AND ASSIGNMENTS WERE  
REVIEWED IN A TIMELY FASHION  
TO HELP MEASURE YOUR  
PROGRESS. 1 2 3 4 5

**E. OVERALL:**

18. AS A LEARNER, I WOULD TAKE  
ANOTHER CLASS FROM THIS  
FACULTY MEMBER. 1 2 3 4 5

**F. AS A LEARNER:**

19. I GAVE ADEQUATE TIME/ATTENTION  
TO ACTIVITIES OF THIS COURSE.    1       2       3       4       5
20. I WAS WILLING TO BE AN  
INDEPENDENT LEARNER,  
ASKING QUESTIONS, CREATING  
LEARNING ACTIVITIES FOR MYSELF,  
EVALUATING MY OWN WORK.       1       2       3       4       5
21. I WORKED TO ACHIEVE THE  
COURSE OUTCOMES.                    1       2       3       4       5
22. I RELATED NEW LEARNING  
TO LIFE/WORK EXPERIENCES.       1       2       3       4       5
23. I TOOK IT UPON MYSELF TO  
COMMUNICATE TO THE FACULTY  
MEMBER MY CONCERNS AND  
DIFFICULTIES AS WELL AS MY  
DISCOVERIES AND INSIGHTS.       1       2       3       4       5
24. THE DIFFICULTY LEVEL OF THIS  
COURSE WAS SIMILAR TO MOST  
OTHER COURSES I HAVE TAKEN.    1       2       3       4       5
25. THE GRADE I EXPECT TO RECEIVE  
IN THIS COURSE IS:  
1=F    2=D    3=C    4=B    5=A    1       2       3       4       5

**G. COMMENTS:**

1. WHAT COMMENTS/SUGGESTIONS CAN YOU MAKE REGARDING

ORGANIZATION OF THE COURSE, THE CLASSROOM ACTIVITIES, THE  
COURSE ASSIGNMENTS, AND THE READINGS?

2. HOW MIGHT THE INSTRUCTOR IMPROVE THE COURSE?
3. HOW MIGHT YOU HAVE IMPROVED YOUR PERFORMANCE?

**SIGNED(optional)** \_\_\_\_\_

Appendix B

Program Questionnaire

The Rural Special Educator Project was undertaken to provide an opportunity to achieve certification for people presently working in rural communities in the special education field. In order to assess whether the program is accomplishing this goal, it would be helpful to the project if you could answer the following questions.

1. Explain what opportunities, if any, this program has provided you in order to achieve your career goals.
2. Overall, do you feel that completing your certification requirements will be easy or difficult? (Explain)
3. At this point, what do you perceive as potential barriers to your success?
4. How supportive are the following of your goal achievement?
  - A. Your family
  - B. Your school/place of employment
5. What kind of support are you hoping the project will be able to provide you to ensure your successful completion of your certification requirements?
6. What kind of knowledge/skills do you hope to obtain to make you more effective dealing with the problems you will face in your role as a special education teacher?
7. To this point, in what ways has this project succeeded in or failed to meet your present needs in order for you to successfully complete your certification requirements? (e.g. in the areas of courses, paper work, financial assistance, phone communication, academic advising, etc.)