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ABSTRACT

The 1983 study surveyed the largest number of rural LEAs/cooperatives to date plus a number of Bureau of Indian Affairs schools and examined previously unaddressed areas such as rural special education technology. Special education administrators from 200 rural school systems in all 50 states (4 from each state) were involved in this survey designed to provide a state-of-the-art synopsis of facets of rural special education service delivery. Respondents were representative of various economies, population densities, and types of organizational structures. Topics covered include: service delivery problems and effective strategies; personnel needs; certification problems; strengths and weaknesses of rural special educator personnel preparation programs; and emerging technologies related to programs for rural handicapped students. In addition to addressing technologies in rural special education, the findings update a number of studies funded by the U.S. Office of Special Education Programs and data-gathering by the American Council on Rural Special Education. Incorporated into the text are 45 tables. Appended are a list of states in each federal region, the Rural Special Education Administrator Telephone Survey Form, and the instrument for discrepancy evaluation of National Rural Project research-based rural preservice competencies. (AH)

IMAGES:

Issues and Trends in Rural Special Education

January, 1983

National Rural Research and Personnel Preparation Project
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IMAGES: ISSUES AND TRENDS IN RURAL SPECIAL EDUCATION - January 1983

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ABSTRACT

A total of 200 special education administrators from 200 rural school systems in all 50 states (4 from each state) were involved in this survey designed to provide a state-of-the-art synopsis of facets of rural special education service delivery. Respondents were representative of various rural economies, population densities, and types of organizational structures. The study covered topics including service delivery problems and effective strategies, personnel needs, certification problems, strengths and weaknesses of rural special educator personnel preparation programs, and emerging technologies related to programs for rural handicapped students.

The findings of a number of studies funded by the U.S. Office of Special Education Programs (SEP) and data-gathering by the American Council on Rural Special Education (ACRES) were updated. New areas of inquiry were also addressed such as the use of various technologies in rural special education.

The study surveyed the largest number of rural LEAs/cooperatives to date plus a number of Bureau of Indian Affairs (BIA) schools and examined previously unaddressed areas such as rural special education technology.

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I. INTRODUCTION

In January, 1983, a study was conducted to gather original data and to update the 1978-82 studies of the National Rural Research and Personnel Preparation Project (NRP) regarding the following areas impacting services delivered to rural handicapped students. This document reports results of the study and offers a brief state-of-the-art synopsis regarding the following topics.

Primary problems of rural service delivery
Rural special education personnel needs
Difficulties with certification requirements for rural special educators
Strengths and inadequacies of rural special educator preservice training
Uses of volunteers in providing services to rural handicapped students
Personnel recruitment and retention problems and effective strategies
Innovative resources used for service delivery/fund raising
Parent involvement strategies
Strategies for serving culturally different students in rural America
The status of emerging technologies in rural areas
Availability of technologies to rural handicapped students
Rural service provider perceptions of future service delivery problems
Recommendations for policy related to rural special education.

A total of 200 rural special education school districts/cooperatives were involved in the survey. This is a greater number than in any rural special education-focused study to date.

II. METHODOLOGY

A. Respondents and Data Sources

Respondents included 200 special education administrators from 200 rural districts/cooperatives in all 50 states (4 from each state). Table I below lists the number of respondents from each federal region. States composing each federal region are listed in Appendix A.

TABLE I

NUMBER OF RESPONDENTS FROM EACH FEDERAL REGION
AND
NUMBER OF STATES IN EACH REGION

REGIONS	Number of Respondents From Each Federal Region	% of Total Respondents From Each Federal Region	Number of States In Each Region
I	24	12%	6
II	8	4%	2
III	20	10%	5
IV	32	16%	8
V	24	12%	6
VI	20	10%	5
VII	16	8%	4
VIII	24	12%	6
IX	16	8%	4
X	16	8%	4
Total	n = 200	100%	50

The percentage of total respondents from each region reflects the number of states in each region. Although the percentages vary from 4-16% of the total, each state and region are proportionately represented. (E.g., although New York is one of the more populated/largest states, only two states are in Region II, and only 4% of all respondents were from Region II.)

B. Sampling Methods

Respondents were identified from a random selection of rural special education administrators on the mailing lists of the National Rural Project (NRP), the American Council on Rural Special Education (ACRES), and districts that were part of the NRP site visits of 1978-81.

C. Data Gathering Processes

A 27-item questionnaire was used for conducting telephone interviews with all respondents (see Appendix B). Interview times ranged from 20 minutes to 1 hour. All respondents were assured that their individual responses would remain confidential. (Individual respondents were assigned numbers for analytical purposes.)

The following definition of rural was developed by the NRP in 1978 and has been consistently used in project studies.

> Districts are considered rural when the number of inhabitants is less than 150 per square mile or when located in counties with 60% or more of the population living in communities no larger than 5,000 inhabitants. Districts with more than 10,000 students and those within a Standard Metropolitan Statistical Area (SMSA), as determined by the U.S. Census Bureau, are not considered rural.

Respondents were asked to give their perceptions of facts related to each question. For demographic questions and those addressing numbers of peronnel needed (questions 1, 2, and 12), respondents analyzed data available in their central administrative offices or spoke from other knowledge of "hard data" such as previously generated State Education Agency (SEA) or LEA documents. (Numerous respondents requested that data be gathered via a 2-part interview in which a project staff member called a second time after an administrator conferred with his/her staff.) When answering questions 3-11, (preservice training questions), the special education administrators were specifically asked to consult with their staff before answering so that teaching and supportive staff points of view were considered.

D. Development of Data Collection Instruments

Questionnaire items were developed after discussions with personnel of the U.S. Office of Special Education Programs (SEP). Dimensions of the SEP Quality Teacher Education Initiative were carefully reviewed as questions regarding the strengths and inadequacies of personnel preparation (#3-11) were designed.

Questionnaire input was also received from members of ACRES and from an analysis of past questions asked by NRP studies to determine needs to update baseline data. (For example, it was obvious that questions regarding current problems of serving rural handicapped students and personnel needs data should be updated.)

E. Data Analysis and Reporting

Two primary types of data analysis were conducted.

(1) For open-ended responses, answers were analyzed, catalogued and tabulated. A percentage of the total n and means were computed.

(2) For items with finite response choices, the number of respondents expressing a particular answer was tabulated. Percentages of the total were computed. Responses listed as "other" were analyzed, classified and tabulated. New categories were created as necessary for data analysis. Percentages of respondents identifying initial and additional questionnaire choices were determined, and means were computed as appropriate.

When appropriate, results of the studies below were compared with those in this document. Significant results of comparisons are noted throughout the document.

1978-79 National Rural Project study of 21 state education agencies regarding problems and successes in implementing PL 94-142 in rural school systems.

1979-81 National Rural Project study of problems and successes in implementing PL 94-142 in rural school systems. Study involved 43 special education cooperatives and 32 LEAs in 21 states.

1980 National Rural Project National Comparative Study of Rural Service Delivery Systems Before and After Implementation of PL 94-142. Study involved 43 special education cooperatives and 32 LEAs in 17 states.

1981 National Rural Project Survey of National Rural Special Education Leadership Conference participants regarding primary service problems in their rural districts. Study involved 56 rural special education administrators.

1982-83 National Rural Project studies of rural-focused content in personnel preparation programs having a rural geographic service area.

1982 American Council on Rural Special Education Survey of National Rural Special Education Conference participants regarding primary service delivery problems in their districts. Study involved 60 rural special education administrators.

III. RESULTS

A. Demographics

Table I (page 2) indicates the numbers of respondents from each state and the number and percentage from each federal region.

Table II below depicts the percentage of interviewees from special education cooperatives (administrative units composed of 2 or more districts), single districts (LEAs or local education agencies), or components of the Bureau of Indian Affairs (BIA).

Table II

PERCENTAGE OF RESPONDENTS FROM COOPERATIVES,
LEAs, AND THE BIA (BY REGION)

REGIONS	Cooperatives	LEAs	BIA
I	14%	86%	0
II	67%	33%	0
III	13%	87%	0
IV	19%	81%	0
V	36%	64%	0
VI	33%	67%	0
VII	67%	33%	0
VIII	50%	28%	22%
IX	20%	70%	10%
X	12%	76%	12%
Average	32%	[illegible]2%	6%

Almost two-thirds (62%) of all respondents were from LEAs, approximately one-third (32%) were from cooperatives, and 6% were from BIA schools or reservations.

Table III below indicates the percentage of each region perceived by respondents to be more sparsely populated (remote) or densely populated (clustered). Although greater percentages of all regions were perceived by interviewees to have more densely than sparsely populated rural service areas (71% versus 29%), Regions IX and X were most frequently described as having clustered service areas.

Table III

RESPONDENTS' PERCEPTIONS OF VARIATIONS IN POPULATION DENSITY OF THEIR RURAL SERVICE REGIONS (BY REGION)

(Figures represent the percent of each region.)

REGIONS	REMOTE	CLUSTERED	TOTAL
I	14%	86%	100%
II	33%	67%	100%
III	0%	100%	100%
IV	44%	56%	100%
V	13%	87%	100%
VI	23%	77%	100%
VII	22%	78%	100%
VIII	71%	29%	100%
IX	50%	50%	100%
X	22%	78%	100%
Average	29%	71%	100%

Table IV illustrates the percentages of the U.S. described by interviewees as remote or as characterized by clustered small towns.

Table IV

RESPONDENTS' PERCEPTIONS OF POPULATION DENSITIES OF THEIR SERVICE REGIONS

(Figures represent the percent of the total.)

REGIONS	Remote Area	Clustered Small Communities
I	3.0%	4.0%
II	2.5%	2.5%
III	0%	7.0%
IV	7.0%	9.0%
V	2.0%	13.0%
VI	3.0%	6.0%
VII	2.0%	6.0%
VIII	10.0%	4.0%
IX	5.0%	5.0%
X	2.0%	7.[illegible]%
Total	36.5%	63.5%

Table V below describes the primary economies of rural service regions as described by the 200 respondents.

Table V

PRIMARY ECONOMIES REPRESENTED IN THE SERVICE REGIONS OF RESPONDENTS

	N	%
Agriculture and Agriculture Related Businesses	84	42%
Agriculture and Other Small Businesses	40	20%
Small Businesses and Manufacturing/Resort	40	20%
Extraction (Timber and Mineral)	8	4%
Extraction and Agriculture	16	8%
Extraction and Small Businesses	10	5%
Other (State University, Fishing and Hunting)	2	1%
Total	200	100%

Consistent with numerous demographic studies of rural America (Beale, 1978), the preponderance of rural economies are supported by small businesses or manufacturing (even when agriculture is also part of a region's primary economy). None of the 200 respondents reported that their communities were toally supported by agriculture. Although extraction industries (primarily mineral & timber) are rapidly growing, they still remain a lesser percentage of rural America's economic base than other support systems.

Table VI

REGIONAL VARIATIONS IN PRIMARY ECONOMIES OF RESPONDENTS

REGIONS	Ag. Rel. Bus/Ag.	Ag/Other Small Bus.	Sm. Bus. and Manuf/Resort	Extraction	Extraction & Ag.	Extraction/Small Business	Other	Total
I	14%	28%	58%	0	0	0	0	100%
II	67%	33%	0	0	0	0	0	100%
III	62%	13%	0	0	13%	0	12%	100%
IV	50%	13%	24%	13%	0	0	0	100%
V	27%	20%	13%	0	7%	20%	13%	100%
VI	36%	40%	12%	12%	0	0	0	100%
VII	56%	22%	11%	11%	0	0	0	100%
VIII	57%	8%	7%	14%	14%	0	0	100%
IX	10%	20%	40%	20%	10%	0	0	100%
X	56%	0	11%	0	11%	11%	11%	100%

B. Major Rural Service Delivery Problems Identified

Table VII below illustrates major problems identified by respondents when asked to state in rank-order the greatest problems faced by their districts/cooperatives as they attempted to serve rural handicapped students.

Table VII

MAJOR PROBLEMS IN SERVING RURAL HANDICAPPED STUDENTS

PROBLEM	PERCENT
Funding Inadequacies	74%
Difficulties Recruiting Qualified Staff	66%
Difficulties Retaining Qualified Staff	64%
Transportation Inadequacies	60%
Providing Services to Low-Incidence Handicapped Populations	52%
Needs for Staff Development	50%
Resistance to Change	46%
Providing Support Services	44%
Negative Attitudes of School Personnel and Communities Towards Handicapped Students	42%
Long Distances Between Schools and Services	42%
Involving Parents	40%
Professional Isolation	40%
Climatic Problems and Marginal Roads	32%
Problems of Geographic Terrain	32%
Cultural Differences	32%
Difficulties Involved in Serving Transient Populations	28%
Post-High School Services	26%
Inadequate Facilities	20%
Foster Care Inadequacies	18%
Planning Difficulties Because of "Boom or Bust" Economies and Populations	16%
Interagency Collaboration	8%
Housing Inadequacies	8%

It is notable that major service delivery problems identified were relatively consistent in the 1978-81 NRP studies and the 1982 ACRES survey. The major noteworthy differences were increases in the percentages of respondents naming funding inadequacies (from 56% to 74%), transportation inadequacies (from 34% to 60%), and difficulties providing services to low-incidence handicapped populations (from 39% to 52%).

Responses indicated that the following factors were primarily responsible for these significant increases:

1. Fiscal inflation
2. Increased numbers of handicapped students identified and served (a 92% increase before and after implementation of PL 94-142).
3. A significant period of time lapsing since initiation of PL 94-142 to determine services needed and to experiment with provisions of IEPs.

In addition, numerous states and impoverished local rural communities are experiencing tremendous revenue shortfalls and other funding problems that appear to be most directly responsible for increased funding problems.

Funding was also found to be the greatest problem mentioned by district special education administrators involved in the third year of a longitudinal study conducted by SRI International on the implementation of PL 94-142 (SRI International, 1981).

Just as in the SRI study, the major concern of respondents in this survey was anticipated cutbacks in federal and state support to education. Administrators mentioned that the uncertain financial picture at federal, state and local levels limited their planning abilities and inhibited their abilities to move toward the full service goals of PL 94-142.

Some states were found to have already limited or were planning to limit their support for special education through various means. This was reported to (1) place limitations on the numbers of handicapped children who could be counted for reimbursement purposes, (2) tighten eligibility criteria, (3) force dropping some special education ability categories, and (4) mandate establishing new funding models. The results of both studies indicated that respondents felt that inadequate funding threatened achievements to date in the implementation of PL 94-142.

Recruitment and retention of qualified staff remains a significant problem in rural America and has been exacerbated by the 92% increase in the numbers of children identified and served (Helge, 1980). Difficulties acquiring and retaining qualified rural special educators remain in spite of current high levels of urban unemployment. In fact, a study by Smith and Burke (1983) indicated that SEA special education directors felt that qualified special educators in urban America would change careers before they would move to rural areas for teaching positions. (This will be further discussed in a later section of this report.)

With attrition rates in rural special education commonly ranging from 30% to 50%, (Helge, 1981), the need for staff development has remained relatively consistent (50-48%).

The uniformly high percentages of respondents reporting rural resistance to change and negative attitudes of school personnel and community members toward handicapped students or special education programs (46% and 42%, respectively) are directly related to staff recruitment and retention problems. In fact, a significant number of respondents reported a need for community education about special education.

Problems involving parents have surfaced to a more significant level (previously an area of concern mentioned by 24% and currently noted by 40% of all respondents). Anecdotal comments indicated that this was partially because of (1) cutbacks in special education staff (see Section III-C), (2) the increase of 92% in the numbers of handicapped children identified and served, and (3) additional years in which to try IEPs. Involvement of parents of many rural subcultures is known to be difficult (Helge, 1981).

Other problems have increased in recognition or intensity. For example, difficulties in serving transient populations (an increase from 10% to 15%), serving culturally diverse rural handicapped students (up from 24% to 34%), and providing post high school services (an increase from 16% to 26%).

The category of "Professional Isolation" surfaced in its own right in this study (although in previous studies it was noted to be directly related to personnel retention problems and needs for staff development). Inadequate facilities and foster care housing, "Boom or Bust" problems (rapid population shifts causing difficulties in program planning), and problems with interagency collaboration and staff housing were also newly noted.

C. Personnel Needs

Respondents were asked, "What special education and supportive positions are most needed in your district but are non-existent, unfilled, or not funded (cut back because funding for a position was rescinded)." Table VIII indicates responses to this question.

Table VIII

SPECIAL EDUCATION AND SUPPORT POSITIONS NEEDED BUT NON-EXISTENT, UNFILLED, OR NOT FUNDED (CUT BACK)

	Non-Existent	Unfilled	Not Funded	Average
Social Worker	10%	3%	16%	9%
Guidance Counselor/ Therapist	6%	0%	0%	2%
Psychologist	10%	0%	6%	5%
Vocational Education Teacher	3%	0%	6%	3%
Vocational Rehabilitation Staff	0%	0%	3%	1%
Occupational Therapist	3%	10%	17%	10%
Physical Therapist	6%	27%	23%	19%
Speech Pathologist/Language Therapist	3%	23%	17%	15%
Audiologist	0%	0%	3%	1%
Hearing Impaired Teacher	0%	3%	0%	1%
Learning Disabilities Teacher	12%	10%	10%	11%
Teacher of the Emotionally Disturbed	3%	6%	6%	5%
Resource Room Teacher	0%	6%	0%	2%
Teacher of the Gifted	0%	3%	6%	3%
Nurse	3%	0%	3%	1%
Low-Incidence/Itinerant Personnel	3%	17%	20%	13%
Teacher of Trainable Mentally Retarded	3%	0%	3%	2%
Paraprofessionals	0%	0%	3%	1%
Preschool Teachers	0%	0%	6%	2%
Adaptive P.E. Teacher	0%	0%	3%	1%
Personnel Adequate	NA	NA	NA	17%

Respondents generally reported that low-incidence/itinerant positions were most often needed but not-existent. Paraprofessional positions were not typically seen as necessary and were least often "existent" than any position described.

Interviewees noted that the need for psychologists, learning disabilities teachers, and social workers was increasing as rural schools more fully implemented PL 94-142. These positions therefore were most frequently "non-existent."

They also reported that low-incidence/itinerant personnel, speech pathologists, and language, physical and occupational therapists were reportedly especially difficult to recruit. Thus such positions were frequently "unfilled." Positions that were most frequently "not funded" (or cut back) included occupational, physical, and language therapists, speech pathologists, social workers, learning disabilities teachers, and low-incidence/itinerant personnel. Interviewers stated that this was directly related to the anticipated and real cutbacks in federal and state education funding problems discussed in Section B above (and their ramifications for positions funded at the local level).

Respondents from Regions III, VII, and X most frequently reported that their numbers of personnel were adequate. This was consistent with the percentages of time that they named specific positions needed, except for Region X, which had one of the highest percentages of BIA respondents. Regions VIII and IX also had higher than average percentages of BIA respondents, and had some of the highest average percentages of personnel needs. Anecdotal comments indicated that personnel recruitment and retention were the primary problems (unfilled positions) in BIA schools.

School psychologists were most frequently needed by respondents from Region VIII. Occupational therapists were needed by almost all respondents' regions, and the greatest percentages of needs were in Regions V and VIII. Physical therapists were also needed in almost all respondents' regions as were speech pathologists and language therapists. Audiologists, nurses, resource room, trainable mentally retarded, preschool, and adaptive physical education teachers and vocational positions were least frequently needed. This was reportedly true across all regions.

Personnel recruitment and retention problems were stated to be directly related to the above descriptions of special education and support personnel needed. It is highly significant that only 17% of the districts/cooperatives surveyed related that they have an adequate number of special education personnel. An increasing concern of the U.S. Office of Special Eduation Programs (SEP) has been that standards for hiring rural personnel have been lower than standards in non-rural areas. The data above would indicate that this is indeed a valid concern.

D. Teacher Certification Guidelines Related To Serving Rural Handicapped Students

As noted in earlier NRP studies, significant problems exist regarding the certification of rural special educators. In the 1978-79 NRP study involving special education directors of state education agencies, many officials expressed serious doubts that rural special education recruitment and retention problems could be solved without modifying current state certification stipulations.

Numerous states (e.g., Wyoming and Wisconsin) have initiated certification requirements responsive to rural service delivery problems, and many (e.g., Colorado) are investigating how they may be more responsive to rural service problems. Several state education agencies (e.g., New York) are initiating non-categorical certifications, and the legislative bodies of a few states (e.g., Vermont) which have had generic or non-categorical certification requirements for years are currently investigating the possibility of changing such requirements in view of increased handicapped child counts. This would have a significant impact on rural populations, especially in predominantly rural states such as Vermont.

Emergency certification was found to be available in 92% of the districts/cooperatives represented in the survey. Variations of the status of emergency certification are described below.

Table X

STATUS OF EMERGENCY CERTIFICATION

Available and Frequently Used	83%
Available But Rarely Used	4%
Available But Never Used	5%
Not Available	8%
Total	100%

Even among the 8% of all respondents stating that emergency certification was not available, only 1 state was reported to be inflexible on this issue if the district was in need of personnel and only uncertified applicants were available.

When asked, "What problems exist with teacher certification in your state as related to serving rural handicapped students?" data in Table XI below were collected.

Table XI

PROBLEMS WITH TEACHER CERTIFICATION REGARDING
SERVING RURAL HANDICAPPED STUDENTS

Certification Regulations too Specialized	59%
Lack of Reciprocal Certification Across State Lines	34%
Certification Regulations too Generic	6%
Special Education Only Certified at Masters Level	2%
Lack of Certification in Learning Disabilities	1%
No Problems With Certification	32%
Total	100%

The majority (59%) of the respondents related that certification guidelines necessitated that one or more areas of specialization occur in training. Most interviewers felt that this was inappropriate for service in rural areas which typically involve working with a variety of low-incidence handicapping conditions.

One-third (34%) of the respondents related their frustrations with the lack of reciprocal certification agreements among states. They felt that this significantly contributed to rural personnel recruitment problems. Approximately one-third (32%) of all interviewees reported no problems with teacher certification.

E. Effective Recruitment and Retention Strategies

When queried regarding the most successful recruitment and retention strategies used by interviewees, two things were abundantly clear: (1) Significant problems recruiting and retaining qualified staff existed. (This is consistent with the primary problems identified earlier.) (2) Successful strategies of attracting and retaining personnel involved linking values of those recruited with the lifestyles and norms of the rural community in which they worked. Successful recruiters also addressed the upper levels of Maslow's Hierarchy of Needs (Maslow, 1954).

Table XII

EFFECTIVE RECRUITMENT STRATEGIES

No successful recruitment strategies	22%
Attention to positive attributes of rural life (lifestyle, values, new challenges in terms of personal growth, recreational opportunities, clean air, low crime rates, smaller classes, etc.)	22%
Recruiting indigenous rural citizens	14%
Salary above the base level	12%
Recruitment from neighboring states	12%
Paying interviewees' expenses	6%
Developing close relationships with related university personnel	6%
No problems - too many applications	2%
Advertising proximity of districts/cooperatives to local universities	2%
Incentives for leadership skill development	1%
Offering staff exchange ability	1%

As evidenced by Table XIII below, district administrators appeared to be even more frustrated by attempts to retain qualified staff. Twice the percentage (44%:22%) of interviewees mentioned "no successful retention strategies" than the number stating that they had "no successful recruitment strategies." It is notable that effective recruitment and retention strategies emphasized the positive aspects of rural America (22% and 12%, respectively).

Table XIII

EFFECTIVE PERSONNEL RETENTION STRATEGIES

No successful retention strategies	44%
Emphasis of rural attributes (low rent, opportunities for individual creativity and decision making, recreational opportunities, positive lifestyle variables, small populations, fewer extra-curricula academic distractions than in non-rural areas, etc.)	12%
Hire locally	8%
Leadership quality and opportunities to grow	6%
Greater than average pay levels	6%
Association with other special educators	4%
Quality program materials	4%
Staff development opportunities	4%
Supportive administration (recognition of quality efforts, cooperation in securing resources, etc.)	2%
No retention problems	2%

It is significant that the primary rural attributes emphasized by respondents who were successful in retaining personnel related to the higher levels of Maslow's Hierarchy. For example, interviewers emphasizing opportunities for creativity and decision making as strategies leading to retention success related directly to Maslow's fourth level (self-esteem). Likewise, interviewers encouraging teachers and support personnel to view rural inequities, social/economic problems, scarce resources, geographic barriers, and other inherent rural attributes as challenges to their own growth and creativity were emphasizing the fifth level or apex of the hierarchy (self-actualization).

NRP studies have indicated that these approaches are by far the most reasonable and successful in rural areas. Emphases placed on the lower levels of Maslow's model (e.g., stressing salary levels, facilities, and equipment) are less effective in recruiting and retaining staff. In addition, these particular dimensions of rural education are frequently inferior to those of non-rural areas. For example, in this study only 12% of those interviewed mentioned that they were able to recruit personnel by offering salaries above the base level for other educators, and only 6% mentioned salaries as one of their effective retention techniques.

Enthusiasm concerning the warmth and friendliness of rural communities and peers related to the "belongingness and love needs" third level of Maslow's Hierarchy, as did other aspects of rural lifestyles. The lack of extra-academic distractions related to the self-esteem level.

Whereas salary issues are typically inflexible in less than adequately funded rural schools, administrative support (identified in all major related studies as an effective recruitment and retention tool) can be cultivated and used to its fullest. It appears to be underutilized (e.g., only 2% of the respondents mentioned this support as their most effective retention strategy).

As the 1980 NRP National Comparative Study identified a 92% increase in the numbers of children identified and served in rural areas, it is understandable that massive increases in the quantity of qualified rural special educators have become necessary.

In fact, the NRP found that securing adequate numbers of personnel to serve handicapped students was a concern of almost all states, whether primarily rural or urban. Even in relatively more attrative states, a major concern of persons in state departments of education who are in charge of training is securing an adequate number of qualified personnel to work with rural handicapped children. The SEP Briefing Paper stated that state departments' divisions of training considered the supply of teachers for remote areas to be a major area of concern in their overall recruitment strategies. Although some strategies have implemented innovative approaches to recruitment, the benefits of many of these approaches have decreased over time as demands for qualified personnel have outstripped supply. Therefore, the 1980 SEP document concluded that the system had exhausted the supply of most potential teachers due to the increased demand for special educators nationwide.

A study by Smith and Burke (1983) involving interviews with SEA special education directors across the nation indicated that unemployed urban special educators would accept unskilled positions before they would move to rural areas to work.

F. Inadequacies of Rural Special Education Preservice Training

The problems of quality and quantity of personnel cannot be addressed in isolation. This has become apparent as quality issues have been highlighted by the demands of compliance with the mandates of PL 94-142. The necessity of moving toward full service has tended to more clearly elucidate the extent of the difficulty of attracting personnel to certain areas due to increased service demands, the growing recognition of educational rights by parents of handicapped children, and the increased involvement of advocacy groups and citizens' councils (Sontag & Button, 1980).

The 1980 SEP Briefing Paper stated that rural personnel shortages are the most acute because preservice programs have not prepared special education personnel who are able to adjust to the demands of remote, isolated, or culturally distinct rural areas. Sontag & Button (1980) summarized that the difficulty posed by such rural areas is not the problem of preparing quantities or sheer numbers of teachers, but of preparing teachers who are willing and capable of teaching in areas posing disincentives for the majority of teachers.

This statement has been verified by the Smith & Burke (1983) study indicating that according to SEP directors of special education, universities are not preparing personnel for the socialization of work in rural communities. Teacher training institutions generally do not consider special rural needs and circumstances when designing their training programs (Smith & Burke, 1983; Helge, 1983; Moriarty, 1981; Sher, 1977).

Even when curricula contain a rural adaptation (which is rare) or are located in rural environments, universities still tend to train teachers to cope with larger school systems (Department of Education Weekly, September 7, 1981; Helge, 1983). An NIE report of 1981 stated that training programs for teachers and administrators reflect an urban basis, and rural schools often end up as recipients of urban-oriented programs.

The lack of appropriate training programs is directly related to the findings in this study that 66% and 64%, respectively, of all administrators surveyed had serious problems recruiting and retaining qualified rural special educators. Congressional hearings have consistently asked what SEP is doing to better prepare teachers so that there will be less attrition in rural special education. Also, relevant are consistent findings that rural LEAs are less in compliance with PL 94-142 than more populated districts (Weber & Rockoff, 1980; Helge, 1980; SEP Semi-Annual Report, 1979).

Questionnaires were sent by NRP to 750 of the 2,376 colleges and universities in the United States in 1980-81. Universities were asked to indicate specific training content areas related to training personnel to serve rural handicapped children. Responses indicated that although university teacher preparation programs currently were not adequately addressing training needs regarding rural special education, the interest to do so was present.

Although several universities across the country reported the existence of rural education centers, none of the centers housed a specific program for training students to serve rural handicapped students.

According to a review of pertinent literature (including final reports of numerous federally funded projects), although the Department of Education had funded several projects in the past with the word "rural" in the project title, a 1980-81 NRP survey concluded that projects were not systematically training students for the broad range of competencies research has indicated are necessary to work with rural handicapped students. (See Appendix D for a list of research-based rural special education preservice competencies.) In fact, none of the universities surveyed had either (1) different competencies for training students for rural than non-rural areas or (2) competencies specifically focusing on rural special education.

This survey of 200 rural special education directors and teachers in all 50 states concluded that mere location of one's preservice training at a rural site did not guarantee a rural training emphasis. In fact, 97% of those interviewed stated that their "rural training" took place "on the job." All respondents felt that this was directly related to the exceptionally high rural special education personnel attrition rates of 30-50% (Helge, 1981).

Table XIV

"WERE YOU, OR ANY STAFF WORKING WITH YOU,
TRAINED SPECIFICALLY TO WORK WITH RURAL HANDICAPPED STUDENTS AND STAFF?"

(Figures Represent the Percent of each Region)

FEDERAL REGION	YES Remote	YES Clustered	NO Remote	NO Clustered	TOTAL
I	0%	0%	33%	67%	100%
II	0%	0%	33%	67%	100%
III	0%	0%	0%	100%	100%
IV	0%	3%	87%	50%	100%
V	0%	7%	13%	80%	100%
VI	0%	0%	33%	67%	100%
VII	0%	13%	25%	63%	100%
VIII	0%	0%	71	29%	100%
IX	0%	0%	50%	50%	100%
X	0%	0%	23%	77%	9%
Average	0%	3%	34%	63%	100%

The vast majority (97%) of the respondents stated that they were trained specifically for work with rural handicapped students. In fact, only 10% described their preservice training as adequate to work in rural communities. Table XV below summarizes the answers to the survey question, "What additional preservice training do you wish you had received but did not?"

Table XV

ADDITIONAL PRESERVICE TRAINING DESIRED

Experiential Training (including on-site work, simulations of problem solving, team management, communication, etc.)	59%
Administrative knowledge (coordination of services, regional delivery systems, team management, school law, finance, and itinerant service delivery strategies)	57%
Generic techniques to be able to work without the availability of specialists for low-incidence handicaps	48%
Knowledge of rural cultures, mores and techniques (to facilitate personal acceptance)	36%
Knowledge of recruitment and retention techniques	31%
Knowledge of transportation alternatives	24%
Preservice training was adequate	5%
Serving minority students in rural areas	3%
Learning disabilities information	1%
Preservice training adequate	10%

Further analysis illustrates specific types of experiential training that respondents felt they should have received via their preservice programs. The majority of respondents (52%) stated that experiential training should occur early in preparation programs. Anecdotal comments indicated that most respondents felt that experiential training (including observations and practica) should begin by the sophomore year.

Table XVI

TYPES OF EXPERIENTIAL TRAINING DESIRED

On-site, early rural training	52%
On-site experiences with rural cultures, mores, and customs	50%
Extensive work with rural teachers	46%
Intensive experiences with parents of handicapped children	38%
Exposure to a variety of handicapping conditions with an emphasis on low-incidence handicaps	18%
Experiences with minority children	16%
Actual work with itinerant programs	12%

It is obvious that respondents would have valued learning experiences strongly attached to rural communities, peer professionals and parents of handicapped students. Anecdotal comments indicated that this would have brought security and stability to trainees. Many mentioned that they considered interactive learning experiences among districts that were part of larger cooperatives to be essential. Respondents indicated that they felt such experiences would have necessitated an understanding of how universities and preservice trainees develop and retain community and peer support for their work.

The emphasis on trainees' involvement with parents was consistent with their concern for accountability in preservice training programs. Mandates for experiential training were complemented by their statements that rural practice contains inherent inequalities (income, community status, resources, etc.) and that such inequalities should be addressed within preservice programs.

Table XVII below indicates the types of coursework expressed by respondents as necessary for quality preservice training.

Table XVII

TYPES OF PRESERVICE COURSEWORK INDICATED NECESSARY

Service delivery strategies for low-incidence rural populations	62%
Generic approaches to teaching rural handicapped children	58%
Customs, mores, and cultures of rural areas	56%
Status of rural special education service delivery systems (strengths, weaknesses, etc.)	54%
Strategies for identifying services and scarce resources in rural areas	48%
Effective strategies of adapting curriculum (and when to do so)	46%
PL 94-142 rules, regulations, and changes	34%
Administration and management skills	32%
Testing and appraisal skills	28%

Respondents were also asked to describe the greatest strengths of their preservice training as preparation for working with rural handicapped populations, their parents, and rural communities. Table XVIII below illustrates their responses.

Table XVIII

GREATEST STRENGTHS OF PRESERVICE TRAINING AS DESCRIBED BY RESPONDENTS

None	32%
Hands-on field experiences	14%
Generalist/non-categorical skills	17%
Categorical coursework	14%
Administrative knowledge	6%
Communication skills	2%

It is highly significant that one-third (32%) did not state a strength; and only 14% noted a "hands on" field experience (practica, student teaching, internship, etc.) in a rural setting similar to one which later employed them. In contrast, 62% of the respondents in Table XX noted the lack of realistic experiences in a rural community as a significant void in their training program.

Anecdotal comments indicated that respondents felt particularly strong about the need for generalizable/non-categorical skills (as most rural special educators work with low-incidence handicaps and have few specialists available). The types of experiential training most valued included on-site work, simulations in problem solving and communication skills, etc.

Valued administrative knowledge included strategies for effective coordination of services, regional service delivery systems, team efforts, school law, and itinerant service delivery strategies. When asked specific preservice learning experiences that contributed to the respondents' successes in a rural community, the responses were as illustrated in Table XIX below.

Table XIX

SPECIFIC LEARNING EXPERIENCES CONTRIBUTING TO RESPONDENTS' SUCCESSES IN A RURAL COMMUNITY

Experiential training	56%
None	34%
Parents involved in training experiences	2%
Coursework regarding initiating special education programs	2%

Several cogent points were made clear by anecdotes related to the above data. Practica were mentioned three times more frequently than student teaching or internships as a factor in respondents' preservice training contributing to their success. This is significant because respondents indicated that even though most of the universities were located in rural environments, it was typical for a practicum to be the only experiential training available to them.

Interviewees were particularly negative in their responses to this question, relating that even though their practica offered inadequate amounts of experiential training, it was viewed as the beginning of what should be the most valuable part. Although respondents mentioned in previous questions that experiential training and interactions with parents of handicapped students were highly desired, proportionally few interviewees related that this was incorporated in their training program.

In contrast, 62% noted the lack of realistic experiences in a rural community as a significant part of their training program. Table XX below illustrates their responses to the question designed to ascertain the greatest weaknesses of preservice training programs.

Table XX

GREATEST WEAKNESSES IN RESPONDENTS' TRAINING PROGRAMS

Lack of realistic experiences in a rural community	62%
Lack of appropriate coursework preparing one for work in rural America	48%
Lack of training in diagnostics and assessment	13%
Inadequate specialization	2%
Inconsistent faculty philosophy	1%

The predominant problems appeared to relate to both quality and voids in training. Respondents frequently reflected that lack of preparation for work in rural areas was directly related to problems in recruiting qualified personnel. When respondents were asked what factors of their preservice training led them to be recruited for their work with rural handicapped children, 90% stated that their preservice training was not a factor in their rural employment. Instead, factors such as the following were listed.

Table XXI

FACTORS OF PRESERVICE TRAINING LEADING RESPONDENTS TO BE RECRUITED FOR THEIR WORK WITH RURAL HANDICAPPED CHILDREN

Preservice training not a factor in rural employment	90%
Personal attractions (recreational opportunities, slower pace, spouse's location, etc.)	36%
Job availability	14%
Respondent was reared in a rural community	8%
Experiential training in a rural area	4%

When asked what factors from their preservice training made a difference in retaining them in rural America, 93% stated "none." Rather, they were retained for such rural environmental and lifestyle factors as those mentioned above, or because of a scarcity of other positions.

Specifically, interviewees stated that their preservice training should include the following facets listed in Table XXII below so that preservice trainees could be more easily recruitable and retainable for rural positions.

Table XXII

ESSENTIAL FACETS OF PRESERVICE TRAINING SO THAT GRADUATES WILL BE RECRUITABLE AND RETAINABLE FOR RURAL POSITIONS

Coping with remoteness to services and other resources	45%
Generalist (non-categorical) skills and ability to work with low-incidence handicaps without specialists being available	36%
Information about rural geographic and socioeconomic subcultures (including value systems and other life-style variations)	34%
Techniques of working with rural peers, families and	

When asked, "What do you wish you had known about working in a rural community before doing so?," almost half (45%) of the rural practitioners interviewed stated that their training should have given them specific experiences with the realities of scarce services and resources in rural areas. Over one-third (34%) felt that their preservice training should have included specific techniques for working in rural geographic and socioeconomic cultures.

With respect to the question, "What do you wish you had known about working in a rural community before you began doing so?," Table XXIII below summarizes responses.

Table XXIII

WHAT DO YOU WISH YOU HAD KNOWN ABOUT WORKING IN A RURAL COMMUNITY BEFORE YOU BEGAN DOING SO?

Coping with remoteness to services and other resources	68%
Techniques for generic service delivery/serving children without the availability of specialists	66%
Coping with remoteness to personal enrichment and stress reduction	56%
How to work with rural families, peers and communities	38%
Information regarding rural geographic and socioeconomic subcultures (including value systems and other lifestyle variations)	38%
Respondent was from the type of rural area he/she eventually became employed in	24%
Recruitment and retention strategies	21%
Transportation constraints (personal and professional)	21%
Dealing with transient populations	11%
Rural governance structure	1%
Economic effects on education	1%

Respondents were also asked, "What additional preservice training regarding consulting skills is needed?" As depicted in Table XXIV below, interviewees continued to emphasize the need for experiential training.

Table XXIV

ADDITIONAL NECESSARY PRESERVICE TRAINING REGARDING CONSULTING SKILLS

Experiences with interpersonal communication skills to sell one's program and one's self	42%
Experiences in understanding community culture regarding problem solving with teachers and parents	30%
None	10%
Skill demonstrations for working with related services personnel	4%

Consistent with the SEP Division of Personnel Preparation Quality Teacher Education Initiative, respondents were asked to specify factors that would demonstrate a high quality rural special education program. Interviewees were encouraged to be as specific as possible in their responses. After every answer, respondents were asked, "How would you know the program/faculty were of quality?" or "fully describe the experience you spoke of." Table XXV below illustrates their responses.

Table XXV

FACTORS RESPONDENTS INDICATED WOULD DEMONSTRATE A HIGH QUALITY RURAL SPECIAL EDUCATION PRESERVICE PROGRAM

Rural special education experiential training (emphasis on interaction with peer practitioners, parents of handicapped students, and rural communities; rural student teaching and internship assignments; etc.)	65%
Rural service delivery content (including socioeconomic and geographic differences affecting learning and living in rural communities; strategies for locating resources; working with multi-ability levels, disorders, and age programming; low-incidence teaching strategies; transportation strategies)	23%
Generic training models	7%
Interpersonal skills emphasis	4%
Faculty from rural backgrounds	3%
Interagency collaboration strategies	1%
Exposure to disciplines of medicines and psychology	1%

Interviewees were clear about their desire for exposure to a variety of service systems and programs. They were especially concerned that special education practitioners learn to gain and keep support from rural administrators, communities, and peer professionals.

G. Hiring of Unqualified Personnel

Rural areas typically have higher percentages of unqualified personnel, lower levels of certification, and higher rates of temporary and emergency certifications.

Roughly two-thirds (66%) of those surveyed reported that emergency certifications were typically used in their district. They stated that temporarily certified personnel were not well qualified for the positions that they held.

Recent federal and state retrenchment in special education money has resulted in additional problems, as indicated by this survey and the Smith & Burke (1983) survey of SEA special education directors. (Their survey identified replacement of special education personnel by individuals with greater seniority, regular education administrators, and even athletic personnel.)

Relatively high percentages of the rural special education directors and teachers interviewed by this study reported a lack of training for their positions. (E.g., 15% of the rural special education directors and teachers had taken few or no courses in special education.)

Respondents issued caveats concerning symbolic preservice program changes (e.g., curriculum revisions leading to false security and simultaneously inhibiting truly needed reforms). Problems preservice training institutions face as they prepare rural special educators were largely understood by interviewees and were reported as follows:

a. There are serious questions about the quality of role models, materials, and facilities in many remote areas/rural schools in which practica and student teaching must be arranged. There is a need to expose students to quality, innovative, state-of-the-art learning situations, facilities, and equipment. This is often in conflict with the need to expose trainees to the realities of rural schools, teaching, facilities, and equipment. These factors obviously have ramifications regarding recruiting students to work in rural America.

b. The need to locate adequate numbers of quality practica and to transport students is frequently a problem, particularly in remote rural areas. There is also typically a problem locating other field experiences (observations, pre-student teaching, internships, etc.).

c. Student and faculty housing are frequently a barrier to quality field experiences. Because of the remoteness of many university service regions, students are frequently located off campus for extensive periods of time.

d. Funds for supervisory travel is often a problem. The role of the supervisor within the school setting often must be clarified. This is particularly true when a supervisor may travel 2 or 3 days to reach some of the remote student teaching/internship sites. Cost efficiency sometimes becomes the determinant planning variable, especially when travel and supervisory costs are considered.

e. Travel feasibility for students and faculty is often severely inhibited by climatic and geographic barriers.

H. Views and Practices of Trainers of Rural Special Educators

Many training institutions with rural service regions are consistent with Blasi's (1982) definition of rural/remote or small universities as: those located outside of counties having a city of more than 50,000 population and having 7 or fewer faculty members within the special education department. Such institutions face many of the difficulties listed below.

a. Many small institutions offer courses with low-incidence handicaps in only a cursory way unless a particular faculty member happens to have such an area of expertice.

b. Most small university faculty have multiple responsibilities including 12-hour teaching loads, supervision and travel, service to the field, and research. There is typically little time for development for new curricula materials.

c. Differentiated staffing at such institutions is rare, and faculty are usually generalists (cross-categorical, undergraduate/graduate, and often cross-departmental) in their responsibilities.

d. It is frequently problematic to find adjunct faculty who will travel and to coordinate field offerings with such adjuncts.

e. The remote geography of many small universities is correlated with inferior field/satellite university (and sometimes regional university) library and training materials. Recent university funding cutbacks have intensified this problem.

f. A predominant number of students are frequently housed off campus, and some regional university librarians will not allow materials to leave campus. Students in dispersed locations, (e.g., students in televised classes miles apart) cannot readily share materials. Some students must drive 100 miles or more to use university library systems. Copyright laws frequently compound these problems by prohibiting duplication of particularly relevant materials.

During the December, 1982, Project Directors' meeting of the Division of Personnel Preparation of SEP, the NRP conducted a survey of 46 university faculty who trained special educators primarily employed by rural areas. Faculty completing the instrument were representative of universities across the United States. Thirty-two states were represented. (A copy of the questionnaire is included in Appendix C.)

Faculty respondents were first asked to rate the importance of the rural preservice training competencies established after 4-1/2 years of NRP research in over 100 rural school districts and cooperatives. These competencies are listed in the right-hand column in Table XXVI.

As indicated in Table XXVI, all of the rural competencies were rated as important to rural preservice training programs. (The mean rating was 3.53.)

However, only 32% to 50% of the institutions polled were currently addressing even those competencies they rated as having the greatest importance (4.0) for their preservice programs. (The range was 17% to 50%.)

In fact, anecdotal comments written on several forms included, "Although we are located in a rural service area, our teacher education program is not <u>specifically</u> rural focused," and "We address these competencies by chance, not focus."

In Provus' Discrepancy Evaluation Model (Provus, 1973) terms, the Standards (valued preservice competencies) of the rural preservice universities differed significantly from their Performance (teaching rural competencies to students).

Table XXVI

DISCREPANCY EVALUATION MODEL ASSESSMENT OF NRP RURAL PRESERVICE COMPETENCIES

Standard: What is Currently Taught in the Respondent's Institution	N	%	Ranking of Importance of Each Competency to the Field 1 = No 2 = Little 3 = Some 4 = Great	Competency
Yes	13	28%	3.6	Students will demonstrate an understanding of the contex of a rural school and its environment.
No	33	72%		
Yes	23	50%	4.0	Students will demonstrate an understanding of differenc involved in serving handicapped students in rural and i urban environments.
No	23	50%		
Yes	8	17%	3.0	Students will demonstrate knowledge concerning the stat of-the-art of rural special education.
No	38	83%		
Yes	16	35%	3.4	Students will demonstrate knowledge of effective servic delivery models for rural handicapped children (includi low-incidence handicaps such as severely emotionally di turbed, hearing impaired, and visually impaired).
No	30	65%		
Yes	15	33%	3.3	Students will demonstrate an awareness of alternate resources to provide services to rural handicapped students and skills to identify alternate resources.
No	31	67%		
Yes	20	43%	4.0	Students will demonstrate skills in working with parents of rural handicapped students.
No	26	57%		

Standard: What is Currently Taught in the Respondent's Institution			Ranking of Importance of Each Competency to the Field 1 = No 2 = Little 3 = Some 4 = Great	Competency
	N	%		
Yes	15	32%	4.0	Students will demonstrate skills in working with citizens and agencies in rural communities to facilitate cooperativeness among schools and service handicapped students.
No	31	68%		
Yes	14	30%	3.5	Students will demonstrate an understanding of personal development skills (a) for their own professional growth and (b) to build a local support system in their rural environment.
No	32	70%		
Yes	11	23%	3.0	Students will develop skills in working with peer professionals from rural environments.
No	35	77%		
Mean:			Mean: 3.53	
Yes	15	32.5%		
No	31	67.5%		

I. Status of Emerging Technology and Computer Literacy in Rural Special Education Programs

Respondents were queried regarding the availability of emerging technologies, primary uses of various types of technology, computer literacy, uses of microcomputers by staff and handicapped students, and reasons why handicapped students were not using computers in areas in which they were not. As evidenced in Table XXVII below, a preponderance of districts/cooperatives surveyed had some type of basic electronic technology available to them. Microcomputers were most common.

Table XXVII

TYPES OF TECHNOLOGY AVAILABLE TO RURAL DISTRICTS SURVEYED

Microcomputers	88%
Videodiscs	19%
Telecommunications	18%
None	12%
Satellite Communications	2%
Other (voice synthesizer, specialized phonic equipment, etc.)	21%

Regional variations in technology available appeared to be significant as indicated in Table XXVIII below.

Table XXVIII

REGIONAL VARIATIONS IN TECHNOLOGIES AVAILABLE

(Figures represent percentages within each region)

REGION	MICROCOMPUTERS	VIDEODISCS	TELECOMMUNICATIONS	SATELLITE	OTHER	NONE
I	100%	14%	0%	0%	14%	0%
II	100%	33%	0%	0%	33%	0%
III	100%	38%	25%	0%	25%	0%
IV	81%	6%	6%	6%	25%	19%
V	100%	20%	27%	0%	33%	0%
VI	56%	0%	0%	0%	0%	44%
VII	89%	11%	44%	0%	22%	11%
VIII	86%	21%	36%	0%	14%	14%
IX	90%	30%	10%	0%	10%	10%
X	89%	33%	11%	11%	33%	11%
Mean	89%	21%	16%	2%	21%	11%
Range	56-100%	0-38%	0-44%	0-11%	0-33%	0-44%

The range of availability of microcomputers was from 56% (Region VI) to 100% (Regions I, II, III, and V). Although Regions IV and VIII were also below the mean of 89%, only Region VI was significantly below the mean. Approximately one-third or less of the districts/cooperatives sampled had videodiscs available (mean 21% and range of 0 to 38%).

Telecommunications were typically available even less frequently, as the mean of availability was only 16% (although the range was 0 to 44%). Satellite communication was the least frequently available technology mentioned by respondents (a mean of only 2%), and the vast majority (98%) of the districts/cooperatives did not have this sophisticated technology. Other technologies such as speech synthesizers, specialized phonic equipment, etc. were available in percentages roughly equivalent to the availability of videodiscs (although the percentages of sampled districts/cooperatives within regions varied).

Region VI (Arkansas, Louisiana, New Mexico, Oklahoma, and Texas) appeared to have the most inequitable distribution of emerging technologies of all districts/ cooperatives surveyed. Only 56% of the sampled LEAs/cooperatives in this study had microcomputers, and none of the Region VI respondents reported any other type of technology available. Thus, this region far surpassed the mean of 11% of those surveyed having "no technology available."

Of interest is that Regions IV and Region VI (with 19% of their respondents stating that no technology was available) both contain a number of states typically thought of "Deep South States." Regions XIII, IX and X, with 14%, 10%, and 11%, of their interviewees stating they had no technology available, contained the largest number of BIA respondents.

The survey next attempted to identify primary uses of technology. Table XXIX below illustrates the predominant uses identified.

Table XXIX

PRIMARY USES OF TECHNOLOGY

Instructional	72%
Managerial	42%
Inservice	8%

Instructional uses included the following:

Direct tutoring
Parent interactions
Use with IEPs (revisions such as after annual reviews, etc.)
Computer-assisted instruction (tutorials, drill and practice comments, etc.)
Grading records
Motivational or reinforcement gains

Managerial uses included the following:

Child tracking (IEPs, etc.)
National/regional/state information retrieval systems
Listing resources for instruction
Completing due process forms
Assistance with program evaluation
Programming routine control procedures such as ordering
    or inventorying supplies
Recording financial records
Word processing
Research
Telecommunications
Transportation and service options
Electronic technology for management decision making
Data control
Record keeping
Reportwriting

Computers were most frequently used for the instructional and managerial uses described above but occasionally used for long-term planning or strategic decision making.

A Council on Administrators of Special Education (CASE) Summer, 1982, study found that approximately half of the special education administrators (urban, suburban and rural districts) answering its questionnaire used or were designing computerized management systems. This compares with 59% of the interviewees in this study using computers for managerial purposes.

Inservice uses of technology ranged from didactic to interactive staff development sessions. This included mailed videodiscs to remote areas, satellite inservice sessions, and other uses peculiar to remote settings. The most common uses included direct use of or training for computer-assisted instruction, accessing information systems via electronic communications, and training to do work with handicapped students via technologies such as voice synthesizers.

Anecdotal comments indicated that rural districts/cooperatives can afford mircocomputers easier than mainframe or minicomputers and that microcomputers are more accessible to remote locations so common to rural districts/cooperatives. Most of the respondents interviewed also indicated that microcomputers were more compatible with their remoteness from university and state education agency mainframes although some teamed their microcomputer with a mainframe or a minicomputer.

Complaints about the use of computers ranged from staff illiteracy, personnel needed for training others to use technologies, staff resistance to procedural changes, human error factors, and unrealistic expectations of technologies. Initial costs (although originally felt high by many school boards) had by the time of this survey seemed minimal, compared to benefits being received. However, initial costs for development time frequently were overrun, and difficulties in finding experts to assist with computer usage and programming were frequent in rural America.

Table XXX below indicates regional variations in primary uses of technology.

Table XXX

REGIONAL VARIATIONS IN PRIMARY USES OF TECHNOLOGY

(Figures represent percentages within each region)

REGION	INSTRUCTIONAL	MANAGERIAL	INSERVICE
I	100%	29%	0%
II	67%	33%	0%
III	75%	25%	25%
IV	51%	31%	0%
V	86%	73%	27%
VI	44%	22%	0%
VII	67%	67%	22%
VIII	85%	50%	0%
IX	70%	50%	0%
X	78%	44%	0%
Average	72%	42%	8%

Interviewees were next asked about staff computer literacy. Respondents were encouraged to answer for themselves and their staff. Table XXXI below indicates staff computer literacy by region.

Table XXXI

COMPUTER LITERACY OF RURAL SPECIAL EDUCATION STAFF FOR EACH REGION

(Figures represent percentages within each region)

REGION	YES	NO
I	42%	58%
II	100%	0%
III	62%	38%
IV	50%	50%
V	93%	7%
VI	11%	89%
VII	77%	23%
VIII	71%	29%
IX	67%	33%
X	50%	50%
Average	62%	38%

Except for Region I, over half of the rural special education staff in the districts/cooperatives surveyed were considered to be computer literate. Predictably, regions having less access to microcomputers (Regions VI, IV, and VIII, specifically), were less frequently described as computer literate although some staff of surveyed areas in Regions I and X were also not highly trained.

Table XXXII below indicates the use of computers by handicapped students, for each region.

Table XXXII

USE OF COMPUTERS BY HANDICAPPED STUDENTS FOR EACH REGION

(Figures represent the percentage for each region)

REGION	YES	NO
I	58%	42%
II	100%	0%
III	75%	25%
IV	37%	63%
V	67%	33%
VI	55%	45%
VII	67%	33%
VIII	64%	36%
IX	77%	23%
X	60%	40%
Average	66%	34%

Again, data were consistent in that districts/cooperatives in regions with less accessibility to microcomputers experienced less usage of computers by handicapped students. However, Regions I and X were overrepresented in this analysis (as they were in the lack of staff computer literacy).

The next question regarded who trained handicapped students to use microcomputers. Table XXXIII below depicts information gathered by this survey.

Table XXXIII

WHO TRAINED HANDICAPPED STUDENTS TO USE MICROCOMPUTERS, BY REGION

(Figures represent percentages by region)

REGION	SPECIAL EDUCATION TEACHERS	OTHER STAFF	COMMUNITY MEMBERS
I	100%	0%	0%
II	67%	33%	0%
III	67%	33%	0%
IV	83%	17%	0%
V	77%	22%	1%
VI	50%	25%	25%
VII	33%	0%	67%
VIII	77%	23%	0%
IX	57%	29%	14%
X	67%	17%	16%
Average	67%	18%	15%

Disabled students were primarily trained by special education teachers (mean = 67%), occasionally by other staff, and infrequently by community members. (Districts/cooperatives sampled in regions VI and VII were exceptions.)

The survey next assessed uses of computers by handicapped students. Table XXXIV depicts the results of this question, by region.

Table XXXIV

HANDICAPPED STUDENT USES OF COMPUTERS, BY REGION

(Figures represent percentages within each region)

REGION	INSTRUCTION	OTHER
I	100%	0%
II	100%	0%
III	100%	0%
IV	83%	17%
V	90%	10%
VI	80%	20%
VII	83%	17%
VIII	100%	0%
IX	57%	43%
X	100%	0%
Average	89%	11%

Clearly, it was felt that disabled students primarily use computers for instructional purposes. Even in the region represented by the lowest percentage (Region IX), a majority of 57% of the handicapped students represented primarily have instructional foci in their usage.

The survey ~~next~~ looked at why handicapped students were not using computers (when they were not). The major reasons were (1) because of rural schools being unprepared for the handicapped to use computers (e.g., they were not aware of uses or appropriate software); (2) because computers were not available, or (3) because school staff were not trained with computers or with useful applications for handicapped students. An additional reason was management policies prohibiting student usage.

Table XXXV below illustrates the results of this question.

Table XXXV

WHY HANDICAPPED STUDENTS WERE NOT USING COMPUTERS WHEN THEY WERE NOT

(Figures represent percentages within each region)

REGIONS	SCHOOL UNPREPARED	NO COMPUTER	STAFF UNTRAINED	MANAGEMENT POLICY INHIBITIONS
I	33%	0%	67%	0%
II	0%	0%	0%	0%
III	100%	0%	0%	0%
IV	20%	60%	20%	0%
V	40%	40%	0%	20%
VI	0%	75%	0%	25%
VII	0%	33%	0%	67%
VIII	20%	60%	20%	0%
IX	50%	50%	0%	0%
X	25%	50%	0%	25%
Average	29%	37%	11%	14%

J. Newly Used or Innovative Resources For Rural Special Education

When describing the most innovative or newest resources interviewees had found and used during the last two years, responses were categorized as in Table XXXVI below.

Table XXXVI

NEW OR INNOVATIVE RESOURCES FOR RURAL SPECIAL EDUCATION

Newly acquired or used caregivers	41%
Newly used funding sources	33%
Increased interagency and interschool collaboration	22%
Technology	22%
State departments of education	9%
Specific special education programs	8%
Inservice	5%
Other	1%
None	24%

Respondents expressed frustrations about funding cutbacks and/or inability of program funding to be consistent with rates of inflation. Interviewees clearly stated that even when they had found alternate funding sources for aspects of the programs, they felt their programs were suffering or might soon feel negative impacts (see chapter on funding) because of projected or current funding inadequacies.

Each of the above categories will be described in this chapter.

New Caregivers. Nearly half (41%) of the respondents indicated that they were using different or new sources to provide services than they had in previous years. As illustrated in Table XXXVII below, the majority of the new caregivers were individuals vis-a-vis community groups, paraprofessionals, or professionals.

Table XXXVII

TYPES OF NEW CAREGIVERS DESCRIBED

Individual volunteers	70%
Community service organizations	24%
University students	12%
Paraprofessionals	4%
Professionals from related fields	2%

Individual volunteers were primarily parents of handicapped students, although other individuals in the community were frequently involved. Service organizations ranged from national groups such as Kiwanis Clubs to organizations more peculiar to rural America such as wranglers'riding clubs, volunteer fire departments, and organized education groups, such as parent-teacher organizations.

A vast majority (74%) of all respondents mentioned that new funding sources identified were primarily community service organizations, as illustrated in Table XXXVIII below. Although most respondents described typical types of funds solicitation from community organizations (e.g., fees for donations for a particular child or project), some were quite innovative. A prime example was the use of gambling proceeds from non-profit organizations for equipment for handicapped children. A typical use of funds solicited from community service organizations was providing funding for inservice opportunities. Funding for private individuals primarily included identifying individuals of adequate means to fund specific special education projects. However, some innovations included encouraging individuals to secure resources and materials - thus making the individual an indirect funding source. Another innovative use of individuals as funding sources included having individuals mention the special education program in their wills or encouraging them to set up trust funds for programs for the handicapped.

University students used as new caregivers were primarily practicum or internship students. Of interest was that not all students were special education students. In fact, social work and counseling students were frequently mentioned. It was reported that university and public school students mutually benefited from such activities.

Table XXXVIII below illustrates the percentages that the various funding sources identified were reportedly used.

Table XXXVIII

TYPES OF NEW FUNDING SOURCES USED

(Figures represent percentages of the total)

Community Service Organizations	74%
Individuals	26%

As noted in Table XXXVI, over one-fifth (22%) of the sampled districts/cooperatives mentioned increased interagency and interschool collaboration as a key resource for their special education programs. Rural school districts/cooperatives have been noted for their collaborative styles for decades. Rural America necessitates cooperation of individuals and/or organizations, particularly in remote areas with scarce resources. Never has a study of rural service delivery indicated duplication of sources as a primary problem. The fact that approximately one-fifth (22%) of the respondents indicated that increased interagency and interschool collaboration were significant resources during the last two years emphasizes the increasing use of administrative cooperatives.

Respondents stated that although they had in the past frequently pooled monetary and other resources so that services could be provided to handcapped children (especially low-incidence handicaps), many were now sharing technological resources. Many districts stated that they would not otherwise be able to afford tie-ins to mainframe or minicomputer systems, electronic communication networking systems, or other technologies.

Regional planning consortia for program "trouble shooting," proactively planning for resource acquisition and utilization, and discussing possible services for individual students, were more common than indicated in the 1980 NRP study (Helge, 1980).

Respondents stated that although it was most difficult for rural agencies to allocate staff time, transportation funds, and other resources to meet ~~with~~ other cooperatives or related service agencies, they felt that it should be a priority of their administration. Outcomes included special education day care programs housed outside school districts for severely handicapped children. These had been positively evaluated and were providing mutual benefits for caregivers and children with special needs. Some of the more dramatic examples involved the use of senior citizens in such programs.

At the local district level, interschool collaboration included more team teaching than had taken place in years past and more cooperative planning among teachers and related service personnel. Categories of handicapping conditions appeared to be more frequently interrelated. Sharing of resources and staff among programs such as special education and Title I appeared to be gaining in popularity.

School assistance teams in which teachers from each school/building listened to problems of others and coordinated resourceswere becoming more common. Some of the school assistance teams involved students as volunteer participants.

Over one-fifth (22%) of all interviewers named "technology" as their most innovative resource. Microcomputers were the primary technology mentioned by 92% of these respondents. Section III - I of this report fully describes data gathered regarding emerging rural special education technological systems.

It was interesting that 9% of the respondents stated that state departments of education were their greatest resource. Comments indicated that respondents primarily depended on state department's assistance with inservice education, educational consultants, and occasionally as a funding source.

A small percentage (8%) of those surveyed mentioned specific special education programs as their greatest resource. Innovative programs mentioned primarily included sheltered workshops and other work experience and preschool program approaches. Although other special education programming aspects were mentioned, these were the primary innovations emphasized.

Inservice was mentioned by a small minority of the participants as their most innovative resource. Facets of inservice new to them were publishers conferences and demonstrations of new technology relative to rural handicapped children. Comments under "other" included cranial syncotherapy and specific child diagnostic techniques.

It is especially noteworthy that although a majority respondents named more than one new or innovative ressource, almost one-fourth (24%) stated that they had "none."

K. Successful Parent Involvement Strategies

Table XXXIX below illustrates the primary uses of parents in the rural special education programs of the districts/cooperatives surveyed.

Table XXXIX

SUCCESSFUL PARENT INVOLVEMENT STRATEGIES

IEP meetings	98%
Parent/teacher organizations	48%
Involvement in instruction (aides, tutoring, and teaching)	22%
Home visits	20
Parents not recruited	16%
Non-instructional assistance (Special Olympics, field trips, and swimming)	16%
Assistance with screening for handicaps	14%
Ongoing child find efforts	12%
Parent advisory councils	8%
Parent counselors	4%

Most organized parent involvement efforts were with preschool and severely handicapped students, especially in home-based programs. Parents were occasionally involved with work-experience settings. Schools frequently used parents with supplementary or non-instructional purposes (such as screening for handicaps, Special Olympics, and assistance with field trips). Although parents were occasionally used in one-to-one tutoring situations (15% of the 22% usage in "involvement in instruction"), rarely were they used in professional positions with other parents (e.g., only 4% of the time were they used as parent counselors).

Involvement was typically unpaid (92%), although 8% of the respondents reported paid parent involvement. In fact, one respondent noted that a 25% tax break was approved in their community, and that parents were totally operating a cooperative preschool program.

Ninety-six percent of all parent involvement reported was located at the district/cooperative level. Only a small amount (4%) took place at a regional level. Organized volunteer programs (across a district/ cooperative) were rare and were reported only by .6% of the sampled population.

Table XL below illustrates that parents were infrequently trained in an organized fashion for their volunteer or professional involvement.

Table XL

METHODS BY WHICH PARENTS WERE TRAINED

No organized training	84%
Classes for training parents	8%
One-to-one teacher:parent training	2%
Make and take it parent workshops	1%
Parent training newsletter	1%

Respondents reported that parent training frequently involved social vehicles, and that informal training took place in such settings (e.g., open houses or organized meals).

I. Strategies for Finding and Involving Volunteers in Rural Special Education Programs

In general, volunteers were grossly under-utilized in rural special education programs. Of the 61% of all respondents stating that they did not use volunteers, 68% of those declared that volunteers were undependable, 42% declared that they were unavailable, and 18% declared that they did not have time to train volunteers.

Table XLI below illustrates the use of volunteers.

Table XLI

TYPES OF VOLUNTEERS USED IN RURAL SPECIAL EDUCATION PROGRAMS

No volunteers used	61%
Senior citizens and retired professionals	35%
Parents	29%
High school students	24%
Univeristy students	11%
Welfare workers	4%
CETA workers	1%
Legal professionals	1%
Social clubs	24%

Volunteers were reflective of rural communities in that rural areas typically have relatively high percentages of retired professionals and social organizations that are known to schools. However, these groups were vastly under-utilized as resources.

Volunteers were solicited primarily by the same techniques that accomplish other functions (communication and power systems, etc.) in rural America. Informal systems of recruiting extra-school personnel were used in almost all cases in which volunteers were actually recruited by the school. For example, personal contacts and telephoning were used much more frequently (84%) than was organized media (12%). Organized appeals to local social clubs were used less frequently (28%), although appeals to parent teacher organizations (a standard volunteer recruitment mechanism across the country) were used in 54% of all cases. Formal advertisement by posters was used in only 1% of the reported cases, formal appeals to community welfare agencies only 6%, and newspaper ads were not reported as being used. State-wide publicity was used in only 1% of all cases, and a formal newsletter in only 1% of the time. Organized parent training as a volunteer recruitment method was used in only 4% of all cases, and appeals to parent advocacy groups, only 12% of the time. This is highly reflective of the fact that so few rural communities have parent advocacy organizations (Helge, 1982). Table XLII below depicts primary mechanisms for securing rural special education volunteers.

Table XLII

MECHANISMS FOR SOLICITING RURAL SPECIAL EDUCATION VOLUNTEERS

	%
Informal recruitment systems (Word of mouth and telephoning)	84%
Appeals to parent teacher organizations	54%
Organized appeals to local social clubs	28%
Organized media	12%
Appeals to parent advocacy groups	12%
Formal appeals to community welfare agencies	6%
Parent training	4%
Formal advertisement by poster	1%
State-wide publicity	1%
Formal newsletter	1%

M. Primary Purposes For Which Volunteers Were Used With Rural Handicapped Students

Volunteers were primarily used for responsible, active roles with special education students rather than for assistance in program development or program evaluation. Involving parents in screening, outreach and aide capacities were quite common as was involvement in tutoring. The only group of volunteers exclusively used for one type of tutoring was high school students who were used for peer tutoring and for tutoring in sign language. (No other groups were reportedly engaged in these types of volunteer assistance.)

High School students were also reported to assist as coaches for Special Olympics. Repondents stated that there were mutual benefits for handicapped and non-handicapped high school students. It was relatively infrequent (16%) that these students were involved for the purpose of earning high school credits. An additional use of adolescents as volunteers included a 4-H Horseback for the Handicapped Program.

As with parent involvement, volunteers were primarily used to provide preschool and severely handicapped services. Senior citizens were primarily involved in Adopt-a-Grandparent Programs and Foster Grandparent Programs.

Parents were typically involved in parent advisory committees, Adopt-a-School programs, assistance with screening, field trips, swimming programs, Special Olympics; and tutoring. The only strictly professional volunteer assistance mentioned was the use of a lawyer by one cooperative for assistance with designing contracting procedures and interpretation of due process policies. Below are listed the types of roles for which volunteers were reportedly used.

Adopt a Grandparent Program
Assistance with field trips
Instructional aides
Foster Grandparents
Parent advisory committees
Adopt-a-school program
Asisstance with screening procedures
Assistance with swimming programs
Assistance with Special Olympics
Home-school coordinator program
Volunteer language literacy program
Assistance with contracting procedures and interpretation of due process policies
Job employment assistance
Deaf interpreters
Work in group homes and foster care

N. EFFECTIVE STRATEGIES OF SERVING RURAL CULTURAL MINORITIES

Respondents were asked to describe the most successful strategies they have used to serve culturally different handicapped students and to work with their parents in a rural environment. Participants expressed a great deal of dissatisfaction with their abilities to serve culturally minorities in ways that they thought would be most effective. For example, 46% stated that they had no effective strategies, and 62% stated that they felt one of the key tools for an effective program for minorities is to hire experienced bilingual personnel or at least a multicultural staff. However, 94% of those respondents espousing this philosophy stated that they could not practice it in their district because they had no qualified minority applicants. There was an overwhelming feeling among participants that qualified minority applicants could choose their positions, and that most did not choose to work in rural areas.

Respondents emphasized the importance of teaching students, peer professionals, and community members to respect minority cultures. Some stated that they had successfully had students involved in teaching this principle by simulations of what it was like not to understand the language or customs of the majority groups in a community. Others stated that their schools stressed cultural diversity as positive (e.g., by celebrating minority cultural holidays, etc.).

As a majority of the respondents said that ideal interpretors for minority languages were not available in their areas, they stated that they frequently used younger siblings, parents, trusted minority students, or volunteers to interpret or at least relate cross-culturally. Another strategy mentioned was to prepare children for acculturation and to include the community as the target for minority educational efforts. A majority (52%) stated that non-discriminatory assessment should be a high priority. However, only 22% of those respondents stated that they felt this occurred in their districts.

The preponderance of interviewees (52%) stated that it was essential that forms that parents were asked to complete be written in their native language and kept as simple as possible. Some districts stated that their forms were bi-lingual. Most stated that theirs contained only one language on any one form, for the sake of simplicity. Informal personalized meetings with parents were stressed as critical by 54% of those interviewed and home visits appeared to be common. The importance of informality in establishing rapport with parents was stressed to gain their trust. The necessity of spending extra time with minority children and parents was stressed, with the comment "always being available" a typical response.

Interprogram collaboration between special education, migrant, and health resources to special education was stressed. Although respondents frequently spoke disparagingly concerning resources for migrant and other transient rural populations available to them, they did state that these were necessary. Special material and curriculum were noted to be available from some regional agencies, state education agencies, and in the "Kids on the Block" puppet show.

Table XLIII below illustrates responses to this question.

Table XLIII

EFFECTIVE STRATEGIES RECOMMENDED FOR SERVING RURAL HANDICAPPED MINORITIES

Hiring experienced bilingual personnel and/or a multi-cultural staff	62%
Informal personalized meetings with parents including home visits	54%
Attempts to use non-discriminatory assessments;	52%
Simplicity of forms for parents to complete, and having forms in native language	52%
Availability of interpreters	22%
Teaching respect of minority cultures	16%
Using older siblings/parents/community volunteers	16%
Special materials and curriculum	14%
Interprogram collaboration between special education, migrant, and health resources	12%
English as Second Language tutors	12%
Group meetings with minority parents	10%
No effective strategies	46%
Not applicable (no cultural minorities served)	8%

O. Anticipated Future Problems of Rural Special Education

Table XLIV below illustrates the anticipated serious problems in providing services to rural handicapped students. Inadequate funding and problems recruiting and retaining qualified personnel were as prominent in future projections as they were in current problems reported by respondents. Respondents also felt threatened by inequalities of projected political actions that would impact rural special education. They were greatly concerned about effects of emerging technologies (e.g., ethical issues, lack of money to secure modern equipment, and speed of technological developments).

Table XLIV

FUTURE PROBLEMS ANTICIPATED BY RESPONDENTS

Funding inequities	80%
Political vicissitudes causing rural inequality	42%
Lack of qualified personnel (recruitment and retention)	41%
Technological demands and ethics	32%
Transportation	11%
Meeting vocational needs of graduates	7%
Other (training 1%, facilities 4%, drug-society related handicaps 1%, declining enrollments 6%, lack of local interest in special education 1%)	12%

F. RURAL SPECIAL EDUCATION POLICY RECOMMENDATIONS

Policy recommendations were primarily focused on (1) maintaining adequate funding levels for serving special education students, (2) enhancing government commitments to PL 94-142, (3) enhancing district/cooperative abilities to serve children and to recruit and retain rural special educators, and retaining parent rights in decision-making regarding their childrens' programs.

Table XIV below illustrates these points.

Table XLV

POLICY RECOMMENDATIONS REGARDING RURAL SPECIAL EDUCATION PROGRAMMING

Congress/President should maintain/increase funding levels so special education students can enter job market	68%
Congress/President should emphasize strong commitment to PL 94-142	65%
Parent rights in decision making regarding their childrens' programs should be retained	52%
Preservice training should adequately address rural special education training needs	48%
Increase money for rural special education inservice	46%
Programs for incentives for teaching in rural areas should be enhanced	38%
Address certification problems related to rural special education	38%
Creation of rural special education technology networks	37%
Emphasis on creation of future jobs including sheltered workshops	26%
Stronger overall commitment to rural special education technology	24%
Clarification of responsibilities of schools for medical and other related services	12%
Flexibility in federal/state regulations to meet rural needs	8%
Realistic look at federal regulations to eliminate unnecessary steps	4%
Mandate services for birth or prenatal to 20 years of age	2%

SUMMARY AND CONCLUSIONS

The inequity of opportunities for rural handicapped children is persistent and pervasive across America. Findings indicate that this is true in all types of rural economies, various school system administrative structures, and in sparsely populated remote areas or clustered small towns.

Primary service delivery problems have not abated since the original National Rural Project (NRP) studies of 1978-79. Rather, funding inadequacies have become more pronounced (reported by 74% of all respondents to be their greatest problem).

In addition, administrators reported that real and anticipated federal and state funding recisions (simultaneous with a 92% increase in rural handicapped children identified and served) threaten their abilities to reach full service goals of PL94-142. Personnel recruitment and retention problems have increased in scope (66% and 64%, respectively) and are reportedly related to personnel preparation inadequacies.

Other problems were also identified as related to greater implementation of PL94-142 in rural America. These included problems staffing for and delivering services to, low incidence handicapped students, particularly in remote locations. Transportation difficulties were a paramount problem, especially when climatic and geographic variables intervened in service delivery.

Personnel needs reflected a dramatic lack of specialists and low incidence personnel of all types. The hiring of large percentages of unqualified personnel had resulted, with emergency certifications rampant. Respondents reported that these problems were directly related to recruitment and retention and funding difficulties. (For example, 22% of all interviewees stated that they had no successful personnel recruitment and 44% no effective staff retention strategies to report to interviewers.

Technology is truly emerging in rural America, with 88% of all LEAs/cooperatives sampled having microcomputers, most (72%) using new technologies for instructional and almost half (42%) using them for managerial purposes of the school system. Staff computer literacy tended to vary in proportion to the availability of computer availability, as did the use of computers by handicapped students. Disabled students primarily used computers for instruction. When computers were reported not to be used by a school system's handicapped students, these reasons were typical: computer unavailability, or school staff untrained in the use of the computers or their applications for handicapped students.

Because of federal and state funding recisions, rural special educators were identifying and using new resources for their programs. These primarily consisted of new caregivers (41%) and to a lesser extent new funding sources (33%). Interagency and interschool collaboration continues to grow, out of necessity, to enhance resources for rural special education programs.

Parents of rural disabled children are still primarily involved in rural schools via mandated (e.g., IEP meetings) or traditional (parent teacher organizations) ways, although some innovations have been found. Organized parent training apparently is still rare (8%).

Volunteers are still grossly under-utilized in rural America. Over half (61%) of all sampled school systems use none, and most uses are somewhat traditional (e.g., assistance in one-to-one tutoring or in supervising field trips). There were feelings that rural communities, because of their inherent "sense of community" and personability, were prime avenues for organized volunteer activities. However, the current state of the art was reflected by statements of school personnel that they did not have time or energy to effectively mobilize volunteers. When volunteers were used, efficient inherent rural communication and solicitation systems were used (e.g., informal personal contact) vs formal advertising and other recruitment mechanisms. Volunteer roles were primarily active, direct roles with special education students rather than assistance in program development or evaluation.

Effective strategies of serving cultural minority children continued to elude many rural school systems even though many respondents had definite ideas concerning workable strategies. For example, the vast majority (62%) of all respondents understood the importance of hiring qualified bilingual or multi-cultural personnel, but stated that such personnel could "write their own ticket" and were extremely difficult to recruit to rural areas. Respondents stated that they struggled to develop rapport with culturally diverse students and their families and attempted to simplify forms or have them written in parents' native languages. Interviewees expressed serious problems regarding serving migrants and other transient handicapped populations.

Interviewees forecast that the most serious future problems facing rural special education programming were consistent with the predominant current problems of funding and personnel recruitment and retention. Respondents were also concerned about emerging technological issues (e.g., ethics, and the speed of technological development vs. inequities of rural funding for acquisition.)

Recommendations for national policies impacting rural special education focused on enhancing funding levels, increasing government commitment to disabled students living in rural America, retaining parent rights in decision-making, and facilitating school system abilities to adequately serve rural handicapped students.

LIMITATIONS OF THE STUDY

Although an n of 200 school systems limits conclusions which can be drawn for the entire United States, this is the largest number of rural LEAs, cooperatives, and BIA schools ever involved in a national rural special education-focused study.

Although interviewees were encouraged to honestly express their perceptions, look at formal documents of their school administrative unit, and solicit the opinions of their staff (often resulting in a two-part interview after administrators had time to visit with their employees), the author is in no position to judge the status of special education services in rural areas that had no participants. Also, participation in the study was voluntary, creating the possibility of sample bias. However, only one of the original pool of 201 respondents declined to participate.

The number of respondents per each federal region varied significantly, although each state was equally represented in the total n, and the percentage of interviewees from each region was proportionate to the number of states in that region.

Several aspects of the research design were planned to enhance national representativeness of findings:

A. Each finding was compared to those of earlier U.S. Office of Special Education Programs (SEP) and American Council on Rural Special Education (ACRES)-funded studies. Most findings supplemented baseline information gathered at an earlier date. The primary differences were in service delivery problems identified. Those differences were because of increased percentages of respondents experiencing certain problems, and due to newly surfaced problems. (School systems had by 1983 had significant time to experience increasing difficulties in their attempts to meet fully service goals of PL94-142 in an era of declining federal, state, and local fiscal resources.)

B. Data were gathered from a national sample of rural districts, cooperatives, and BIA schools representative of geographic, cultural, and socioeconomic rural subcultures. Careful assessments were made of various types of economies, population densities, and organizational structures of the school systems.

C. The *n* of 200 sampled districts, cooperatives, and BIA school school systems in this study is the largest number of school systems ever involved in a national rural special education-focused study.

Researchers consistently are challenged by the potential that responses to questions such as, "What are your major problems in serving the handicapped students in your rural area?" are answered in the context of current crises. This was a particular concern because rural school systems have not typically conducted systematic needs assessments involving standard setting processes. Attempts were made to confront this challenge by:

A. Seeking input from a relatively large *n* (for a study of this type).

B. Noting repetitions between the results of previous studies and data collected as part of this effort.

C. Attempting to verify comments by encouraging administrators to peruse formal documents of their school administrative units, and solicit the opinions of their staff. This often resulted in a 2-part interview after the interviewee had time to visit with his or her employees.

Further data gathering and analysis currently being completed is expected to offer more information on the concerns in this document. Of particular value will be data comparing divergent responses between LEA, cooperative, and BIA school system personnel.

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APPENDIX A
List of States in Each Federal Region

FEDERAL REGIONS

Region I:	Connecticut Maine Massachusetts New Hampshire Rhode Island Vermont
Region II:	New York New Jersey
Region III:	Delaware Maryland Virginia West Virginia Pennsylvania
Region IV:	Alabama Florida Georgia Kentucky Mississippi North Carolina South Carolina Tennessee
Region V:	Illinois Indiana Michigan Minnesota Ohio Wisconsin
Region VI:	Arkansas Louisiana New Mexico Oklahoma Texas
Region VII:	Iowa Kansas Missouri Nebraska
Region VIII:	Colorado Montana North Dakota South Dakota Wyoming Utah
Region IX:	Arizona California Hawaii Nevada
Region X:	Alaska Idaho Oregon Washington

APPENDIX B
Rural Special Education Administrator
Telephone Survey Form

RURAL SPECIAL EDUCATION ADMINISTRATOR TELEPHONE SURVEY FORM

Introduction:

This questionnaire is designed to obtain information about regional (geographic) differences in opinions and needs. We also hope to ascertain differences in responses relevant to the types of rural communities (remote schools vs. those located in clustered townships, etc.).

All responses are confidential and a copy of the report of responses will be available to all respondents.

Survey Questions:

1. Describe the community(ies) surrounding your district/cooperative as:

   ___remote (sparsely populated)
   ___clustered small communities (more densely populated)

2. Describe the primary economy(ies) of your service region: (try to use one of the following types of variables as descriptors).

   ___agricultural
   ___small businesses/industries
   ___manufacturing
   ___mineral extraction
   ___resort area
   ___other (specify) ______________________________

3. Were you, or any staff working for you, trained specifically to work with rural handicapped children and staff? (Note to interviewer: Mere location of a university in a rural area does not necessarily mean training for nor preparation for working in rural America.)

   ___yes
   ___no

4. What additional preservice training do you wish you had received, but did not? (Please be specific with your answers.)

5. (a) What were the greatest strengths of your preservice training?

   (b) Name some specific learning experiences received in your preservice training that contributed to your success in a rural community (e.g., a practicum in a rural community, etc.).

(c) What were the weaknesses of your preservice training? (Address quality and voids; state specifically how training should be changed.)

6. What factors in your preservice training led you to be recruited for your work with handicapped children in a rural area?

7. Have any factors in your preservice training made the difference in retaining you in rural America? (Note to interviewer: e.g., "hands-on" work in a rural area made them know what to expect.)

8. What are the most successful recruitment and retention strategies you have used?

9. What specific factors would demonstrate a high quality rural special education pre-service program? (Note to interviewer: e.g., internship in rural areas, faculty from rural school backgrounds, rural parent involvement, etc.; make them tell you specifics. E.g., they say "quality faculty", you say "how do you know" they are quality faculty? or "describe the practicum," etc.).

10. What additional preservice training regarding consultative skills is needed? (Note to interviewer: e.g., how to work with teachers and/or parents from rural backgrounds.)

11. What do you wish you had known about working in a rural community before you began doing so?

12. What special education positions are most needed, but are nonexistent or unfilled or are unfunded in your district/coop? (Note to interviewer: If they say which are nonexistent, or unfilled, or unfunded note the difference for our report.)

13. Describe the most innovative resources you have found and used during the last two years. (Note to interviewer: e.g., funding via a new source, using retired professionals as caregivers, etc. Get as much and as specific information as possible, to share with the other service providers.)

14. What are the most successful strategies you have found to serve culturally different handicapped students or to work with their parents in a rural environment?

15. Describe the most effective strategy you have had for finding and involving volunteers in your special education programs.

16. What are the most successful strategies for involving parents?

17. What are the biggest problems your district/coop faces in trying to serve rural handicapped students? (Name them in the order that they are a problem.)

18. What problems exist with teacher certification in your state as related to serving rural handicapped students? (Note to interviewer: e.g., emergency certification to fill positions, etc.)

19. What is the status of emergency certification?

20. What technology does your district/coop have? (Note to interviewer: e.g., telecommunications, micros, videodiscs, satellite, etc.)

21. What are the best ways in which your district/coop uses technology?

22. Does your staff understand how to use computers?

23. Do your rural handicapped students use computers? If so, how are they trained and how do they use them? If no, why not?

24. What other technology do you need and for what purpose? (Note to interviewer: e.g., instructional, managerial, inservice, etc., and for what purposes.)

25. What do you think are the most serious future problems of rural special education?

26. Do you have any policy recommendations for the future?

27. Are there additional comments you would like to make?

APPENDIX C

Instrument for Discrepancy Evaluation of NRP Research-Based Rural Preservice Competencies

National Rural Project (NRP)
Murray State University
Murray, Kentucky
Doris Helge, Ph.D.
Project Director

RURAL PRESERVICE COMPETENCIES

The following rural preservice core competencies evolved after 3½ years of research in over 100 rural school districts and cooperatives across America. Findings that attrition rates of 40-50% are common and that 94% of all states reported serious personnel recruitment and retention problems are directly related to the Office of Special Education Programs (SEP) emphasis on quality teacher education.

If a majority of your graduates become employed in rural schools or if you have a special emphasis on preparing rural special educators, please evaluate the nine core competencies below as follows:

In Column "A", place a check mark (✓) opposite competencies upon which your training program focuses.

In Column "B", identify the level at which a competency is addressed (if you have placed a checkmark in Column "A"). Designate the graduate (G) or undergraduate (UG) level.

In Column "C", rate the importance of each of the nine competencies according to the following scale: 1 = no importance, 2 = little importance, 3 = some importance, and 4 = great importance to the field.

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RURAL PRESERVICE COMPETENCIES

"A" What Currently Exists in Your Institution	"B" Level at Which Competency is Addressed Graduate (G) or Undergraduate (UG)	"C" Importance of Each Competency to the Field 1 = No, 2 = little, 3 = some, 4 = great	Competency
________	________	________	Students will demonstrate an understanding of the context of a rural school and its environment
________	________	________	Students will demonstrate an understanding of differences involved in serving handicapped students in rural and in urban environments.
________	________	________	Students will demonstrate knowledge concerning the state-of-the-art of rural special education
________	________	________	Students will demonstrate knowledge of effective service delivery models for rural handicapped children (including low-incidence handicaps such as severely emotionally disturbed, hearing impaired, and visually impaired).
________	________	________	Students will demonstrate an awareness of alternate resources to provide services to rural handicapped students and skills to identify alternate resources.

"A" What Currently Exists in Your Institution	"B" Level at Which Competency is Addressed Graduate (G) or Undergraduate (UG)	"C" Importance of Each Competency to the Field 1 = No, 2 = little, 3 = some, 4 = great	Competency
________	________	________	Students will demonstrate skills in working with parents of rural handicapped students.
________	________	________	Students will demonstrate skills in working with citizens and agencies in rural communities to facilitate cooperativeness among schools and service agencies to serve handicapped students.
________	________	________	Students will demonstrate an understanding of personal development skills (a) for their own professional growth and (b) to build a local support system in their rural environment.
________	________	________	Students will develop skills in working with peer professionals from rural environments.