Isolated by distance and geographic barriers from population centers, services, current information, and opportunities, 15 of Nevada's 17 school districts are not simply rural, but are remote. Servicing districts that average fewer than 2 people per square mile, 21 elementary schools have only 1 teacher. Sixteen high schools have enrollments of less than 100. Curricula in remote schools is limited, depending on resourcefulness of teachers, administrators, and community members to fill gaps from lack of art, music, counseling, physical education, library, or vocational specialists. Alternative strategies for remote schools include multigrade arrangements, itinerant services, assistance from multi-school principals, employment of paraprofessionals, and rotating diagnostic-prescriptive services. Use of computers and video tapes is increasing but remote areas lack access to television/satellite transmission. Mildly/moderately handicapped children are mainstreamed while severely handicapped are unserved or institutionalized. Teachers must be "competent generalists," with skills in individualizing instruction for all students. Teachers either spend a lifelong career or only 1 or 2 years in remote schools. Despite teacher benefits including housing subsidies and isolation salary bonuses, districts cannot always fill positions. Teacher training, retraining, and inservice needs are extensive and are beginning to be addressed by the Nevada Rural School Alliance, formed in 1983. (NEC)
Teaching and Learning in Remote Schools: A Dilemma Beyond Rural Education

By Robert J. Scott
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MOST STATES WEST OF the Mississippi River experience problems associated with the fact that they encompass schools and school districts that are not simply rural, but are remote — isolated by distance and by geographic barriers from population centers, services, current information, and opportunities. Nevada is such a state.

Within a land mass of 110,540 square miles, Nevada's total population is only 917,870. The state is divided into 17 counties, which are also school districts. The average of 8.3 people per square mile takes into account the metropolitan centers of Las Vegas (Clark County) and Reno (Washoe County). Among the remaining 15 counties (or school districts), four average fewer than two people per square mile, and six average fewer than one person per square mile. In these counties, a small number of people are dispersed over thousands of square miles that contain few organized communities. For example, Nye County is the third largest county in land mass in the United States (18,064 square miles), yet its population density is only 0.85 per square mile. Its communities (with approximate population figures) are: Tonopah (8300), Pahrump (3600), Beatty (1200), Gabbs (900), Round Mountain (500), Amargosa (250), and Duckwater (200). Particularly in the latter five, the population tends not to be entirely clustered but to be dispersed over distance. Moreover, to travel from one of these communities to the others, consecutively, would require a trip of more than 2,300 miles. Therefore, of these seven communities, only Tonopah and Pahrump fall into the category traditionally defined as rural. The remaining organized areas and their schools are characterized by their remote nature.

Among the schools in Nevada's rural remote counties, 26 are schools in which one, two, or three teachers are responsible for instruction of grades 1 through 8. Two of these 26 schools have three teachers. Three have two teachers. The remaining 21 are one-teacher schools. In these same counties, there are also 16 high schools with enrollments of 100 or less.

Remote schools are as far as 350 miles from a central administrative office. Many students in these areas of low population density spend up to two hours on a school bus, each day. Some adolescents live more than 100 miles from the nearest high school and therefore live in towns with relatives or in boarding homes in order to attend school. The logistics of travel to such extracurricular activities as sports events are out of the ordinary. A typical basketball trip in Humboldt County will include two games, one on Friday and one on Saturday. The travel will cover well over a thousand miles.

In many remote parts of the state, the population fluctuates dramatically in relation to fluctuations in the prices of gold and other metals that are mined here. Within a 30-day period, a district can lose a substantial proportion of its average daily attendance (and student turnover in a single school can be 50 percent or more) because the price of gold has fallen below a certain point and the mines shut down. Some superintendents check the Dow-Jones closings and the London gold fixings regularly, in the attempt to anticipate such events.

Nevada's remote areas also have multicultural concerns. Besides people of Hispanic origin, there are small clusters of Basque, Cornish, Greek, Austrian, Japanese, and other ethnic groups, as well as several tribes of Native Americans, primarily Pahutes and Shoshones.
The Communities

The "community" may be a valley 50 miles long, with no residence within several miles of the school, or a much larger terrain with a very low population density. Residents make a living by ranching or mining, unemployment averages 15 to 20 percent.

Although there are physicians in some of Nevada's rural areas, there are none in its remote reaches. Babies are often delivered by fathers or midwives. Portable vans house well-baby clinics and provide vaccinations and other routine medical services periodically. Sheriff's rescue teams, helicopter medical evacuation teams, or forest rangers respond to emergencies, and people must often be transported well over 100 miles to reach a clinic and still farther to reach a hospital.

Since distance often precludes the formation of organized clubs or social organizations, the school tends to be the center of the community and the setting of many activities in which the adult population is directly involved. Community members feel that they own the school and have a stake in it.

Socially, there is more warmth and acceptance in these small communities than in cities. It is "hard to keep young teachers single," and no teacher will have difficulty becoming part of the community if he or she wants to. The community relates to the school as its center. The teacher is the center of the school and is regarded as an important and essential asset. Nor are parents passive with regard to the school. There is generally rapport and trust between parents and teachers, and far better cooperation by parents than is found in many urban centers.

The ability of a single teacher in a small, remote school has a powerful impact on the education of these students. What students learn is much more closely related to the skills and personality of the individual teacher than is true in large metropolitan schools.

Educational Characteristics

Remoteness causes difficulties in operating schools that districts traditionally defined as rural, urban, or suburban do not experience. State funding is not sufficient to provide the levels of service that other types of districts can provide. Curricula in remote areas are more limited than those in rural areas because of the high costs associated with offering a wide range of services and facilities for an even smaller student population. Whereas Nevada's rural schools can include physical education facilities, shops, and other features, small remote schools can offer little beyond the three R's.

Because there are no special services to provide art, music, counseling, physical education, library resources, or prevocational education, teachers in remote schools incorporate these into their own teaching agendas. In many cases, the resourcefulness of teachers, administrators, and community members has helped to fill these gaps. District wide library books, resources, services, and instruction are being used successfully in traditionally defined rural settings, their use is often ruled out in remote districts because distance and terrain interfere with reception. Nevada's remote areas have no satellite stations nor mountaintop relays and, thus, no one in these areas is able to get decent reception on a television screen. Some schools are, however, using videotapes and videotape recorders.

In response to all of these contextual challenges, alternative strategies for Nevada's small remote schools include multigrade arrangements, itinerant services, assistance from multi-school principals, the employment of paraprofessionals, and rotating diagnostic-prescriptive services. The organization of eight grades in one, two, and three room schools is necessitated by small enrollments in remote areas and by the accompanying fiscal limitations regarding the teaching staffs that can be hired.

The frequency of special services varies from once a month to once a week. Nursing and psychological services are typically available once a month, whereas speech therapy is often available on a weekly basis. Some rural communities contract for the services of occupational and physical therapists, but the availability of such services in remote areas is highly unlikely. For visual, auditory, and psychological testing, some districts employ central office personnel who are qualified to perform these evaluations as itinerants, other districts purchase these services from agencies in metropolitan centers.

All but a few handicapped children in remote Nevada are
taught in regular classrooms by regular classroom teachers. These are mildly to moderately handicapped children in grades 1 through 8. When a school serves no more than a dozen or so students altogether, a child with a mild to moderate handicap may not always be present in the service area’s school-aged population. The high cost of providing special services to this small number of students, and the fiscal and logistical difficulties of deploying itinerant special educators over great distances restrict the provision of special education classes in remote areas. However, all graduates of Nevada’s teacher education programs in elementary and secondary education must now have completed two courses in special education, and all practicing teachers must complete one course in special education and one course in multicultural education to be recertified. Similar requirements exist in many other states from which Nevada’s teachers are recruited. Moreover, the mildly or moderately handicapped child in a remote school is not part of a multicategorical group of students with diverse types and degrees of disability, rather, he or she is usually the only handicapped member of the student group, and, as such, receives the considerable benefits that accrue from learning with and from nonhandicapped peers.

In 12 of the 15 counties with remote areas, school psychologists are employed to work with teachers and students on a referral basis. The other counties do not have school psychologists on the payroll, but purchase these services from another district or from the universities. If a student is identified as handicapped, the psychologist works with the teacher on a plan of action and assists in the development of an Individualized Education Program. The psychologist orders the materials indicated by the student’s program and otherwise helps the teacher with its implementation. Speech therapists also travel remote schools, setting up speech and hearing programs for parents and teachers to follow, monitoring programs and the progress of students, and providing additional assistance and materials, as needed.

Most school-aged children with severe or profound handicaps are either unserved, institutionalized, or receiving educational services in a metropolitan area. Although even the remote schools include children with physical handicaps and multiple handicaps of some kinds, the relatively small number who are severely mentally retarded, severely emotionally disturbed, deaf, or blind continue to receive services outside the school system. In Elko County, most of these children are enrolled in a private developmental center at the county’s expense. There are also interdistrict agreements whereby severely handicapped students are placed in urban settings. The full inclusion of severely handicapped children and youth in remote schools in Nevada will take ingenious applications of technology, greater access to related services, considerably more interagency agreements, and special structural arrangements for itinerant services, home programs, and parent training.

The Teachers

Teachers in small remote schools have to be competent generalists, with skills in individualizing instruction for all students, in planning instruction according to individual learning styles, in grouping children for instruction, in managing multiple activities, and in using creativity and ingenuity in working with children and using local resources. The nature of the remote schools requires, in essence, that all students have an individualized program, whether they are handicapped or not.

For example, the teacher in Deno (in Humboldt County) has 16 students over eight grades, which means that he has approximately 48 preparations (8 grades x 6 subjects). Each teacher in a multigrade situation has a similar workload. Each remote school employs an aide, and many aides and some teachers are also bus drivers. Deno is more than 100 miles from the district’s central administrative office, and this distance makes inservice training, support services, colleague-to-colleague sharing, resource exchange, and every kind of communication difficult. However, the teacher in Deno, and the teachers in most of Nevada’s remote multigrade schools, are succeeding in providing sound instruction.

The very best experience a teacher can have is that of teaching in a remote school. By mastering the multigrade classroom, these seasoned people have come to understand individual differences, instructional grouping, and the reinforcement of learning. They know curricular skill sequences across grades and subject areas, they understand direct instruction and increments of learning. They approach classroom instruction with the same logic that people use for problem-solving in everyday life — by assessing the present situation or problem, determining steps to take to deal with it, taking those steps, evaluating the result, modifying the approach as necessary, re-evaluating, and so on.

Veteran teachers in remote schools become experts at organizing peer tutoring and managing cross-age and cross-grade activities. They know how to use whole group sessions to develop inquiry and thinking skills in students. The situation in which they work enables them to grasp the relationships within curricular components. For example, when teaching phonics, one can simultaneously teach spelling. If a teacher is helping a student to identify the main idea in a reading lesson, that teacher can simultaneously be teaching the child how to develop the topic sentence in a paragraph. A teacher, in teaching main ideas, one can use a science or social studies text, not just a basal reader,
and thus the teacher and student can work with two subjects simultaneously.

Instructional practices such as these are paramount necessities in remote schools. We believe they are also essentials of good instruction, regardless of the geographic location of the school, and that they benefit both handicapped and non-handicapped students.

**Housing Subsidies and Other Incentives**

There is a common concern in rural and remote communities to find housing for teachers. In remote areas, both housing and utilities may be subsidized. In one area, the reduced rate is $100 per month for a three-bedroom house, and the teacher pays for utilities. In another, the teacher pays $100 per month for a trailer, and all utilities are paid for by the district. One county owns a multi-unit duplex for teachers in one of its rural townships, another owns a trailer court for teacher residences.

The base salary ranges between $13,500 and $14,500, plus employee benefits. Other benefits are also provided. Counties pay the full pension costs (both the employer's and employee's shares) and, of course, housing costs are subsidized for all teachers in remote schools. One county still offers an isolation bonus for service to remote locations, the differential is $350 to $500 per year, based on mileage from the central administrative office. Aside from these rather modest incentives, people who have served at remote sites receive special consideration for other county jobs that open up.

**Recruitment and Attrition of Personnel**

Teachers in remote schools typically follow one of two patterns. Some stay for many years or for a lifelong career, others stay for one or two years and then depart. Administrators spend much of the summer recruiting. They have found job banks less effective than direct mailing of flyers to smaller colleges and universities across the country.

Districts cannot always fill open positions. The problem is not simply a matter of quantity, but also of quality, as it is preferable not to fill a position than to fill it with a person who lacks the skills to perform this very demanding role effectively. In cases of unfilled positions, a substitute or a multi-school principal takes the teaching role until a qualified teacher can be found. On occasion, the absence of a qualified teacher makes it temporarily impossible for a program to operate.

**The Preparation of Teachers**

Nevada's remote and rural schools are in need of adequately and appropriately trained teachers and paraprofessionals. Colleges and universities are generally not producing personnel who know how to handle multiple preparations, to individualize instruction, to understand curricular sequences across subjects and grades, to group and regroup students around learning tasks, and to apply other strategies necessary with heterogeneous groups of students. Teachers need to be sensitive to learning styles that are manifested by children in their classrooms. For most areas of Nevada, the matter of learning style is just as important as the language factor in children from other cultures, but too few teachers have been trained to respond to these variations. Teachers in rural and remote schools must particularly be critical consumers of materials, with the ability to identify and match instructional materials to individual student needs.

Adding the principles of special education to the preservice curriculum of all teacher trainees would be acceptable if all of these graduates developed competence in individualization of instruction, curricular sequencing, student grouping, and mastery learning. For those in remote, rural, and small districts, this is what genuine instruction represents. With more skilled generalists of this type, there would be fewer needs in any district of any size to label children as learning disabled, and fewer children would be categorized as slow learners or non-achievers.

If colleges and universities are concerned with preparing personnel for service in rural and remote areas, the only sensible approach is to send trainees to such sites for internships and practical experiences which emphasize the skills and understandings that are needed, and which expose students to the very positive features that exist in rural and remote areas. The University of Nevada in Reno does send preservice trainees for an internship in Elko County. These trainees come in pairs, and the county provides them with extremely inexpensive housing. Each trainee is supervised by the head teacher of a one, two, or three teacher school. Each also receives the same supervision that teachers receive from the multi-school principal, and each is also supervised by a university faculty member who generally visits twice during the internship. The university seems reluctant, however, to place trainees in situations where they cannot be immediately supervised by faculty members. This reluctance might be assuaged somewhat if higher education would appoint master teachers from remote areas as adjunct faculty members for the precise purpose of supervising trainee practice in such schools.

The greatest challenge is to re-educate or retrain teachers who are new to remote schools. It takes at least a month of assistance from the principal and others to orient personnel to the individualization and planning that must occur. While children in remote schools benefit from learning from each other, their teachers are often located too far apart to engage in much mutual exchange. If a teacher in a remote school has problems, however, most counties hire a substitute in order to bring the teacher together with a
successful, long-term teacher from another school. The two teachers will teach together, eat together, and often share living quarters during this experience, and the almost always establish substantial and lasting contact. This has been the best tool for helping teachers to improve, and additional funding for this kind of professional development is much needed.

In some counties, teachers from remote schools may come together for a summer session in which they share and develop methods and materials. Elko County conducts two inservice workshops each year, which all teachers attend as part of their contractual agreements. These workshops improve attitudes and teaching skills demonstrably and should be available more frequently. Teachers in remote schools continue to need more training in procedures for educating handicapped students. The University of Nevada in Las Vegas provides training and technical assistance of this nature to teachers in the southern part of the state, and the Nevada Department of Education's Division of Special Education operates a Rural Assistance Project, which provides training and other services, but many remote teachers have to travel prohibitive distances to participate. Requests for inservice training are met by the State Department of Education or by the universities, but teachers need to come together much more frequently for training and information.

The Rural School District Alliance

The Nevada Rural School District Alliance was formed in 1983 to improve the quality of education available to those in outlying portions of the state. The Alliance represents rural and remote education in all of the 15 counties outside the state's two metropolitan centers. Local school boards have approved the concept, support local membership in the Alliance, and have allocated funds for its startup costs. This inter-district organization will provide rural and remote administrators with an open means of communication with one another, as well as a central information center where they can determine how similar districts are dealing with specific problems and questions. Unified efforts by all districts will increase each district's capabilities for providing quality programs.

A superintendent of schools from each region of Nevada sits on the Alliance's Board of Directors, which meets regularly to review and take action on requests from districts and to advance the planning of the Alliance. An Executive Secretary coordinates the program and plans for program funding.

Education in Nevada's remote areas represents the combined strengths of teachers, administrators, students, parents, local residents, and the resources that can be marshalled for this effort. Education in remote areas is also typified by difficulties and needs that are unique to each school, and by problems that are shared in common by all such schools. Without a concerted and unified effort, the strengths of remote education will not be sufficient to overcome the weaknesses. By stimulating leadership development and linkage among district leaders, the Alliance intends to help schools, teachers, students, parents, and the community to improve the quality of education in remote areas of the state. The short-term and long-term plans of the Alliance will address the problems and needs described in this report. Further information will be shared as the Alliance's programs develop.

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This article and the report on teaching and learning in remote schools were prepared as a mutual effort by Mr. Scott and other members of the Rural School District Alliance: ELMO DERICCO, Superintendent, Churchill County School District; F. GREGORY BETTS, Superintendent, Douglas County School District; CHARLES H. KNIGHT, Superintendent, Eureka County School District; JAMES BULLOCK, Superintendent, Esmeralda County School District; SELWAY MULKEY, Superintendent, Eureka County School District; LEON HENSLEY, Superintendent, Lander County School District; NELDON MATHEWS, Superintendent, Lincoln County School District; HARRY DICKSON, Superintendent, Carson City School District; JANET WALSH, Superintendent, Lyon County School District; ARLO FUNK, Superintendent, Mineral County School District; JOAQUIN JOHNSON, Superintendent, Nye County School District; JAMES P. KILEY, Superintendent, Pershing County School District; ORVILLE D. CULLEY, Superintendent, Storey County School District; and RUSSELL McCOMBER, Superintendent, White Pine County School District.
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