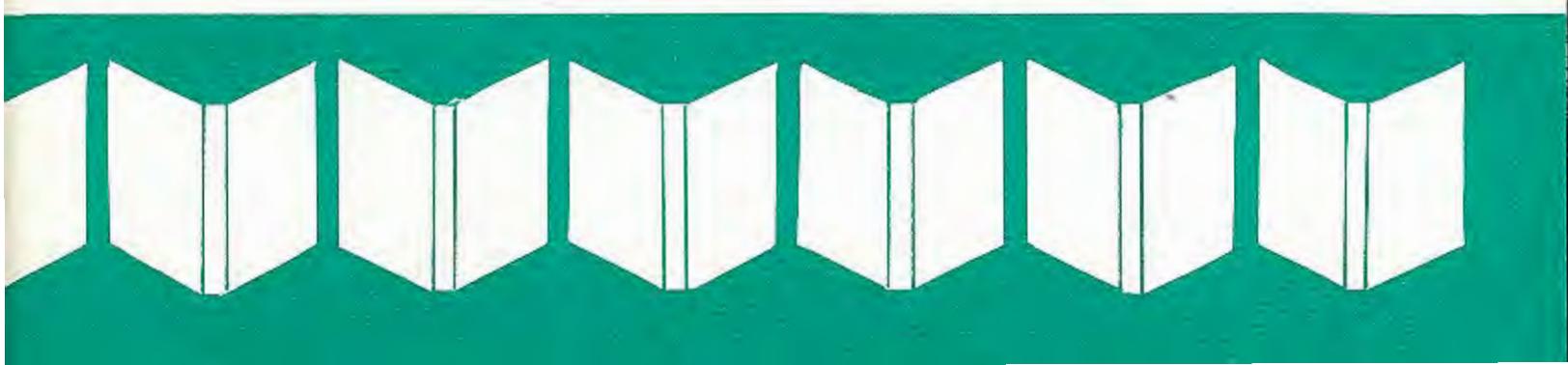


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# **educational considerations**

**published at kansas state university college of education**



## Viewpoint

# The future of rural schools

We have in this issue a provocative set of contributions which both poses new directions as well as delineates problems to which rural educators must respond, either immediately or at least eventually. The issue has a decidedly western flavor since most of the authors are either now, or have until recently, been working and living in the shadow of the Rocky Mountains. Perhaps readers will forgive us if an occasional hint of regionalism manifests itself. If challenged on this point I suspect most of us would only smile and say we deserve the latitude, (in our best Gary Cooper tradition, of course).

If my colleagues' contributions can be taken to task at all it might be because they have, in the midst of their recommendations for the future, probably been too supportive of the present educational establishment. The underlying assumption has repeatedly been one of suggesting rather cautious directions which indeed can be fully accommodated by the existing order. Perhaps such conventional wisdom will be the key to the future. However, I believe that compelling arguments can be made for a much more sweeping philosophical restructuring, especially in teacher education.

Our present view of teacher education is one steeped in a kind of engineering mentality, a view which considers the teacher as craftsman rather than professional, even though we lay claim, rhetorically, to professionalism. The result is that the engineering philosophy reduces education to its most primitive character whereas a professional philosophy seeks to prepare the teacher to effectively deal with diversity and, as indicated several times in this issue, response to diversity is the name of the game.

Until we recognize the need for rethinking teacher education we will continue to see rather unimaginative and somewhat simple-minded schemes to improve rural schooling.

The issue is one of awakening teacher education to its responsibilities. The major step, I believe, is to recognize the unique opportunities teachers have to serve as architects of the future, and consequently, the responsibility of teacher education to prepare and assist teachers in that work. This of course will require teacher education to abandon, or at least to relegate to relatively minor status, our current penchant for such weighty issues as the design of competency based programs to effect a more orderly lunch line. Instead we must commit to the concept of the educated, literate person as teacher rather than to the shallow, trained performer of management skills.

The future alternatives for education in general, and teacher education in particular, are in fact quite clear. The education system, like any other system, must obey the age-old imperative to either evolve in response to changing conditions or become extinct.

By the way, I'm sure the reader is aware of the fact that elementary students know much more about dinosaurs than about their own physiology, or culture, or history and . . . but that's a topic for another time.

**Jerry L. Jinks**  
Guest Editor

# educational considerations



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## The diverse nature of rural America must be recognized

# Rural education: Issues in diversity

By Everett Edington and Judi Conrad

Robert lives in a small native village halfway between Fairbanks and Nome in the state of Alaska. He is 12 years old, a sixth grader in the local two-teacher school. In his school, there are 35 students; the school contains grades 1 through 8. Robert comes from a family of nine children. His father does a little prospecting on mine claims as well as some trapping and fishing on the river during the salmon run in the summertime. Robert has his own trap lines in the winter months. He has earned enough from trapping to buy his own snowmobile which he uses to run the trap lines.

The school Robert attends is a two-teacher school. Both teachers are women; one has lived in Alaska her entire life; the other has been there for four years and recently married. In addition to the responsibility of teaching, these teachers share the responsibility of seeing that in the winter the furnace is running, and that the generator is operating properly so that there are lights and electricity. There is a backup generator at the school in case one goes out. Because all supplies are brought in by barge, and only during the summer months when the ice has melted, Robert's teachers operate in extensive isolation.

John is a high school sophomore in Nebraska. His father owns a farm and has 1,800 acres of wheat; John's father also runs 200 cows in a cow/calf operation. Last

year, John was President of his Greenhand Class in the Future Farmers of America; his goal is to receive the state farmer award in that organization. In addition to his activities in FFA, John is active in the school sports program. His school consists of 300 students; John rides a bus 15 miles one way every day to get to school. The school has a fairly broad curriculum for its size, offering three years of foreign language as well as advanced mathematics. The vocational program, in addition to vocational agriculture, offers home economics and business courses. Some people in the town are working to initiate an auto mechanics class to start in the fall.

John's father is well educated, a member of the school board, and a strong advocate of preservation of rural America, the family farm, and the rural values he has known all his life. At dinner time, the family talks farm price controls, impending legislation, market fluctuations, fertilizers, cattle breeding, etc. John likes his school, his community, and his family's way of life. He expects someday to inherit the family farm and he knows that the responsibility makes it incumbent upon him to learn everything he can about the business. He expects to go to college, marry locally, become a major contributor to his community and, like his father, pass the farm on to his sons.

Mary lives in a rural town in southcentral Georgia. Mary is one of nine children. She is eight years old and in the second grade. Her father still farms the small family farm which has been passed down for generations. Her mother works as a maid in a local hotel in town. Her father has an eighth-grade education, and her mother dropped out of school during her first pregnancy when only a sophomore in high school.

At eight years of age, Mary has not learned to read yet; her teachers think she is slightly retarded, that she needs remedial, if not special education. However, in Mary's community there is little support for education, much less special education. Most of the local farmers are too busy putting food on the table to concern themselves with school affairs; moreover, they feel incompetent in the face of formal educators. There is very little encouragement for reading from Mary's parents as both are tired when they get home. With a large family, the major responsibility, as they see it, is keeping the kids clothed and fed. Mary's father resents the fact that school keeps his boys from helping in the fields. In fact, he often keeps them out of school on the pretense of illness.

Marge is a senior in a rural high school in Colorado. Recently, her small community has experienced a drastic change. With the discovery of coal the town has suddenly become a boom town. Marge's parents own a small grocery store and as tradesmen they have welcomed the influx of population and trade. However, Marge has not been pleased with the changes in her school. She has always been an A student and a leader in her school. With the influx of new students, coming from predominantly lower socio-economic backgrounds and urban environments, Marge has found her security threatened. The new kids have teased her unmercifully, called her a teacher's pet, tried to steal away her friends, and called her square when she refused to play around with drugs. One of her best friends has started to run with the new crowd, and Marge is finding herself confused and torn between the excitement of the new kids and the security of her old values. She no longer feels safe walking on the streets at night, and her parents only talk about all the

money they are making. Marge's grades have dropped; her boyfriend of three years is now going with a new girl, and Marge is planning to leave as soon as school is out. She doesn't know where nor does she care. She just wants out!

Because rural people are not a homogeneous group and because rural environments can vary considerably, education in rural America necessitates diversity. Often subject to inequities and generally undergoing dramatic changes, rural education presents inordinate challenges. Nevertheless, the diversity of the American rural education experience is frequently overlooked. As a nation, we tend to think of rural Americans as a singular group. Likewise, rural education is generally defined in terms of its counterpart—urban education. The fact is, rural education is as diverse as the populations it serves, and rural populations are becoming increasingly different, for the rural areas of this country are changing.

In many areas of this country, rural America is experiencing reverse migration; that is, thousands of people are moving out of the cities and into rural areas (Ross & Green, 1979). In other parts of the country, particularly in the Intermountain West, energy boom towns are springing up virtually overnight. In the great sun belt of the Southwest, retirement boom towns are increasing at an alarming rate (Ross & Green, 1979). The rural populations of the Midwest are generally affluent, articulate, and highly sophisticated. However, there are still glaring socio-economic inequities among rural minority populations. The poor black farmer of the South has neither the influence nor the sophistication of the more affluent Iowa farmer. This diversity is of extreme importance to the rural educator and to the provision of rural education in this country, and it must be acknowledged.

#### Federal role

In a report to the National Rural Education Seminar at College Park, Maryland, Tweeten (1979) indicated that many measures illustrate discrepancies between the quality of rural and urban education; however, Tweeten suggested that the deficiencies in rural schools were primarily concentrated in low income areas and among minorities. Tweeten further suggested that rural school quality and quantity could be improved by federal involvement in the development of remedial programs, student retention programs, and supplementary funds (Tweeten, 1979). However, all rural educators are not in agreement on the value of federal involvement in rural education. For example, in 1979 the U.S. Office of Education held a series of 11 regional rural roundtable discussions for 179 non-federal representatives from rural organizations; attendees were asked to react to 28 recommendations generated by the May 1979 National Seminar on Rural Education. Jacobsmeier (1980) reported that from region to region there was fairly consistent agreement on the role of the federal government. Nonetheless, a minority of the rural constituency consistently questioned the role of the federal government in rural education. As a participant in the rural roundtable discussions, the senior author of this paper can verify that the school board members and school administrators from some states were quite vehement in their belief that the federal government could best serve rural education by allowing local boards to run their own schools and make their own decisions. While this point of view was that of the minority, it should be noted that this minority

was both sizeable and quite vocal. There is, then, diversity of opinion regarding the role of the federal government in rural education, and diversity of opinion should be recognized as an important factor in the development of rural education policies.

#### Reverse migration

The issue of immigration has occasioned equally diverse reactions. Generally speaking, immigrants differ considerably from the populations in the rural areas to which they migrate. In most cases, the immigrant brings values and expectations that differ from those of the rural community. Often, rural immigrants are from a higher socio-economic level, better educated, younger in average age, and more idealistic than the local rural population (Ross & Green, 1979). This kind of migrant comes to the rural community with preconceived expectations regarding the improvement of his quality of life. As this kind of immigrant begins to matriculate in the rural community, his values become apparent in the kinds of demands he places upon the community in terms of human services, community development, and, of course, education. While initially this immigrant may prove disturbing and even disruptive to the rural community, the potential for positive change is quite good. On the other hand, boom town immigrants may have a more negative than positive impact on the rural community. Dennis Mileti (1979) reports in "Study of Resident Perception of Growth Impact in Western Agriculture Communities" that recent immigrants in western agricultural states are people of lower socio-economic status; that recent immigrants, people of lower socio-economic status, and out-of-town residents perceived fewer problems with all phases of their community than did longer term residents, people of higher socio-economic status, and in-town residents. Mileti suggests that his phenomenon is caused by the fact that immigration brings about changes within the community that are more acceptable to the less tenured and more mobile population than to the more permanent and tenured rural residents.

#### Rural school finance

It is often stated that rural schools "never" get their fair share of federal funding and that they are "always" underfunded. A study by Bass and Berman (1979) indicates this statement is only partially true. While they did find programs in some rural districts fared poorly, especially where states are awarded fewer and larger sized grants, Bass and Berman also found that funding was equal in some urban and rural areas. It should be noted, however, that equal funding per student does not totally eliminate discrepancies, because when there are fewer students in a school, it may cost more per student to provide an adequate program than when there are larger numbers of students. On the other hand, some states are now developing funding formulas which aid the smaller isolated school via the conversion of funds. These formulas generally take into account the higher cost per student in the smaller school. Both New Mexico and Wyoming have such a funding program (Hobbs, 1979), and the Iowa Association of School Boards recommended such a program be adopted in 1978 (Rural Education Study Committee, 1978). In a report on equity for rural school districts, Steve Wiener (1979) pointed out that this discrepancy in funding needs was a serious problem in

the state of Minnesota and that many rural districts with high evaluation farmlands received no foundation aid at all.

Given the diversity of situations affecting rural school finance, it would seem that generalizations are both inappropriate and inaccurate, that policy makers must look at specific situations, specific problems, and specific solutions.

#### **Community involvement**

In his book *Growing Up America: Schooling and Survival of the Community*, Peshkin (1978) reviewed the relationships between high school students and the school, and the school and the community in a small mid-western town. Peshkin's work strengthens the theory that rural schools and their communities are closely related. He suggests that while schools are traditionally perceived as facilities designed for youth, rural schools are in actuality governed by adults, and that adults perceive the school as an integral part of their survival, particularly in the cultural sense. Peshkin maintains that in this rural area, the school and the community are inextricably related, that the school is an integral part of the community and what happens in that community.

However, different communities approach community involvement in different fashions. The nature of community involvement invariably depends upon the nature of the community, and since each community is unique, the community school relationship assumes a unique manifestation. For example, in 1960, due to a large increase in Navajo enrollment in San Juan County, Utah, the public schools were faced with the dilemma of trying to preserve local control in the face of a change in American Indian self-determination policy (Garman, 1979). The San Juan public schools chose to employ the help of the Northwest Educational Laboratory to implement the Rural Futures Delivery (RFD) strategy, a method of achieving significant education innovation with broad community support and preservation of local control. It has been reported that by 1979, when 50 percent of the district's students were Navajo, the RFD strategy had resulted in passage of a \$7,000,000 bond issue, construction of one high school, planning of another, and increased communication between educators and the community (Garman, 1979).

Another example of the diversity of approach to rural community involvement is illustrated in a comparative study of two communities experiencing rapid population growth (Ross & Green, 1979). In one of these communities the schism between newcomers and tenured residents was such that education suffered immeasurably. In the other community, the school and the community worked together to solve their communal problems; they secured more facilities and teachers and stronger school programs.

Once again, it is apparent that diverse needs produce diverse responses. School size, for example, means different things to different people. A rural school in New York is quite different from a rural school in western North Dakota, the former being far less isolated than the latter. In Millard's (1979) review of the literature, he found that recommendations for minimum size school districts range from 400 to 10,000 students and that recommendations for optimum size school districts vary from less than 750 to 50,000 students. Millard suggests the an-

swer to questions regarding size of school district should include careful analysis of educational programs and the delivery of same. If, for example, a district is small, alternatives for improving educational opportunities should be analyzed. Small districts need to thoroughly analyze their options, plan well in advance, and then determine if the most efficient and effective means of educating their students will mean maintaining the district or consolidating it. The final answer inevitably must be incumbent upon the district and the school or schools involved. In this era of change in rural America, there can be no standard answer.

#### **Academic achievement**

Historically, rural students have achieved at a much lower academic level than their urban counterparts (Cosby, 1979). Recently, however, the majority of research on rural students indicates that they are achieving as well or sometimes even better than their urban counterparts (Southwest Regional Lab, 1979; Clark, 1978; Martin, 1979). A recent study comparing rural and urban students in the Canadian Province of Alberta (Clarke & others, 1978), indicates that Alberta's non-urban students are performing better than its urban students. Specifically, students living outside Edmonton are scoring better than students living in the urban area of Edmonton. Further comparisons indicate the Edmonton students are on a par with other urban areas in the nation.

A study of particular significance is that of the Southwest Regional Laboratory (1979) wherein, non-urban elementary schools in 20 western states were provided with materials and technical assistance to improve remedial instruction in reading and mathematics over a three-year time span. Results indicate that 83 percent of the participating schools maintained or increased the level of learning in their programs.

#### **Proliferation of rural interest**

It is, perhaps, the diverse nature of the rural constituency and its equally diverse problems that has led to a recent proliferation of rurally oriented programs, projects, services, and publications.

The fact that in 1979, the U.S. Office of Education conducted a National Seminar on Rural Education and subsequently sponsored 11 regional rural roundtable discussions is indicative of a renewed interest in rural America. Additionally, it should be noted that the U.S. Department of Agriculture has a number of people now working in the area of improvement of rural education. The U.S. Department of Education has specifically designated rural contact people; among these are Norman Hearn in the Bureau of Elementary and Secondary Education; Tom Schultz in the National Institute of Education; Don Jacobsmeier in the Kansas City Regional Office; and Carol Johnson in the Assistant Secretary's Office for Adult and Vocational Education. There are also regional laboratories working in rural education. They include the Northwest Regional Educational Laboratory, Southwest Education Development Laboratory at Austin, the Midwest Continent Regional Educational Laboratory and the Appalachian Laboratory, all of which have rural education projects in operation. A number of universities are starting rural education centers or institutes. Among these are Brigham Young University, Colorado State University, Cornell, Kansas State, Montana State, New Mexico State, Southern Illinois, Southwest Minnesota State, Texas Tech, South

Dakota State, University of North Dakota, University of Northern Iowa, Auburn University, and Western Montana College.

There is an increased interest in research in rural education. The newly formed special interest group on rural education within the American Educational Research Association is indicative of increased interest in research on rural education. At present there are over 65 members of this special interest group. There are also several professional organizations concerned with rural education. People United for Rural Education (headquartered in Iowa) and the Rural Regional Education Association are growing both in numbers and in activity. Texas, Oregon, Utah and Kansas have established rural

education associations and other states are looking at the value of rural education associations.

Two new journals in rural education are now being produced by Colorado State University through its Office of Rural Education. One is "The Small School Forum" and the other, "The Rural Educator."

While this proliferation of rurally oriented services suggests that the problems inherent in educating rural America will receive attention, it is extremely important that the diverse nature of rural America be both recognized and accepted. If "rural" solutions are allowed to become standardized and entrenched, minorities within minorities will be generated and the needs of Robert and John and Mary and Marge will not have been equally or properly served.

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## Teaching children to read in rural environs carries special problems, challenges

# A lesson on the cow

By Leonard Breen

"My heavens," you must be thinking, "you mean the state of the art has progressed to the point that there's a special reading program for rural children?" Relax good teachers. It has not. Those who teach in the rural classroom, however, realize that teaching children to read in rural environs does carry some special problems and challenges. Some of these challenges are school related, such as shortages of adequate instructional and library materials, lack of in-service opportunities and a high turnover rate in teaching and administrative personnel. These problems, granted, are real and should be of concern to all of us committed to quality education for rural youth. They are also difficult for us as individual teachers of reading to come to grips with in meaningful ways. The challenges this paper addresses are learner related and, although no less pressing, do carry the hope that there are things we can do Monday morning to help meet them.

There are many different kinds of rural schools and rural children. There is the child of the migrant worker, the child attending school in any of the Indian reservation schools, the mountain child of Tennessee, and the child of small town Kansas, New Mexico or Montana. Each of these groups of children has unique problems. But common to all is their rural-cultural experience. It is this experience which affects the rural child's reading needs and performance.

Reading success is closely related to a child's ability to use the language he is learning to read. It is related also to the varieties and kinds of experiences the reader brings to the task with him. The child's language is indeed an excellent record of his past experiences and level of concept growth. The child with numerous enriching activities in his background is likely to use language which accompanies such experiences. Children who are products of the rural-cultural experience, however, will often have

less facility with language and limited conceptual development because of less adequate opportunities and stimulation. Rural teachers who observe their children closely have often seen how these two factors—language and experience—stand between them and success in learning.

A nine-year-old, fourth-grade boy held up his hand and asked the teacher how to spell if. When the teacher bent over his desk and said "i-f," the boy looked surprised and said, "Oh, I thought it was a four letter word." (Zintz, 1972).

A second-grade class in the mountains of Tennessee is listing and finding pictures of methods of transportation. The students repeatedly lay aside the pictures of airplanes and refuse to add them to their growing list. When queried by the teacher they responded, "sure they fly around, but we're listing things that carry people."

A tenth-grade teacher of business education in rural Montana trying to teach the concept of banking and bank services finds to his surprise that only three of four of his students have ever seen a bank building. None have actually entered one, and most associate the word bank with a jar or baking soda can with a slit in the lid.

We have known, of course, for years how to work best with young children and capitalize on their unique linguistic and experiential backgrounds by using the language experience approach. Because this approach to reading is a total integration of all language abilities, and because children can see how language is represented in print, encoding and decoding activities occur in a context that is meaningful to the child. Additionally, understanding is facilitated in that background for the writing and reading comes from the child's experiences or from experiences that are provided for the activity. In this approach teachers bridge the possibility of a discrepancy between the language experiences of their students and those upon which the reading books are based.

In writing of her methods of working with the Maori children of rural New Zealand, Sylvia Ashton-Warner (1964) holds out a model of the language experience approach for teachers to follow when she writes:

First words must have an intense meaning.

First words must be made of the stuff of the dynamic life.

First books must be made of the stuff of the dynamic life.

First books must be made of the stuff of the child himself, whatever and wherever the child.

In addition to a heavy emphasis on the language experience approach to reading, teachers can aid rural children in reading through the following practices.

1) Do all you can to foster an interest and excitement in words. Let language be the key to learning in your classroom. Words are the stuff of reading and the linguistic labels for growing concepts. Encourage children to talk about the common things that are observed in the world around them—the seasons, weather, food, crops, feelings, etc. Don't let them just get by with, "I'm having an apple for lunch." Encourage them to use descriptive adjectives such as red, yellow, crisp, juicy, sour. Stretch their conceptual boundaries by having them name other fruits which come from the same area. In what ways are apples good for growing boys and girls? Are apples considered fruits or vegetables, and how are the two different from each other?

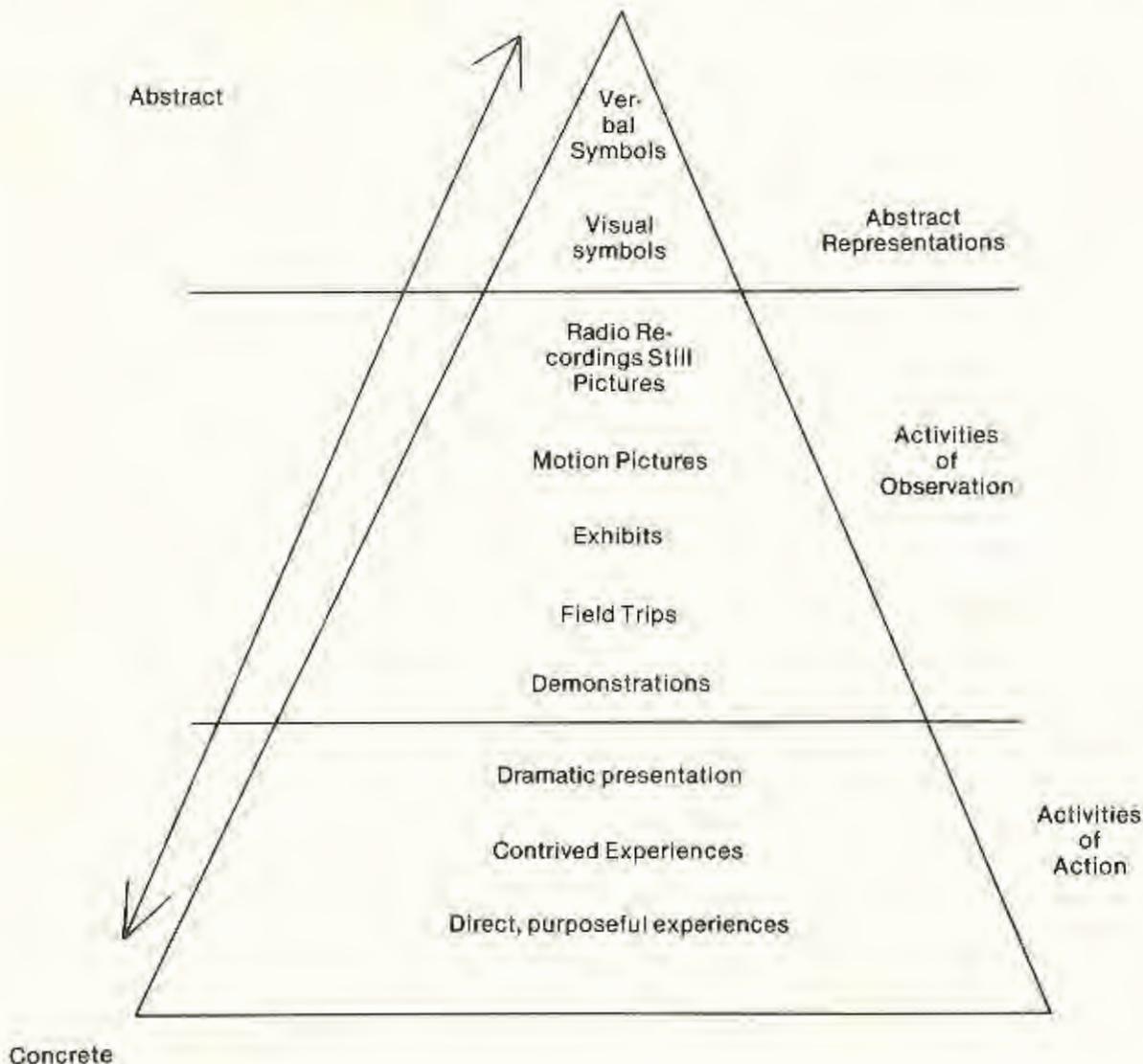
With middle and upper-grade children be alert to words having multiple meanings such as bark, run, bank, etc., and develop activities which expose this array of meanings to them. Help them recognize language used in figurative and idiomatic expressions. Help them become cognizant of and flexible in their use of synonyms, antonyms and appropriate word selections. Try never to let a day go by without using language to predict, to summarize, or share, or to enjoy learnings and feelings. Children retain best the words in print that they can pronounce and commonly use in conversation.

2) Make an effort to read aloud everyday. Somehow in the hustle of the "modern curriculum" this once common practice has gotten shelved for more important things. Yet a more enjoyable way to share the artistry of words and language has not been found. When working with teachers in classes and workshops I often have them identify those activities that most turned them on to reading when they were children. Inevitably oral reading of library books and stories by their teachers is the source of the warmest memories, and the motivation that led them into the classroom adventure of independent reading.

3) Since it's impossible for teachers to eliminate all reading materials which do not, in some way, relate to the rural experiences of their student; and equally impossible to provide only materials written for and related to the experiences of their students; then teachers must carefully select those reading materials which are not completely removed from the background experiences of their students, identify those experiences in the materials which are likely not to be understood by the student and then provide students with those experiences **before** they read.

In planning requisite lesson experiences for their classes teachers need to remember that learning progresses from the concrete to the abstract.

Dale (1969) expressed this hierarchy graphically in a Cone of Experience which identified three levels of activities: activities of action or doing, activities of watching someone else do something, and activities which require interaction with abstract visual and/or verbal symbols.



Requisite learning activities for children with limited conceptual and experiential backgrounds need to be selected from as near the base of the cone as possible. Hands on experiences, making models, participating in role playing, and extensive exposure to pictures and audiovisual aids are all superior to teacher talk, glossary definitions and use of graphic representations in developing new conceptual understandings and readiness for comprehending classroom reading materials.

4) Children who are products of a culturally different environment are in special need of a reading-language curriculum which totally integrates the skills of speaking-listening-writing-reading. Let me suggest an excellent example of the kind of teaching needed by children in the rural school. This excerpt is from a unit taken from a reading methods book published when most schools in America were rural schools. (Arnold, 1899). Here is a reading unit that is language oriented, experience oriented, meaning oriented.

In meeting the reading needs of the child who is a product of the rural-cultural experience, we could do worse than returning to some of the methods of the original rural classroom.

#### **A lesson on the cow**

##### **1) Find out what the children know about the cow.**

Every new lesson should be built upon and fastened to the children's past experience. If they have no knowledge of cows we must introduce the subject accordingly. If they have always known them the lesson will be merely a review, because the foundation will have been prepared. If the children live in the country and know the common animals, proceed at once to definite questions which will arrange their knowledge and help them to express it:

Where have you seen cows? What do you know about them—their size, color, the head, ears, legs, feet, tail?

How large are they, as compared with the horse, dog, cat?

Compare the covering with that of the horse, dog, cat. Compare the parts with the corresponding parts of those animals.

Describe the horns. Why do cows have horns? What use do they make of them?

Describe the ears. Where are they? Does the cow move them? The ears of the dog, cat, cow, horse are movable; ours are not. Why?

Compare the cow's nose and mouth with those of the cat or the horse.

Does anyone know anything about the cow's teeth? What does she eat? What kind of teeth does she need?

Tell the children about the chewing of the cud.

Of what use to the cow is the long tail with its brush at the end? Who has seen her use it? Would a short tail serve as well?

Who knows something about the cow's foot? Who can draw a picture of a cow's footprint?

Of what use are cows to us? What kind of stall, what kind of bed, what food, water, pasture, should they have? Describe a pasture that you would like if you were a cow. Describe a barn that you would like if you were a cow.

How ought we to treat animals? Is it right to forget their wants when we have the care of them?

Every lesson upon animals should help the children to realize more fully their obligation to properly care for them. Sympathy for animal life ought to be developed through the reading and language lessons. Interest in animal life is always present in children. The questions suggested above cannot be answered at once, by any ordinary class of children. Many who are familiar with cows in general will be unable to answer them definitely. But the questions will lead them to more thoughtful observation, after which they can report in another lesson. Sometimes the subjects may be distributed, different groups of children being held responsible for the answer to a certain question.

##### **2) Direct outside observation, in order to get new knowledge.**

It is entirely feasible, in many schoolrooms, to make the study of the cow the subject of a field lesson. The children may be taken, in groups to a farmyard, a pasture, or a stable, where a cow may be observed and studied. Such lessons have ceased to be formidable, since they have become so common. The need of these visits is revealed by the children's vague answers. Nothing but definite observation of the real thing will open their eyes, and make the words in their lesson full of meaning.

There are many city children who have never seen a cow. If it is impossible to take them to a real cow, excellent pictures should be substituted. Many of the questions suggested could be answered by pictures. It must be remembered, however, that the picture tells to us, who have had the real experience, much more than it tells to a child who has never had the experience. It is not strange that a boy who has never seen a real cow should imagine that animal to be six inches long, the size of the cow which he has known from pictures in the lesson. Emphasize the fact of the size. Allude to the picture as a picture only. Have the children show by their hands how high a cow would be, how long, how wide its head, etc. By such means, help to vivify the mental picture which is suggested to the children by the lesson. If the pictures are the only avenue through which they learn about the cow, do not attempt to give as much information as would naturally be associated with the real observation lesson. Remember that the amount of knowledge the child gains is not proportional to the number of facts which the teacher enumerates. He will intelligently appropriate those which his observation and thought have helped him to understand. As has been said before, this truth determines the value of the reading lesson to the child, and necessitates the associated lessons, which supplement his experience and enables him to bring to the lesson a mind furnished with appropriate ideas.

##### **3) Tell the children simple facts which they cannot find out for themselves.**

There are many facts associated with the cow which the children can only know through others; the use of the horns, of the bones, the hair, etc.; the manufactures; the reason for the cud chewing; the making of butter and cheese. The writer has known classrooms in which milk was skimmed, the cream churned into butter, and the butter eaten by the children. The quantity, of course, was small, but the process was real and interesting. This happened recently in a kindergarten in a large city. There were only three children in the class who had ever seen a cow. It is hardly necessary to say that the lesson followed a visit to the cow.

#### 4) Reinforce the lessons by stories.

Stories about cows, or descriptions of certain animals, perhaps the pets which we have known, will add interest to the lessons.

#### 5) Collect pictures of cows for comparisons and descriptions.

In almost any district children will be able to help in making collections of pictures which illustrate the language and reading lesson. These pictures can be obtained from newspapers, magazines, advertisements, and various other sources. Every child who helps to swell the collection will feel an added interest in it. The collection will be valuable in proportion as it is carefully arranged and thoughtfully used by the teacher. If the cards are neatly mounted upon separate sheets which contain the name of the contributor, and distributed among the children for observation and comparison, it will prove

really helpful. Through the comparison of the different pictures many facts will be developed, suggested by the children's comments or questions. Such teaching will be sure to fit the need of the children.

These suggestions will be modified and arranged by any teacher who desires to use them. They may help to point the way for those who are not entirely familiar with this phase of their work, and lead to better things.

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**New techniques will  
enhance quality, help  
achieve goals**

# In-service education in rural areas

**By David M. Davison**

To keep abreast of the task of educating children for a rapidly changing world, classroom teachers need to continually update their own knowledge, perspectives and skills. Institutions of higher education and local education agencies, sometimes acting together, but more often acting separately, have been the typical source of this in-service education.

The traditional role for colleges and universities involved in the provision of in-service education to schools has been that of expert consultants or program designers. The trend in recent years, however, has been for teachers to expect resource personnel, including those from colleges and universities, to respond more directly to concerns as they have identified them. There are indications that schools are beginning to look elsewhere for expert resources when colleges do not deliver. This means that continued involvement of colleges in in-service education calls for a realistic assessment of how they can help schools achieve the changes they desire. In rural areas, the nature of this help has varied considerably according to the accessibility of the school to the college.

## **Models of in-service education**

In-service education may take a variety of forms, (Howey and Joyce, 1978). The in-service may be 1) embedded in the job, focusing on actual classroom performance. Analysis of video tapes of one's teaching and

exchange visits to a colleague's classroom are typical examples; 2) related to the job, although not occurring during the teaching. An example might be an after-school workshop on team teaching; 3) to improve general competence rather than directly relating to one's classroom performance. An example here might be a workshop in teaching problem solving for mathematics teachers; 4) for the renewal of a teacher's certificate, or for gaining qualifications for advancement; 5) simply for the teacher's personal enrichment.

Teachers tend to be critical of in-service education that does not respond directly to their perceived needs (Olivero, 1976; and Wiles and Lovell, 1975, p. 169). Generally, job-embedded and job-related in-service arises from local problems, identified either by the teachers or by their supervisors. Motivation is high since direct pay-off is evident. One problem has been that resource consultants often have frames of reference that do not address teachers' problems (Davis and others, 1977, p. 185). McLaughlin and Marsh (1978) report that outside experts frequently inhibit effective staff development in school settings by operating outside the constraints set by local planners. Thus, if college faculty are to play a useful role in locally developed in-service programs, they need to participate in the developmental phases of the program and to be genuinely responsive to the perspectives of the local participants. It seems evident that the "hit-and-run" expert, whether delivering a "quickie" workshop or serving as an itinerant consultant, cannot be expected to produce any lasting changes in teacher behavior.

Carey and Marsh (1980) suggest that colleges seeking greater involvement in in-service education should become more involved in the job-embedded and job-related modes. The success of this involvement must be based upon evidence concerning effective staff development. This includes the limited viability of outside consultants, training packages, and one-shot training, the importance of classroom application as a phase in training, and factors influencing successful transfer of training into classrooms. Carey and Marsh (1980, p. 80) indicated that college personnel should expand their roles for involvement in in-service education to include complementor, evaluator, researcher, trainer of trainers, instructional materials developers. These new roles will be quite as relevant in working with schools in rural areas as in working with other schools. These issues will be referred to again later in the paper.

It has been more traditional for college personnel to direct their attention to the other forms of in-service education. Through the medium of regular or specially-designed college courses, in-service education can focus on courses that will enhance a teacher's professional background. This has been a characteristic of coursework available at Eastern Montana college, located at Billings, Montana, the only four-year college in eastern Montana.

## **In-service education opportunities in Eastern Montana**

Relevant courses to this service area are provided in the following ways:

1) Regular college credit courses, conducted on campus. A teacher seeking to update his/her background or renew certification may take courses on the college campus. These courses usually carry graduate credit and may form part of a graduate degree program. While such courses may address immediate concerns of the classroom teacher, for example, "Improvement of Instruction in

Elementary Mathematics," it is not axiomatic that college courses will achieve that end. This is particularly true if college courses are constructed without a survey of the needs of specific content teachers in the region, or if such a needs survey is essentially ignored.

When appropriate courses are being offered, they are typically scheduled for the convenience of teachers within easy commuting distance, most often as part of the college's evening program. While some teachers travel forty or fifty miles to attend those classes, the majority live in the local area.

Summer school attracts teachers from across the region, but the focus then tends to be on recertification and completion of degree and credential requirements rather than on in-service education applied to improving classroom competence.

It would be fallacious to conclude that the evening and summer school program offerings are specifically directed to the concerns of rural area teachers.

2) College credit courses, taught at off-campus locations. Courses packaged for off-campus delivery are typically presented in a workshop format. The college instructor travels to the remote site, perhaps on a weekly basis to deliver ten, three-hour sessions, or perhaps on five Saturdays to present day-long workshops, or some variation of these approaches. These courses are offered on an extension basis and are presented only if enrollments are sufficient to cover the costs of offering the course (including the instructor's overload salary). This offers some assurance that extension courses are somewhat responsive to the needs of the consumer, at least within limits set by regular college credit courses.

3) Extension workshops, perhaps offering college credit. These programs differ from those identified above, in that the consumers identify an educational need with which college faculty are able to assist. Alternatively, such workshops may be designed by college faculty in response to a state or region-wide assessment of the needs of a specific group of teachers. These workshops are typically more relevant to the ongoing school situation than those selected from the college catalog.

4) Training courses, offered for college credit. Special courses funded, for example, by National Science Foundation grants, may be conducted to train trainers of teachers in different regions. The intention is to prepare a cadre of teachers located in different areas with the background to offer in-service to teachers in their own region. This method has been used to prepare teacher trainers in metric education, metrics for special education and, most recently in the use of microcomputers in the classroom. This model addresses the current need to conserve energy resources in that the college faculty member works on campus with a selected group of teachers who will be responsible for dealing with the in-service needs in their own geographical area. Not only does this constitute a considerable saving of time and fuel, but a substantial benefit accrues from teachers working with peers who have been equipped to provide them with classroom-relevant training.

5) Courses taught using modern technology. An alternative way of responding to the energy crisis is for the college instructor to use technological devices to teach the course, so that he does not need to travel the long distances involved in reaching the more remote rural areas. One such approach is the Educational Teleconferencing System recently adopted at Eastern Montana

College. In this system the instructor teaches the class from a room on campus equipped with a microphone and speaker while the class at the target site has a speaker and up to four microphones. This system permits interaction between the instructor and the students, with several students typically sharing each microphone at the remote site. For a description of the operation of this system, see Lee and Nowotny (1980). The author has incorporated this method in teaching a three-course sequence for prospective elementary mathematics teachers to a single remote site (Davison and Lee, 1980).

Another technique would be to use an electronic blackboard, whereby the instructor's chalkboard presentation would be visible to a remote class. Other alternatives reflecting the use of later 20th century technology include television and computer-assisted instruction. With all of these media, the instructor has to be especially careful that the personal touch is not lost. This is as much a function of the instructor as of the technology. In interactive systems such as those involving the use of teleconferencing and the electronic blackboard, the instructor needs to establish rapport with the students and to build on this relationship while teaching at a distance. With television and computer-assisted instruction, however, the presentation is independent of a particular group of students, and the instructor must pay greater attention to communicating his personality to a remote audience. In preparing lesson material for computer-assisted instruction use, for example, the author has found it helpful to visualize relevant classes that he has taught. Computer-based learning does not directly respond to the concerns of any specific group of students, but if well planned and directed at a variety of distinct learning patterns, it can create the impression of being individualized for each learner.

The influence of technology will be increasingly significant in curriculum planning in the next decade. Not only will it permit remote instruction of the type described, but it will allow, for example, a distant consultant to visit with a class via a conference telephone call. In this respect, the college can function as a resource locator; it can maintain a comprehensive consultant file and, via ETS, can provide rural areas with the resource assistance that it needs.

The different technologies discussed in this section are all accessible now, although not always in a cost efficient manner. When face-to-face instruction ceases to be the most feasible alternative, we can expect to see greater use of these technologies combinations varying so as to maximize learning.

#### **Prospects for in-service education in rural areas**

While the packaging techniques described above do provide a mechanism for responding to the needs of rural teachers, it is clear that a commitment to education in rural areas will call for some new directions. College courses or in-service workshops, offered in response to local demand, may be managed by any one of several of the above modes. If a college is sensitive to what its constituency is requesting, there can be more distinctive programming for schools in rural areas.

However, programs and courses designed by college personnel represent just one of the ways that teachers in rural areas can be assisted with their in-service needs. In line with the emerging direction for college involvement identified earlier, college faculty can assist with planning

in-service programming, can monitor its progress and generally exercise some direction. In particular, training local teachers to execute their own programs seems most sensible. The college representative becomes responsible for maintaining quality control, but is able, in the main, to monitor the program from a distance. This is consistent with the model outlined in (4) above, but as teachers increasingly adopt a professional stance we can expect more impetus and direction to come from the local area rather than being determined by college personnel.

Regional conferences for teachers, where many of the presentors are classroom teachers, support the notion of local initiative. Such conferences serve a worthwhile in-service function, especially since they are job-related. The trend toward school districts assuming more of the responsibility for in-service education places greater emphasis on local leadership, affording school personnel with the opportunity to design in-service education that is more directly related to what happens in the classroom. In this case, the role of the college consultant becomes one of assisting in the attaining of objectives.

This paper has addressed different ways in which a

college with a rural education mandate is involved in the provision of in-service opportunities for teachers in rural areas. The primary format to date has been courses and workshops for teachers, typically focusing on recertification requirements, and incidentally addressing problems that the teachers want to solve. As teachers increasingly become able to assume leadership roles, they can better define what help they need from college faculty. Then teachers will look to college personnel to help them achieve the objectives they have set for themselves. Thus, the emphasis is to be on quality not quantity of college assistance. The use of modern technology, not merely as instructional media, but also as means of conducting in-service education planning and review sessions, seems promising. In this sense, consultant advice will be immediately accessible, even to schools in the most remote areas. The effective use of media enhances the possibility that colleges will continue to cooperate closely with schools in providing in-service education opportunities for teachers in rural areas. As college personnel adapt to new demands for their in-service expertise, they should also reflect the latest strategies for communicating with these rural teachers.

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It's not only the law—it's  
right

# Toward special services— minus prejudices

By John M. Dodd

Rural education emphases should include education for health, education for vocation, education for leisure, and education for citizenship (Sipple, 1920, p. 7). While these suggestions were made 60 years ago and without special regard for children with handicapping conditions, they are appropriate curricular goals for all children.

Unlike 1920 when those goals were elaborated in the first volume of a journal called *Rural Education*, published by the Northern Normal and Industrial School at Aberdeen, South Dakota, current litigation has combined with current legislation to promise a guarantee of an appropriate public education for all school age persons. Public Law 94-142 is civil rights legislation for handicapped children. It provides for an appropriate education in the least restrictive alternative without regard for whether handicapped children live in urban or rural areas. At times compliance with the law in rural areas faces obstacles that seem insurmountable. Yet, the law is relentless. Children in rural areas deserve and must receive educational programs which are second to none. Still, even the hope for such a guaranteed right makes it necessary to face facts. Among those facts is the necessity to realize that both distance and sparse population concentrations make efforts to comply with the spirit and the letter of PL 94-142 sluggish at best.

Programs for teacher education for the handicapped must shoulder greater responsibilities when it prepares teachers for rural areas. A specialist cannot be employed for every handicapping condition in small communities. Therefore, it is imperative that several specializations are built into the preparation of the one or few rural special educators who can be employed in small communities.

The need for multiple specializations requires supervised practical experience with a wide variety of handicapping conditions in children. It requires the ability to decide which techniques and which materials are to be used for which condition and to do so without supervision. It requires a diverse teacher education program of solid excellence. It may require a greater expenditure of funds per teacher and it may require more time to prepare an excellent rural special educator than it requires to prepare a teacher with a single specialization. Failure to do so shortchanges handicapped children of rural America and denies their rights.

Handicapped children deserve very early education because children who have difficulty learning have no time to waste waiting for opportunities to learn. Because young handicapped children often cannot be grouped homogeneously and because they should not be bussed great distances, frequently they must depend on parents or other family members for early intervention. Parents need very early information and ample encouragement. In rural areas it is imperative that the special education system must develop an early and lasting partnership with parents.

While a partnership usually needs to be formed to provide appropriate learning opportunities very early, often partnerships between schools must be formed to provide appropriate educational opportunities during later school age years too. This partnership, usually described as an educational cooperative, provides services in a variety of ways. Itinerant specialists may be employed jointly to provide direct teaching to children and consultant help to teachers. Consultant teachers may be shared primarily to provide consultation to teachers who provide direct instruction for handicapped children. Other arrangements call for employing a teacher, who provides direct instruction for part or all of an instructional day, frequently for youngsters who ride a bus to a centrally located school. However, all of these arrangements require cooperation beyond that required to provide an appropriate education for non-handicapped youngsters.

Rural special educators must be able to sustain isolation. They must have the courage to act whether there are colleagues to provide reassurance or not. They must keep current in several exceptionalities through journals and continued in-service education. To fail to do so fails to fulfill the promise of PL-142 and fails to meet the educational needs of the handicapped.

Greater resources need to be allocated to rural special education programs to provide instruction for health, vocation, leisure and citizenship for the rural handicapped. Legislation, litigation, and need combined with teacher conviction dictate that education for handicapped children in rural areas must be second to none.

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**Do students have the necessary information to make career choices?**

# **Expanding career awareness for rural students**

**By Suzanne A. Dorsey**

Our world is in a constant state of change. The advent of modern technology has altered the world of work dramatically. Jobs that were once considered vital are daily becoming obsolete, with jobs that have not been invented yet becoming the key to the future. Because the world of work is constantly changing and the numbers and kinds of occupations are becoming more varied, career awareness is becoming an increasingly critical element of the curriculum. The increased complexity of our society with the subsequent specialization of occupations has produced an almost incomprehensible array of vocations which, in turn, has made the process of career choice a difficult one even for students who have considerable knowledge about job clusters and unique occupations. What, however, of those students who have limited or no knowledge of the world of work other than the jobs available in their local communities? Do these students have the necessary information to make career choices? Does the educational system have a responsibility to teach career awareness; and if it does, how should it be taught?

It has been shown that the most effective way to learn about occupations is through personal or direct contact (Resnick and Smith, 1979; Wehrly, 1973). According to social learning theory, modeling is one of the most effective methods of learning. Modeling can occur simply by observation even if there is no direct reinforcement for

learning or overt practice of what was modeled. In the days of extended families, children were able to have direct contact with a variety of occupational role models. Now, that the numbers and kinds of occupations have increased tremendously, direct or personal contact is limited partly because of the increasing number of one-parent families (Resnick and Smith, 41).

Typically, rural students do not have the opportunity to become acquainted with as many kinds of occupations as do urban students. In rural communities where there is no nearby industrialization, and where the sole commodity of the area may be wheat or cattle, the numbers and kinds of jobs are definitely restricted.

Rich (1979) conducted a study of the extent to which rural students may be handicapped by limited occupational knowledge. She assumed that knowledge of occupations is a prerequisite for occupational aspiration and career choice and hypothesized that rural students, because of their limited occupational knowledge, were prevented from making as diverse and optimal career choices as their urban counterparts (Rich, 320). She also demonstrated that rural students needed to be given information about nonlocal occupations to have equal opportunity to make better and different career choices (Rich, 325).

Expanded career awareness, then, is a must for students residing in rural, isolated communities. Because of isolation and the lack of varied occupational role models, career awareness is limited. The problem becomes how to expand the career awareness of rural youth. The research literature offers few methods and suggestions directly related to rural situations; however, there are steps which can be taken.

## **Career guidance**

The major step in expanding career awareness in rural schools should be to provide competent guidance and counseling services with strong emphasis in career education, and since research has shown that elementary children begin to effectively assimilate career information about the fourth grade, such services need to extend into the elementary grades (Parks, 1976; Resnick and Smith, 1979; Wehrly, 1973).

An adequate career guidance service might well include the following activities:

**1) Develop an attractive, easily accessible corner of the library or other widely used room where career information can be housed.** Here a vertical file of magazine articles, reprints, free career information from industry and government can be made available for student use. Teachers, especially those with special programs such as Title I reading and math development, can be encouraged to assign activities that will necessitate student use of this career information resource.

**2) Make a collection of college materials and display them for student use.** One might place these advertisements in conspicuous places on the walls in the halls. Some of these are quite colorful and have cards students can send in to obtain more information. Have a bulletin board on each floor of the high school in the hall and in the elementary school hall displaying career information. There are also free colorful and unique signs about careers that can be ordered through the Occupational Outlook Quarterly.

3) **Take advantage of college recruiters.** Solicit student feedback about these presentations either verbally or through the use of an evaluation form for students to fill out. Keep track of colleges which have the best presentations and then encourage more students to attend these presentations the next time they are scheduled. Contact colleges whose presentations are weak and give them ideas for future visits. Make a list of things students want to know and questions they ask and prepare recruiters in advance. Encourage students to shop around and attend several college presentations. Do not limit attendance to "just seniors." By the senior year students should have their plans made. The senior year is hectic enough with college entrance examinations, financial aid forms, college application forms, and all the other physical and emotional and academic preparations that must be made by students who know where they are going. Students who are undecided may be lost in all this preparation.

4) **Encourage students to apply for several different types of scholarships.** Many scholarships are no longer based on grades alone. Take the time to personally contact the scholarship and financial aid office at the colleges students plan to attend. Personal letters from the school counselor or phone calls concerning students help make the student known to college personnel.

5) **Start a career night or day program.** Information from college admissions offices can often be useful in establishing such programs. Contact technical and trade schools and ask them to visit the school. Many of these schools will tour rural areas only upon invitation. The Bell and Howell Institute, for example, has an excellent presentation dealing with future technology which motivates students in career planning.

6) **Try to visit with each student grades 8-12 at least once during the school year about career plans.** Make high school students a calendar of career planning that gives them steps they must follow and activities to check off yearly from grade 9 to grade 12 in their own personal career planning. Visit elementary classrooms and develop ways to introduce career information. There are several publications that students should be acquainted with such as the College Handbook and the Index of College Majors. The Occupational Outlook Quarterly should also be made available to students. Once the counselor has oriented students to available materials, they will usually search out the information they need.

7) **Acquaint teachers with the National Center for Career Education.** NCCE is located on the University of Montana campus in Missoula, Montana, and has a set of career oriented curriculum materials for grades 1-12 which can be used by classroom teachers in the course of regular instruction to expand and develop career awareness. These ideas and programs have been gathered from all over the United States and are proven methods. The entire set costs about \$600 which covers the cost of reprinting. In addition, the NCCE has a national information retrieval system and can do computer searches for career programs and materials at a minimal cost.

8) **Seek out computerized career information systems which are being established in many states.** An example is Project View, a career information system offered through the Office of Public Instruction, State of Montana, to all school districts in the state. A microfiche reader with a set of microfiche cards listing specific occupational descriptions and information for all colleges in the state of Montana are available free to every school district. The cards are classified according to the D.O.T. and are constantly updated. These services usually charge districts the price of computer terminal time; however, rural school districts could go together for the cost of this service, or perhaps seek outside funding through the Career Education Incentive Act or Title IV and incorporate the cost of the service into a career education program.

9) **Involve the local community in promoting career awareness.** Even rural areas host a certain number and type of nonfarm occupations such as doctors, dentists, lawyers, bankers, accountants, government workers and others. These people should be involved in career education programs either by bringing them into the school to speak to interested students, or by setting up a work-study program whereby interested students are allowed released time from school to work with these professionals as part of their school activity. Caution must be exercised in setting up this type of program so that it is not abused. The purpose should be to give students an opportunity for career experiences they could not have otherwise. Pumping gas and working as a car hop at the local drive-in would not be considered options in this type of program. These jobs students can obtain readily; the school work-study program should focus on career experiences that would not otherwise occur until after a college education, or technical training, or in a nonrural area business with on-the-job training.

10) **Establish an effective student assessment system.** From the time school starts in August, the counselor should begin to inform students about the ACT and the SAT and their respective testing dates and deadlines. Students should know which one they need to take and why.

Interest inventories such as the Kuder and the Strong-Campbell should also be made available to students. The Strong-Campbell Interest Inventory (SCII) is especially good for juniors and seniors. In the junior year the Army offers the administration of the Armed Services Vocational Aptitude Battery (ASVAB) at no cost to interested students. The ASVAB provides students some insight into their abilities, both academic and trade technical. For the junior high age student the Differential Aptitude Test (DAT) may be used. Although somewhat time consuming, it also can be used to help the student understand personal abilities and limitations. It should be axiomatic that if any tests or inventories are employed, it is essential that the counselor interpret and explain the results to the students individually. Test scores are of no value if no one understands what they mean and if they are not used.

These are some possibilities that have been used and/or could be used to expand career awareness in rural student populations. A creative counselor can develop many more. Career education is a must for rural students

because limited career awareness handicaps rural youth in career choice. Having a limited spectrum of occupations from which to choose is costly to the nation as well as to the individual student. Future leaders, statesmen, lawyers, doctors, scientists, and many other talented individuals who could contribute much to society can be found in rural areas as well as urban centers and rural school districts cannot afford to afford career

education programs. Much can be done without extensive financial demands if qualified, competent counselors are available for a significant amount of time, especially when other school personnel and community members work together. However, regardless of cost, the future will require well qualified people and rural youth must be prepared to accept their place in the job market of tomorrow. We need their potential.

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## Quality programs require lengthy commitments

# Successful science teaching in a rural setting

By Robert K. James and Loren E. Riblett, Sr.

Teaching science in a rural setting offers numerous challenges. Frequently there is a support system lacking for the teacher especially for opportunities to share ideas with peers and for review by knowledgeable science educators. Rural communities are frequently separated from centers of scientific and technological activity with little opportunity to draw upon these resources in establishing a climate favorable to science teaching. Furthermore, the opportunity to relate science content to the industrial needs and activities of the community is reduced to the point that these activities are usually missing. The isolation of the rural setting may also lead to a lack of free flowing ideas and knowledge of recent scientific developments. Students also have difficulty identifying the science-related career opportunities available to them.

There are also advantages to science teaching in a rural setting. Science teachers can relate science content to natural environments which are close at hand. They also may have greater potential for establishing positive relationships with the community, facilitating access to natural resource areas and providing support from a broad spectrum of local business and industry.

Several questions arise about science teaching in rural schools. For example, how might a teacher develop a high quality science teaching program? What are the problems inherent in this setting and how can the teacher find a balance between supporting and opposing factors in program development? In this article we describe a

case study involving what we judge to be a successful science program in a rural area. Out of this, we draw numerous ideas about how successful science education programs might be initiated into other rural school districts.

### Wamego, Kansas: A case study

#### The setting

Wamego, with a population of about 2,700, is located about 100 miles west of Kansas City and 40 miles from Topeka. The district includes portions of Pottawatomie, Wabaunsee and Riley Counties and encompasses approximately 192 square miles. The district has a student population of 1,150 with 325 of these enrolled in a four-year high school. The original building was erected in 1938 with an addition for science and music added in 1963. While these science facilities are certainly adequate, they probably do not go beyond the average for facilities built at that time.

#### The teacher

Most educators recognize that the teacher is the key to a successful program. In setting up a successful rural education program it is probably even more true that the teacher is the most significant determiner of success. In this case, the teacher is a male, 45 years old, who has held his current position for the past 16 years, and has taught science for 21 years. He holds one of two staff positions in science with the responsibility for teaching all of the physical science courses. The other position is a full-time biology and laboratory science position. The teacher preparation is extensive, but we have no basis for saying that his preparation is greater than most teachers who have taught science for 21 years. He completed his bachelors degree in 1957 from a nearby teacher training institution. He subsequently completed a Masters Degree in 1961 at another teacher training institution in Kansas, and took additional graduate work beyond the masters at various universities both in and out of state. He is currently completing a Ph.D. in science education. Most of his preparation has been in science content areas with a minimum amount of emphasis on pedagogy, philosophy and teaching techniques. Only the Ph.D. degree includes a major emphasis in the area of education. His preparation is broad in terms of the types of experiences he has had in the classroom, in the laboratory, and in field-related science teaching.

#### The program

When his work began at Wamego High School in the fall of 1965, the established program was a rather traditional sequence of general science, biology, chemistry and physics. These courses were taught primarily from a textbook approach with very little content being taught through laboratory experiences. The first change to be made in the curriculum was to establish the "Laboratory Science" course to replace General Science. The new course centered around laboratory investigations prepared by the teacher.

Secondly, a new text was chosen for the biology course, **High School Biology (BSCS-Green Version)** and **Chemistry: An Experimental Science** was chosen as the core curriculum for the chemistry program with some conventional chemistry experiments retained. Physics was converted to a blend of Harvard Project Physics and Physical Science Study Committee programs again

retaining some conventional approaches.

Two other changes were also made. One was to institute the course "Senior Science," which integrated science content from both biological and physical sciences and included such topics as: plant physiology, biochemistry, qualitative and quantitative analysis, nuclear radiation and electronics. This course could follow or be taken concurrently with physics.

The second to initiate the "Independent Study Program" which provided students with an opportunity to work on an independent research project of their own choosing. Students might take this course during any or all grades as long as they were enrolled in one other regular science course. Each student was required to prepare a research paper reporting his results in a scientific form for possible entry in a science fair or Kansas Junior Academy of Science competition.

This curriculum program made it possible to set up three different channels for student involvement. Channel 1 involved students taking ninth grade Lab Science and moving sequentially through the other science courses at the rate of one course per year. Channel 2 made it possible for better students to enter the sequence at the biology level in their ninth grade year and move sequentially through Senior Science at the 12th grade level. The third channel involved the Independent Study course which ran parallel to one of the other two channels. Of course, students could abandon the sequence at any point.

#### **Auxiliary program elements**

Another important dimension of the science program has been the development of certain kinds of auxiliary science activities. The science club was basically a support group. It conducted numerous fundraising projects and provided small financial grants to cover the cost of awards and expenses associated with the rest of the science program.

A focal point for each year's work is a local science fair offered to grades K-12. For the 1980 science fair 150 student projects were entered from the Wamego and surrounding school districts. Thus, Wamego serves as a focus for science fair participation for many schools in the area. Primarily the science fair offers students the opportunity to exhibit their work from independent study and from other courses taken during their high school career.

Another activity which has captured the attention of many students is participation in the Kansas Junior Academy of Science. This regional and state program offered students the opportunity to present their ideas to their peers and to scientists and to gain feedback regarding the quality of their scientific work. During 1980 Wamego sponsored the regional Junior Academy of Science.

Other significant parts of this program are annual awards. Since athletic, thespian and debate awards were made at the end of the year, two science awards were added. The first was the Leonard Nehring Senior Science Award. This award began in honor of Leonard Nehring following his retirement from teaching science for 42 years. This was awarded to the two top science students (seniors) selected by the science department. A plaque is presented to each winner plus the winner's name is placed on a school plaque prominently displayed in the school trophy case. The second award, the Wamego Research Award, was given to the two best research

projects for each year. The students could be in grades 9 through 12. Again, each student receives a plaque and their name is placed along side those of previous winners on a school plaque.

#### **Determining the success of the program**

How does one evaluate such a program? Certainly the products of the program are an important assessment of its effectiveness. As indicated the students have competed in science fairs at regional, state and international levels. They have also participated in and competed in the Kansas Junior Academy of Science programs for the past 13 years. During this time, 13 students have participated in the International Science and Engineering Fairs. Two have won the coveted Atomic Energy Commission Award which provided for one-week, all-expense paid trips to the Argonne National Laboratories Research Center in Chicago. Others have won third and fourth places in their respective divisions. Several have received recognition through the American Chemical Society and the United States Department of Transportation. Recently one student won the first place award from the U.S. Department of Transportation, the U.S. Atomic Energy Award, and fourth place in his division with a project on gasohol. Several students have been recognized in the Westinghouse Talent Search. Wamego science students have received over \$150,000 worth of awards, trips and scholarships over the last 13 years.

Wamego High School has also had state winners in the Kansas Junior Academy of Science each year since they first entered competition. There have been as many as five first-place winners at the state level in one year alone. One student from this group was selected to present his research paper to the American Association for the Advancement of Science meeting in Washington, D.C. and another presented his findings to the National Science Teachers Association meeting in St. Louis, Missouri.

Five students have won trips to West Point through the auspices of the U.S. Army Research Center. After presenting their findings at a science and humanities symposium, one of them was selected to present his research at the national meeting in West Point.

Students who have finished this program have been recognized through the presentation of awards and scholarships. They have won many scholarships for having the best science project at science fairs in Maryville, Missouri, and Emporia, Kansas. Many have been Seaton Scholars at Kansas State University and some have graduated as the top engineering student in their respective fields. Many have gone on to receive their masters and Ph.D. degrees in several science areas including civil, mechanical, electrical, industrial, agricultural, nuclear, and chemical engineering. Medical doctors and dentists are also graduates of this program. The teacher points with pride to students who have gone on to be science teachers.

In assessing the significance of the numbers of student awards, it is important to remember that only about 80 students graduate each year from this school and that in a typical year, fewer than 25 seniors are enrolled in science.

Another measure of the success of the program is the kind of peer recognition received by the teacher. This year the State Department of Education chose him as the Kan-

Teacher of the Year from a population of over 25,000 teachers. Further, he was awarded the Outstanding Physics Teacher of the Year Award by the Arkansas, Oklahoma, Kansas Chapter of the American Association of Physics Teachers (1980), and in 1979 he was selected Master Teacher of the Year by the Emporia State University Selection Committee. In 1973 he was selected as one of the top 10 innovative physics teachers in the nation by the American Association of Physics Teachers.

#### Lessons about rural science teaching

From this case study the authors have identified numerous principles which are believed to have wide applicability to the improvement of rural science teaching and should be applied by teacher educators, rural school districts, and rural science teachers. Those who prepare rural science teachers would do well to consider the following:

1) A broad preparation in academic areas will be necessary if the teacher is to deal with multiple class assignments, diversity of topics that arise out of independent study, and the relative "isolation" of the rural community from the "scientific" community.

2) Teachers should begin teaching with preparation for a process approach to science teaching if they are to understand the significance of independent study; be able to teach the process skills students will require; and develop the commitment necessary to design and conduct a program like the one outlined.

3) The teacher believes that another component of his success has been his industrial training and experiences which have made it possible for him to show practical applications of content and recommend career directions to his students. If he is correct a broad movement should be mounted all across science education to get teachers into industrial settings.

4) Teacher education programs should provide a broadened view of the science curriculum. For too long our view has been restricted to biology, chemistry and physics. While this is a problem in all schools, it is a particular problem with rural schools. This broadened view should not only include topics beyond the traditional courses, but should include the interactions and interrelationships between the various disciplines.

5) Teacher education programs should include the opportunity to develop laboratory teaching skills, including equipment operation, construction and repair. It should also include the development of skills in organizing and managing laboratory instruction.

6) Teacher education programs should seek ways to develop and nurture certain personal qualities or attitudes in their trainees. Prospective rural science teachers should be "risk takers," willing to venture into unknown areas and able to profit from their mistakes. They should be encouraged to develop a strong personal commitment to science teaching in the rural setting, and should exhibit strong enthusiasm for the job of science teaching. They should also be encouraged to develop auxiliary skills such as photography, lapidary, taxidermy and collecting natural specimen.

7) Finally, if teachers teach as they are taught, science teacher educators must exhibit the qualities listed above and must move to design programs which will make that possible.

#### Lessons for rural districts

1) Local rural districts must recognize the value of experienced, effective science teachers. Rumors continue to circulate that districts are hiring "new" teachers because they are "cheaper." In a time of restricted budgets this may be believable, but it overlooks the fact that time is a factor in building an effective program. We are **not** saying keep experienced teachers who maintain the **status quo!** We are saying, value those teachers who are developing an effective science program.

2) Local administrators will be wise to provide a high level of encouragement to the teacher involved in program development. This implies cutting the "red tape" inhibiting curriculum change, making budgetary allowances to cover the cost of equipment and supplies; and providing personal monetary rewards to teachers who demonstrate success. Expensive equipment should be justified on the basis of the program needs, not of the whim of the teacher or some equipment salesman.

3) Local administrators should assist the science teacher in securing community recognition and support for their accomplishments. This will provide both a reward and a motivation for the work. It will also set a climate in the community which will encourage student/parent involvement in the science program.

#### Lessons for science teachers

Finally there are numerous lessons which science teachers should learn from this case. They include:

1) The teachers should recognize the necessity of their own long term commitment to science teaching. Only with sufficient time and effort will they be able to build an effective program.

2) Teachers should demonstrate a commitment to growth or quality in the program. This quality can be built gradually. It will not happen over night.

3) Teachers should recognize that flexibility in terms of content and student entry should be built into their science program. For example, Independent Study should not be reserved only for those students who have completed two years of science study. Let them in when they are ready.

4) There should be strong emphasis on laboratory learning wherever possible. It is the essence of science. Thus, students grasp the exploratory nature of the discipline and use these skills to solve real problems.

5) A high degree of personal enthusiasm will be necessary for most teachers to continue to grow, even after 21 years of service!

6) Teachers and their students should work diligently to secure strong community support. It developed in this case because of the activities, awards, and scholarships students have received.

7) Auxiliary science activities, including Science Club, Science Fair, Academy of Science and a local awards program all broaden the program and provide opportunities for the students to receive recognition for their work. They should be encouraged.

8) This program has received numerous resources from industries, business, colleges and universities. This has been made possible through the efforts of the teacher to maintain positive contacts with leaders in these organizations.

## Resource teachers must examine their role conceptions

# Role confusion in rural schools

By Katharin A. Kelker

In the past five years rural schools have widely adopted the resource room model for special education, and the resource teacher has become a new breed of teacher on rural faculties. As newcomers on the educational scene, resource teachers themselves and their colleagues in rural schools are still struggling with the definition of the resource teacher's role. Many schools in rural areas have resource teachers, but that is not always because they wanted them. Sometimes school personnel are not even sure why they have resource teachers or what they are for (Harris & Mahar, 1975).

In many cases resource teachers have adopted roles which stray from the original threefold conception of their duties: 1) assessment, 2) prescriptive teaching, and 3) consultation (Wiederholt, Hammill & Brown, 1978). Although the entire responsibility for assessing a child for special education was not intended to rest on the resource teacher, it has been suggested (Wiederholt, et al., 1978) that resource teachers should be able to do both educational and behavioral assessments; that is, resource teachers should use both formal and informal assessment tools to pinpoint a child's academic strengths and weaknesses, and they should observe the target child in various school settings to gather information about that child's behavior.

Secondly, the resource teacher should be engaged in prescriptive teaching which means planning, implementing and evaluating individual educational programs (I.E.P.'s). Prescriptive teaching involves working with children on a one-to-one basis or in small groups, adapting materials and instruction to the children's special needs

and continuously evaluating teaching procedures and the children's progress.

Third, resource teachers are expected to cooperate with other educational specialists and classroom teachers in implementing a child's program. Sometimes the resource teacher may need to consult with regular educators and provide suggestions for remedial activities to be used in the classroom. Resource teachers need to be knowledgeable about curriculum and teaching practices in the regular classroom, and they must possess the necessary tact and skill to suggest effective ways to modify the regular program to suit the needs of exceptional children and their teachers.

In practice these three aspects of the resource teacher's role have become blurred and some common mutations, like the following, have emerged.

**The Invisible Woman.** This resource teacher sees students in a windowless, converted storeroom. She seldom ventures out of her room because she is booked solid all day with some of the most difficult students the school has to offer. She feels lonely and estranged from the faculty and fears that her classroom is nothing but a glorified study hall or a holding tank for juvenile delinquents.

**The Fifth Wheel.** This resource teacher is not taken seriously. She is the joke of the teachers' lounge. Teachers and principal alike ignore her comments and she is a silent partner at child study team meetings. Everyone knows that the real test results are presented by the school psychologist.

**The New Fellow on the Block.** This resource teacher is not taken seriously either, though all the other faculty members are annoyed with him. He gets a higher salary than the regular classroom teachers, sees fewer students and has no lunchroom duty. The regular education teachers regard him as an expensive extra who is of no visible help to them.

**The Sweet Young Thing.** This resource teacher, a common variety, is just out of graduate school and has limited classroom experience. The old hands in regular education regard her as a real nuisance and speculate that she would not know what to do in a classroom of 30 kids. Needless to say, the regular education teachers are not interested in the "sweet young thing's" advice.

**Ms. Wizard.** Ms. Wizard is known to be an expert, so staff members refer students to the resource room with the conviction that they will be returned to the classroom transformed kids—well behaved and academically motivated. Once a child is in Ms. Wizard's hands, the classroom teachers feel their responsibility ends; Ms. Wizard will work her magic and cure the child of his school problems.

These five and perhaps more distortions of the resource teacher's role are occurring commonly in rural schools. Of course, not all resource teachers are suffering from an identity crisis—some have the necessary teaching experience and personal qualities to make their jobs work—but many seem to be floundering, suffering from social isolation, lack of authority, lack of experience and lack of clear role definition (Kelker, 1980). In the rush to comply with P.L. 94.142 (which mandates free, appropriate public education for all handicapped children) and provide special education services, often where none had existed previously, many rural school districts hastily adopted the noncategorical resource room model and

hired a broadly trained educational specialist. These educational specialists were often saddled with the total responsibility for developing special education programs, identifying children, working with parents and teachers and providing the on-going teaching services to the children.

Many resource teachers who have found themselves with multiple responsibilities in rural settings have begun to complain of job dissatisfaction. In a seminar on the role of the resource teacher conducted at the Montana Convention of the Council for Exceptional Children (Kelker, 1980), 20 recent special education graduates of Eastern Montana College who presently work in resource rooms throughout Montana named the following as serious reservations they have about their jobs: 1) isolation from colleagues in special education, 2) isolation from teaching staffs in their schools, 3) lack of support from the administration, 4) unreasonable expectations from parents, and 5) lack of clear idea of what their roles should be. The degree to which these opinions are representative of special educators in Montana is not known; however, it is interesting to note that Harris and Mahar (1975) have reported similar findings in a study in rural Michigan.

A key element in the data from Montana and Michigan appears to be a lack of clarity about the role of the resource teacher. In an effort to gain some idea of the resource's role as it is perceived currently in Montana, a study was undertaken at Eastern Montana College in which three groups, regular educators, special educators and parents of handicapped children, were asked to respond to 15 statements about the role of the resource teacher. Of the 15 statements, eight had to do with the consultative aspects of the resource teacher's role, five with the tutorial function and two with assessment. The respondents were asked to agree or disagree with the statements about the resource teacher's role and then to guess how each of the other two groups would respond. Thus, each respondent gave his own real opinion and predicted the opinions of the other two groups.

In this study there was agreement among Montana teachers, parents and special educators about the tutorial aspects of the resource teacher's role: such things as providing special attention, restoring a child's self-concept, and working with an educational team. However, there was significant disagreement about the consultative and assessment aspects of the role. Apparently, the special educator is viewed largely as a tutor who is intended to deal with slower students in some separate setting. This study appears to show that the roles of the resource teacher as consultant in the regular classroom or as part of the assessment team do not have widespread acceptance in Montana (Dodd and Kelker, 1980).

The resource room model as a system for special education delivery has much merit in rural settings because it multiplies the number of children who can be served in special education, and it holds promise for keeping handicapped children in as normal an environment as possible. However, the simple imposition of the resource model on top of the long-standing regular education model appears to have led to considerable confusion about how the two models fit together. It appears that the resource teacher as the link between regular and special education may be bearing the brunt of criticism which might more properly be leveled at special education delivery in general.

In the past, teachers in their classrooms have been largely autonomous and special education, if available at all, was something quite apart from regular education. If a child was referred to special education and indeed found to have a handicapping condition, it could safely be assumed that child would receive services "somewhere else" and would not be heard from again. Now with the development of the resource room concept and the requirements of P.L. 94.142, things are different. Children in special education do not go away; they go back and forth to the resource room and sometimes the resource teachers want to come into the regular classrooms to observe and to suggest changes in procedures. Classroom autonomy may be threatened and the resource teacher is (or potentially can be) an intruder. In some cases, then, resource teachers, because they are the link between special and regular education, may have become the recipients of the resentment and misunderstanding that teachers harbor toward the changes that P.L. 94.142 mandates.

Dealing with the resource room is a new way of doing business for most regular education teachers and administrators. The changes taking place are not just in special education delivery, but in the educational model itself. Wiederholt and Hammill (1978) have likened the relationship between special education and regular education which the resource teacher represents to that of the medical practice situation in which a specialist (a resource teacher) is called on to assist in diagnosing a difficult case by the generalist (the classroom teacher). The colleague concept, which is common in medicine, is something new in education. Physicians are accustomed to asking each other for advice, but teachers are not as accustomed to consulting others about problems in their classrooms. In fact, in many schools, teachers are rewarded consistently for not asking for help, for never sending a child to the office, for being firmly in control of their own rooms.

If the resource room model and resource teacher are going to be incorporated successfully into the educational system, then two significant changes need to be made:

**1) Administrative Changes.** Principals must begin to schedule time in the school day for teachers to confer with the resource teacher and in the process to get to know each other personally. Many resource teachers are so over-scheduled with students, particularly at the junior high and high school levels, that they do not have time to do classroom observations or to talk to teachers. School administrators are really the only persons who can remedy this situation by dictating that consultation time must be built into the resource teacher's schedule.

School administrators also can encourage the linkage between special and regular education by providing for in-service training on the services which resource teachers can provide. If administrators **lend their authority** to special education matters, then teachers are likely to see them as important and may respond appropriately. At the same time, administrators can also back away from leadership in some situations and allow the resource teacher to assume a more prominent role. For example, in child study team meetings it would seem particularly appropriate for the principal to sit in as an advisor and allow the resource teacher to lead the meeting. This simple shift in leadership would immediately establish the authority of the resource teacher in that situation.

2) **Resource Teacher Changes.** Administrative changes and support can be helpful in defining and enhancing the resource teacher's role, but the resource teacher must also do some self-defining. Expectations of resource teachers run high, particularly in the rural setting. Resource teachers are expected to interpret special education to teachers, to assess and teach children, to confer with parents, and to be experts about both regular and special education. Resource teachers can be change agents or at least a visible part of the significant changes which are taking place in special education, if they 1) set goals for themselves, 2) pursue

those goals in a professional manner, and 3) face up to the leadership requirements of their positions. Resource teachers must look carefully at their own conceptions of their role, they must see their obligation to be thoroughly professional in their work, and they must hone their professional and personal skills so that they are indeed "expert" at assessment, prescriptive teaching and consultation. If resource teachers do assume responsibility for developing their professional roles, then potentially they can be change agents for children and for school staffs as well.

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## Interest in rural education has risen sharply

# A university response

By Jack L. Larson and Michael R. Penrod

Recently, interest in rural education has risen sharply among Kansas lawmakers, professional educators, and the general public. This is not particularly surprising since only 11 of the state's 305 unified school districts are located in areas that might be considered urban. Of the rest, 225 are located in counties with a population of 30 or less per square mile and 69 are located in counties with large urban centers, such as Sedgwick, Riley, Saline, or Shawnee. These, too, however, serve the rural population located around their urban centers. Obviously, Kansas education and rural education are virtually synonymous and the growing statewide interest in the subject, if somewhat belated, is nonetheless appropriate.

In response to this growing interest the Center for Rural Education and Small Schools was established at Kansas State University in 1977. Mandated by the State Board of Regents, the Center has a twofold mission: first, to study and evaluate rural education in Kansas; and second, to assist in the development and administration of programs designed to help rural Kansas schools continue to meet the needs of their constituency. The Center functions as part of the University's College of Education outreach component and is under the immediate direction of the Associate Dean. This article summarizes the first year and a half of operations and specifically outlines programs and projects currently underway, the results achieved, and previews some possible activities for the future.

### Assessing the needs

During the first 18 months of existence, the Center has been directing its efforts towards assessing the needs of rural and small schools. Initial emphasis was placed in

this area for two reasons. First, there was a dearth of information relating directly to the state's small and rural schools, and before the Center could effectively respond to the needs of the state's small schools, those needs had to be identified. Second, in order to forecast future needs, the Center had to design a comprehensive, multi-faceted, long-range needs assessment program which required accurate, baseline data.

As part of this needs assessment the Center conducted two-day long conferences, one in February, 1979, and the other in March, 1980. A select group of rural school administrators were invited to the K-State campus, asked to confer with the Center staff and to identify specific areas where the Center might focus its initial evaluation efforts.

In October, 1979, the Center also sponsored a 2½ day regional rural education conference. The purpose of this conference was much the same as that of the two-day conferences, except that the participants represented a broader population. During that fall conference, a variety of workshops and seminars were held to acquaint rural educators with the resource services available through the Center and to explore selected issues in greater detail.

In the fall of 1979, the Center's staff began visiting small schools across the state. Two separate sets of visits were conducted. The first was to gather more perceptions from students, faculty, administrators, and patrons concerning the needs of rural and small schools. Information collected during these visits was utilized by the staff to develop a multi-media presentation highlighting rural education in Kansas. Currently in the final development stages, the presentation will be made available to interested groups through the Center for Rural Education and Small Schools.

The second set of visits began in March, 1980, and was co-sponsored by the Center and the Mid-Continent Regional Education Laboratory. These visits were made to a third set of districts and were used to gather information on public school program and policy development, as well as classroom practices. Operating on a five-year time basis, this study will not be completed until the spring of 1985. It represents the most extensive assessment efforts yet undertaken and will be refocused and updated as interim data reveals specific areas of concern.

### Concerns of rural education leaders

From these various activities, the Center staff has identified those issues expressed by board members, superintendents, principals, and teachers, as being of primary concern to Kansas rural and small school educators.

Perhaps the most significant of these issues is teacher recruitment and retention. For a variety of reasons, including geographic and social setting, pay, advancement opportunities, and workload, the state's rural and small schools are having an extremely difficult time attracting and retaining teachers. With Kansas currently in the midst of a teacher shortage in at least some fields and with projections indicating that this shortage could get progressively worse the state's rural schools face a worsening situation in the next five to eight years.

Teacher preparation and subsequent certification is also of concern among those in rural education. Student teachers are not frequently placed in rural schools because of the time and distance involved in traveling to

and from the state's universities. This creates a lack of people entering the field with pre-service experience in a rural setting. The problem is compounded by current teacher certification requirements which force most students into relatively narrow fields of specialization, such as science, math, or social studies, and does not allow them to develop the generalized background demanded by rural schools.

Another area of concern to the state's rural educators was the problem of image. Many believed that the public, state government, and other educators still perceive rural education to be the one room schoolhouse and the elderly school marm. Associated with this bias is the notion that quality education cannot take place in a rural environment because of limited facilities, materials, and staff, all of which combine to limit the educational choices open to students in small schools.

Lack of adequate time and opportunities for in-service staff development was also seen as a problem. Geographic isolation and time constraints often prohibit effective in-service programs. Also, when in-service workshops are available, they are often too narrow and specialized for the rural school. To be useful, such programs need to have a broad focus and deal specifically with the unique needs of the small schools.

Finally, state and federal regulations were a major source of problems for rural school administrators. Often such programs, while aimed specifically at large urban schools, are made applicable across the board to all schools. Specific programs mentioned were Title IX, mandated special education programs, minority studies, and mainstreaming of handicapped students. All are good in theory but in practice act to put an "intolerable" burden on the small school districts.

#### **Assisting the rural schools**

In an effort to help the state's small schools deal with

these problems, the Center for Rural Education has begun preliminary work in a number of areas. We are currently working closely with the Kansas State University Placement Center to develop specific small school teacher recruitment programs. If successful, we will attempt to expand the programs to the other university placement centers around the state. Working in conjunction with the Center for Extended Services, efforts have also been undertaken to revise KSU's in-service workshop offerings so they deal more directly with the rural school problems. Based on input from the Center, efforts are also underway to revise and re-orient the student teaching program to develop an option designed to prepare prospective teachers for the rural setting. The Center is also currently working with a group of rural school districts called Schools for Quality Education, attempting to bring the state/federal regulation problems to the attention of the Department of Education and the State Department of Education.

The Center for Rural Education's needs assessment programs are gathering data in most of the identified problem areas. By the 1980-81 academic year the staff plans to have the preliminary set of studies completed. At that time, tentative plans are to shift our focus away from the evaluation programs and concentrate on the development and implementation of more service oriented programs. Initial efforts in this area will probably be concentrated in pre-service training, in-service training and teacher recruitment and retention.

Kansas State University's efforts in rural education are still in the embryonic stage. However, the Center for Rural Education and Small Schools represents a step, perhaps a small one, in the right direction, and one that, with time, will be of service to Kansas rural educators and may indeed serve as a model for other universities to emulate in organizing education services for their rural areas.

## Teaching in rural schools requires specialized preparation

# Preparing teachers for careers

By Benedict J. Surwill

Montana is the fourth largest state in the nation, having an area of 147,138 square miles. The state is predominantly rural, with an estimated population of 760,000 people. Of the 56 counties within the state only six have a population density of 10 or more people per square mile. In the 1979-80 school year there were 104 one-teacher schools in the state. Furthermore, a large percentage of the school districts in Montana enroll less than 100 students. Education in Montana is definitely rural and worthy of the attention of teacher educators. However, like many teacher education institutions in rural areas Eastern Montana College does not provide programming specifically designed for teaching in isolated areas.

To determine if such programming might be needed I contacted rural school teachers and administrators in Montana to determine if they believed there was a need for developing teacher preparation programs designed specifically for rural schools.

The survey was conducted as a part of the continuous review process of our teacher preparation programs in the School of Education at Eastern Montana College. The method selected to carry out the survey began with telephone calls to rural school superintendents requesting their participation in answering a brief open response format questionnaire. In addition, permission was requested of the superintendents to meet personally

with their teachers and principals to explain the intent of the survey and to obtain their written comments to a second open response questionnaire. Total cooperation was obtained from all the superintendents, teachers, and principals contacted.

### Superintendent Questionnaire

The following questions were asked of the rural superintendents:

1) In your estimation do the teacher education institutions prepare students to be effective teachers in rural schools, as compared with preparing them to take positions in urban school settings?

2) Are the teachers who are currently employed in your school system "generally" lacking any specific skills which in your estimation are important to being effective classroom teachers in 1980?

3) What can the teacher training institutions do to assist rural school administrators in staff development?

4) Is the Montana Office of Public Instruction helpful to rural school administrators and teachers? In what ways?

5) Which institutions and/or organizations do you find of value to you as a rural school superintendent? (example: Office of Public Instruction, colleges/universities, county agencies, etc.)

6) In what ways have you found them to be of value to you as superintendent?

### Teacher Questionnaire

The second questionnaire was distributed to rural classroom teachers and school principals during on-site visitations. Again an open response format was employed in asking the following questions:

1) What general suggestions do you have for the design of our (Secondary/Elementary) teacher preparation program?

2) Is there a need for developing a special teacher preparation program for rural school teachers as compared to preparing teachers for metropolitan schools systems?

3) What specific suggestions do you have?

### Recommendations from Rural Classroom Teachers and Administrators

1) Students preparing for a teaching career in rural schools should be required to master the skill of teaching in multi-grade classrooms. The majority of the respondents reported this to be the biggest void in regular teacher preparation programs.

2) Students need a strong background in the teaching of reading. The respondents were educated in a variety of institutions both in and out of the state and it was interesting to note that the majority indicated that they had received minimal preparation in teaching reading. They felt that this continues to be a definite weakness in teacher preparation programs today.

3) Elementary teachers in rural schools are commonly expected to teach art, music, health and physical education, library skills, and dramatics in addition to the three R's. Therefore, methods courses and early practicum experiences should be designed to provide adequate preparation in the arts and sciences as well as

the basic skills areas. Furthermore, students should be provided the opportunity to visit rural classrooms to observe teachers teaching these various subjects.

4) Secondary teachers preparing for careers in rural schools should realize that highly specialized training in only one academic discipline often restricts their marketability. In the great majority of rural schools it is imperative that teachers teach at least two academic disciplines and often carry additional assignments. One high school teacher in a school that enrolled less than 50 pupils reported that 95 percent of the training she received in her teacher training program prepared her to deal with five percent of her actual teaching responsibilities, mainly because her training prepared her **only** as a subject matter specialist. A teacher in another rural high school reported, "I teach Business Education, administer the guidance program, coach basketball and track, serve as Senior Class Advisor, and sponsor the National Honor Society." The range of responsibilities that goes along with a teaching contract in a rural school may well shock some students preparing to teach in a rural community.

5) Almost all of the respondents stated that students preparing for careers in rural schools need better training in handling classroom discipline with various age groups of children.

6) Students need specialized training in how to effectively use the resources in a rural community to enrich their classroom programs.

7) Students should be required to demonstrate how they would effectively plan a curriculum for a multi-grade level setting.

8) Students should be required to demonstrate their competency in diagnosing individual student needs and effectively planning programs to meet those needs.

9) Students should understand the sociological implications for a teacher living and teaching in a small rural community in contrast to living and teaching in a metropolitan community.

10) Students should be prepared to maintain a variety of school records including attendance records, test records, health records, equipment and supply records, and often county and state records.

#### **Summary of recommendations**

In many ways the responsibilities of a rural classroom teacher appear to be analogous with those of the traditional country doctor. Both may well be classified as specialists in "general practice." Like the circuit riding doctor, the professional training of rural teachers should prepare them to deal with a multiplicity of problems without depending on immediate specialized assistance. This would not be true for all rural classroom teachers in Montana since some rural schools cannot be distinguished in operation from urban schools except for their location. Teachers who teach in larger schools are generally considered somewhat specialized, i.e., first grade teachers, fourth grade teachers, sixth grade teachers, high school English teachers, high school mathematics teachers, etc. Therefore, they may need a more concentrated training program beamed at a specific grade level or subject area.

For the most part, however, rural schools are not financed well enough to be able to afford the level of

specialization more typical of urban schools. Thomas (1974: p 2) has shown that the administrative cost per pupil in school districts of up to 600 pupils are approximately twice that of districts with more than 25,000 pupils. In 1979, Muse reported that teachers in rural western high schools felt that their pre-service education did not adequately prepare them for the curriculum and poor facilities encountered in rural schools, and Edington and Musselman (1969) have reported that rural teachers tend not to have advanced degrees, are often poorly trained in curriculum and guidance principles and are unfamiliar with the unique problems of rural schools. Similar conditions prevail at the national level according to Estes, 1967. Such findings seem to support the need for preparation specific to teaching in isolated areas.

Students preparing to teach in rural schools should receive professional preparation **specifically designed** for this challenging career. This segment of their teacher preparation program should include on-campus and off-campus experiences designed specifically to meet the challenges of teaching in a rural school. In addition to the special rural teaching preparation rural teachers also need, as do all teachers, certain generic competencies. For example, teachers should be knowledgeable in the area of learning theories, so that they are well qualified to promote a productive learning environment for their students. Subsequently a learning oriented classroom environment presupposes a host of other competencies such as the teacher's ability to maintain discipline, to motivate students, to apply appropriate evaluative techniques and to teach academic content skillfully.

#### **Designing a special track in the regular teacher education program for students preparing to teach in rural schools**

As previously suggested isolated, rural teachers are typically faced with special job responsibilities. Teacher educators should be aware of this and take the steps necessary to meet the professional training needs of students preparing for rural schools. The recommendations that came from the rural teachers, principals and superintendents, appear to substantiate this claim.

Therefore, I offer the following programmatic suggestions, which may be included in any teacher preparation program, as a means of responding to the particular needs of students preparing for teaching careers in rural schools.

First a "methods" course in rural school teaching should be developed. This course should be designed to provide students with a variety of experiences relating to the effective presentation of academic subject matter in a multi-grade setting. The course should include observation of rural school teachers in action, along with laboratory and clinical experiences both on and off campus. Ideally the course should be team taught by college faculty in consultation with rural classroom teachers.

Secondly, a course in rural educational sociology should be developed. This course should provide an overview of the sociological implications for teachers living and working in rural communities. It would be highly desirable to include guest speakers from rural communities as a part of this class.

A third cause in developing effective school-community relations should also be included. This course should provide students with the knowledge and skills

necessary to effectively use the community as resource for enriching the program. Rural teachers, administrators, board members, business representatives, social and service organization representatives, should be recruited as resources for the class.

In addition to these three rural oriented foundation courses experiences to relate theory to practice should also be provided. Students should be provided these experiences in rural school settings preceded by specially designed on-campus clinical experiences. Students should be given the opportunity to observe and participate in teaching activities in a rural classroom environment. The on-campus clinical experiences should involve the student in the diagnosis and treatment of teaching problems under simulated conditions.

Finally, students preparing for a career in rural education should certainly be assigned to student teach in a rural school.

### Summary

The sampling of rural teachers and administrators in this Montana survey points toward the need for a specialized training program for rural teaching and teacher preparation institutions would be responding by designing programs to meet the professional needs of rural educators.

It is suggested that the design must include consideration of the sociology of rural areas as well as preparation to function in relative isolation.

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## ECE programs need to be tailor made

# Early education in rural areas?

By Billie Thomas

Three major areas of concern confront the educator who is designing and implementing programs for Early Childhood Education (ECE) in rural areas. First, should communities become involved in the lives of young children? Second, will there be enough children to justify programs? And third, what can be done about the special problems rural program will face?

### Should we become involved?

Many of the social issues historically associated with ECE have been related to the fear of tampering with the almost mystical relationship between child and family. Children were viewed as legal possessions and responsibilities, first of their parents, and then of their extended biological families. During the last generation, the American nuclear family and extended family have undergone radical changes. Today, for example, a majority of preschool children will spend time in a single parent family. More than half the mothers with preschool children are working. Extended families are smaller, and in our mobile society, often live thousands of miles away from the young children in their family. All over the nation parents are asking the community for help and support for themselves and their children.

Do we know enough to help them? Will we do more harm than good by becoming involved with young children? Over the last 20 years, research has shown that the bonds within the family may actually strengthen when the child is in an ECE program, especially when the family is included (Kagan and Whitten<sup>1</sup>; Kempe<sup>2</sup>; and Weikart<sup>3</sup>).

A Westinghouse Study 12 years ago showed that children who attended ECE programs had only a slight general academic benefit because of a "washout" effect during the second grade. It has been discovered that this conclusion was premature and subsequently inaccurate because the "washout" is temporary.<sup>4</sup> Since then, many thorough efficacy studies have shown the "washout" appears in the second grade for some unknown reason, and that after second grade the academic benefit increases yearly for the children who attended ECE programs. By seventh grade, children who attended preschool have 50 percent fewer special education placements and 50 percent fewer grade retentions than comparable groups which did not attend preschool.<sup>5</sup>

Educators often promote continuous programming as an educational goal because it would eliminate unnecessary assessments, records, and training for educators, and would also eliminate unnecessary adjustments for students and their families. However, because of different funding patterns, philosophy and organizational structure, continuity has not been a reality for the preschool through elementary levels.

Preschool provides a somewhat protective, generally individualized situation where one-to-one child-staff interactions and active parent involvement are characteristic. Upon entering the structured public school system, however, both parents and child may feel resentment at the somewhat non-personal approach to placement and programming. It seems only reasonable that continuity from preschool through the elementary years should be an imperative goal for ECE programs.

Because of the academic benefit to children, the support and training for parents, the continuity of programs, and the savings in later decreased special education programs, ECE programs are an advantage. Funding for such programs should be viewed as a financial investment for rural communities. An investment which not only pays dividends in better education but also in financial efficiency.

### Will there be enough children?

During the 1960s, rural communities experienced an out-migration of young families which prompted educators to question the need for future ECE. However, the vast rural-to-urban migration that was in the 1960s has been reversed in the 1970s. The trend that produced this reversal seems to be a sharply diminished attraction to the nation's massive metropolitan areas and more settlement in the smaller rural and urban cities (25,000 to 49,999 people) as well as small towns and rural areas.<sup>6</sup> During the late '60s and early '70s many rural areas experienced increased growth in prosperous and slow economic periods. For example, an economic downswing seems to return the earlier out-migrant to family and friends, while the economic upswing may bring new migrants seeking small town amenities which they cannot find in the more congested, costly environment. The people moving are young, with the peak rate among all persons occurring at 23 years of age.<sup>7</sup> Consequently there is an influx of young people into rural communities during prosperous and slow economic periods.

In the **completely rural** counties, the natural increase of population has been very low since 1970 because of the comparative shortage of adults of childbearing age (resulting from past out-migration), and the growth of older populations of higher mortality. The high rates of

rural growth are found among counties with retirement areas, recreation areas, senior state colleges, and with large metro areas nearby. Geographically, several subregions have had rapid growth. The Ozark-Ouachita Area, the Upper Great Lakes Cutover, the Rocky Mountains, and the Southern Appalachian Coal Fields<sup>8</sup> are examples.

An additional factor is that the birthrate in rural areas has not declined as much as in urban areas. However, despite the increase in population and the slower decline in birthrate, the total number of children still decreases as the age of the child decreases. For example, as of spring 1976, Montana had 55,000 children under five years old; 60,000 children under 10 years old; and 73,000 children under 15 years old. Another way of looking at this is to consider the number of children under five years old per 1,000 women. For the total U.S. population, the number decreased by 18.2 percent from 1970 to 1976. While there is a slow decline in rural areas, the number of children will not be expected to increase in rural areas, and if present trends continue may decrease by about 2½ percent per year.<sup>9</sup> This means that a class of 20 children would lose one child every other year.

This small anticipated decline in children hardly seems to indicate abandoning or not starting ECE in rural areas. Perhaps it even justifies channeling **more** resources to ECE and making efforts to provide all the support we can to young children and their families. An analogous example is rural physicians. As their number has declined in rural areas, they have become **more** valuable. When one considers today's preschoolers, realizing they are the resources of the future, each individual becomes that much more precious.

One might consider the future years from a personal point of view. In the 21st century, today's preschoolers will be adults. Imagine that you are old, and can no longer care for yourself. Because of the economy your family must work, and someone else must care for you during the day. Would **you** like to spend those days in the cheapest building in town? Perhaps a church basement or some space that cannot be used for anything else? Your caregivers may have invested a whole \$2,000 in necessities such as beds, tables, chairs, bookcases, eating utensils and games to be used by over forty other people. At a charge of \$5 per day there could be no money for carpets, field trips, movies, or other extras to brighten your long days. Instead you will be sent outside and to the TV because they are free.

With one "nurse" for each ten people you would not get much attention. Of course, this is not a real "nurse," with college training. That would cost too much. Perhaps someone who is not able to be a waitress or secretary. A person who will work for absolute minimum wage, with few increases, or none. "Nurse" will have no paid vacations, no insurance, no coffee breaks, no sick leave, and no paid time to plan for you.

Does this future appeal to you? Do you think "nurse" will feel good about you? Or that you will feel good about you? This is of course the model we provide daily for millions of young children. Remember, they will be the adults who care for us in our old age.

#### What about special rural problems?

The rural schools face special problems as they become **more** involved in ECE. Identification of students, transportation, staffing and program choice are all critical issues.

Finding the children becomes important because mandatory schooling is set at seven years for most states, and families of preschoolers may not realize there is a possibility to involve their child in ECE programs. Also the "captive audience" is not available as it is in the elementary and secondary school. If a family does not like the program, for example, they can leave it.

Special efforts must be made to locate students and to involve their families. Utilizing the existing resources in the rural community is one way to begin this task. Coordinating and planning with local resources such as public health, social services, and census agencies can also lead to successful identification procedures and parent involvement.

As of 1978, 78 percent of preschool children were driven to school,<sup>10</sup> and the distance traveled to school was considerably longer for those living in rural areas, averaging 50 percent farther than in metropolitan areas.<sup>11</sup> Transportation costs will continue to rise, and will become more prohibitive in rural areas, especially where winters are severe or where the changing residential patterns and consolidation of schools have increased the distances to be traveled by students.

Lack of trained staff may also be a problem, and with declining enrollments and teacher layoffs, the tenured teachers may not be trained in ECE. However, because the intrinsic rewards of working with young children are highly valued administrators can usually find someone willing to attend summer workshops for that critical additional training. An elementary teacher is **not** an early childhood specialist; however, special planning, program development, interaction, and group skills are all necessary to prepare good elementary professionals to work in a quality ECE program.

Rural children too have moods particular to the rural lifestyle. The lack of peers often means the group social skills are less likely to develop. Once in groups they may need more time to develop interpersonal skills. They are usually accustomed to more space than urban children, so may need time and help adjusting to limited school boundaries, group limits and processes. They also need to learn about urban lifestyles, just as urban children need to learn about farms and rural communities. The school is often the child's primary link to public health, social services and community resources, and these services are often utilized only after school entrance.

Parents in rural areas have special needs also. They may need support groups that the rural locale does not provide. These may include parent groups, crisis nurseries, day care, toy libraries, and human services agencies, all of which may be miles away and made prohibitive by inadequate transportation.

#### Which program design?

These needs of rural schools, staff, children, and parents all lead to questions of program design. One possible answer is the **Center Model**. Here, children are removed from the home and educated together at a central location. The advantages are that the school can control many learning variables, and thus modify the total environment. The major disadvantage is the heavy financial burden that results from transporting children to the center and the long travel time involved. There is also the possibility of alienating the family due to their inability to become involved in the school's program.

The **Visiting Teacher Model** is another option and entails a trained teacher who is sent into the home to work with the child for a specified amount of time, usually on a weekly basis. Parents may, and often do, choose to leave during these sessions. The advantage of this model is that it provides a one-to-one teacher/child interaction in a familiar situation with no travel time for the child. The disadvantages are the travel expense and the teacher salary during travel time. It has also been shown that staff burnout is highest for this model.

In a **Home Visitor Model**, an educator goes into the home to train the mother and/or father to stimulate their own child. Outcomes using this model can be substantial, provided the interaction between the visitor, parent and child is positive and motivating. Financial considerations relating to long distances for travel and staff time again become important costs in this model.

The **Cluster Class Model** involves motivating parents and children to travel two to four mornings a week to a center, where the children are placed in groups and parents are placed in adult classes. After class, parents pick up their child and return home. Cluster Classes provide the desirable advantages of the Center Model, such as socialization in groups, controlling the learning environment, availability of equipment and trained staff. Travel costs are absorbed by parents, and staff has no travel time. The disadvantage is that the high level of motivation and cost may deter many of the parents from becoming involved. If the school provides transportation and babysitting for siblings, this model is more successful.

By considering the students, staff, parents, community, transportation, finances and goals, each community can decide which program model will best meet its needs. A local needs survey would be a good place to start. Let the parents tell you about needs, and the community tell you about resources.

### Conclusion

It would seem obvious that ECE programs should be developed in rural areas. There is a population, and problems such as identification, transportation, staffing and program design can be solved through community planning. However, it is important that rural areas act now,

so that inequities in essential ECE services will not become worse.

Young families and young children are some of the greatest future resources a community can have. If ECE programs and support services are non-existent or inferior in rural communities, it is probable that young families will leave and seek them elsewhere.

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# Author sensitive to rural life

By George Madden

**The Social Cost of Space in the Yonland** by Carl F. Kraenzel. Big Sky Books, Montana State University Press, Bozeman, Montana. (137 pp., \$5.75)

The people who speak most glowingly about the virtues of rural life are mostly those who don't live there. They live in urban areas or, at best, are recent transplants from the city to the country. But modern man likes to romanticize the pleasures and advantages of the pastoral life even as he creates the conditions that destroy it. He is rarely willing to take an honest look at the situation much less sacrifice any part of his own personal interests in an effort to preserve that way of life about which he is so nostalgic.

Not so with Carl Kraenzel whose book **The Social Cost of Space in the Yonland** has been published recently. Kraenzel was (he died just a few months ago) a modern man in the sense that he was a social scientist (rural sociology) and a scholar but he retained his love for the rural life he had known as a North Dakota farmboy. He was aware that one pays a penalty for living in sparsely populated areas, but he was convinced the penalty was neither fair nor absolutely necessary. He therefore set out to describe these penalties (social cost) in some detail, explain the causes of them, and propose ways of ameliorating them.

His language sometimes reflects sadness and a touch of bitterness. For example, the book is dedicated to the residents of the Yonland especially farm and ranch people, "whose expertise, efficient use of capital, and abundant production have brought them low income, declining communities, inadequate social services, and a loss of a way of life. Urban Americans need not wait to see what happens when automation and technology get the upper hand."

The Yonland (a term he invented) is composed of the non-urban parts of the 10 states which have the Great Plains as a common bond between them (North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, Texas, New Mexico, Colorado, Wyoming, and Montana) plus four intermountain states (Idaho, Nevada, Utah, Arizona). This area contains just over one-half (50.6 percent) of the area of the 48 adjacent states, but has only 13 percent of the population. The more urban areas within the Yonland (e.g. Denver, Salt Lake City, Billings, etc.) are referred to as the Sutland. The Sutland naturally receives scant attention in the book because social cost is not as much of a factor there as in the Yonland.

Social costs are that collection of disadvantages associated with rural life including: lower income, reduced career opportunities, higher prices for goods, social services that are both fewer in number and generally lower in quality, etc. Some social costs are quite direct and can be calculated with some precision, e.g. one can make direct comparison of prices for manufacturer goods in urban and rural areas. As a general rule such prices will be higher in rural areas and this provides a direct measure of social costs in that instance. Other social costs are more subtle and therefore difficult if not impossible to calculate. A good example of these more subtle social costs is provided by the author's account of a visit he paid to a remote ranch in eastern Montana where a former student lived with his parents. Kraenzel discovered that the mother was suffering with terminal cancer "perhaps the result of late detection." If the late detection actually occurred (we can't be sure from the account) and if the cause of late detection was the fact that quality medical care was not readily available (the nearest town was 100 miles away and had a population of only 300) then late detection was a social cost to the mother and the family but not a cost one would be willing to assign a dollar value to.

In a chapter on education the author makes the point that small rural schools are penalized for their smallness because state formulas for the funding of such schools do not make up for the increased per student cost of education in small schools as compared to large urban schools. The argument is familiar but a somewhat new twist is provided in a section on the effect of pro-urban funding formulas on school organization. Using Montana as an example he shows that the 8-4 pattern of school organization is common in rural areas while the 6-3-3 pattern is more typical of urban schools. He points out that (at the time of his writing) the state formula allocated \$144 per student more for 7th and 8th grade students in a 6-3-3 (junior high) pattern than for those in an 8-4 pattern, thus rewarding urban schools and penalizing rural ones. It is perhaps unfortunate that after making this valid point on the inequality of school funding, the author spent the balance of the chapter on bilingual education thus failing to touch on any of the many other problems of rural education. One can be forgiving on this point, however, since the author was a rural sociologist, not a professional educator.

Especially interesting is his analysis of why social costs exist. The causes are not simply geography and demography but additionally and more importantly the operation of the "central place theory" and the rapaciousness of the "agents of capitalism." Central place theory is itself an aspect of our economic system which requires that for the maximizing of profits the

majority of consumers must be located near sources of production i.e. in urban and suburban areas. The people who live in these more densely populated areas (both in the Sutland and elsewhere in the country) thus derive maximum economic benefits in income, career opportunities, social services, etc. Conversely those who live in sparsely populated areas must pay the penalty of lower income, reduced opportunities, and fewer and poorer social services, in other words a lower standard of living. Kraenzel argues that this is injustice. Rural dwellers render valuable services to the total of national life and should not be punished with a lower standard of living!

But the social costs are not purely the results of the blind forces of the economic system but also the greed and avarice of those who operate the system. While he does not produce data on this side of the argument he does employ some of his sharpest comments, e.g. "The capitalist agents \_\_\_\_\_ have certainly raped the Yonland" or several references to "the exploitation of the Yonland, its residents and its resources, by the non-Yonland capitalist agents and their satraps \_\_\_\_\_."

Solutions to the problem of the social cost of space are somewhat less clear than the analysis of the causes. Professor Kraenzel seems to feel (and properly so) that there should be equality in the standards of living between urban and rural areas. How this equality is to be achieved is a bit vague—it seems to involve some limits on the activities of the "capitalist agents" although these are not spelled out, some positive programs of federal assistance (we do pour federal money into urban areas don't we?) and, most importantly, cooperative efforts among the

dwellers in Yonland themselves. This last point is one of the most vital in the book. He points out that the rural dwellers are besieged by the greedy forces of outsiders or as he puts it, "The Yonland residents, and their state governments, are at bay with their backs to the wall and fighting off the exploiters." Those of us who live and work in energy rich states can identify especially well with this quote. The people of Montana, for example, have imposed a 30 percent tax on coal extracted from our state as a means of accumulating the resources to offset the social cost of the extraction of our resources. But already the exploiters have mounted a concerted campaign to forbid by federal legislation this wise and humane practice. Clearly the residents of the Yonland had better learn quickly to cooperate together to resist this new wave of activity by the "capitalist and their satraps" because this new wave of exploitation is more serious than ever supported as it is not just by greed but by an admittedly serious national and world energy problem. Kraenzel argues that only through regional cooperatives can we resist. He cites a number of examples, among them the Basin Electric Power Cooperative, the Great Plains Agricultural Council, the Western Interstate Commission for Higher Education (WICHE) and others as models of the eventual salvation of rural life in the area. He closes his provocative book with this sentence, "Only by being 'Blue-eyed Arabs' can the Yonlanders fight for regionalism for a time."

Let us hope time does not run out before rural America can unite to preserve its precious way of life!

# About the authors

**Leonard Breen** is an associate professor of continuing education and a reading specialist for the Regional Educational Services Agency at Mississippi State University in Starkville, Mississippi.

**David M. Davison** is an associate professor of mathematics education at Eastern Montana College in Billings, Montana. Presently he is serving as Acting Dean of the School of Extended Studies and Community Service.

**John M. Dodd** is a professor of special education in the Institute for Habilitative Services at Eastern Montana College and served as co-editor of this issue.

**Suzanne A. Dorsey** is school counselor/psychologist for the Scobey public schools in Scobey, Montana.

**Everett Edington** and **Judi Conrad** are both with Educational Resources Information Center/Clearinghouse on Rural Education/Small Schools (ERIC/CRESS) in Las Cruces, New Mexico. He is director and she serves as information specialist.

**Robert K. James** is a professor of science education at Kansas State University and **Loren E. Riblett, Sr.** teaches science at Wamego, Kansas.

**Katharin A. Kelker** is a special education teacher for the Yellowstone West/Carbon County Special Services Cooperative. The Cooperative is located in southcentral Montana.

**Jack L. Larson** and **Michael R. Penrod** are both at Kansas State University where they are completing doctoral studies in the College of Education.

**Benedict J. Surwill** is dean of the School of Education at Eastern Montana College.

**Billie Thomas** is an assistant professor of early childhood education in the Division of Elementary and Secondary Education at Eastern Montana College.

**George Madden** is a professor of education in the Division of Elementary and Secondary Education at Eastern Montana College and served as co-editor of this issue.

**Jerry L. Jinks** is an associate professor of science education and director of Faculty Development at Eastern Montana College.