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ABSTRACT

During the past two decades, rural America has undergone substantial restructuring that affects both rural education and prospects for rural economic development. Rural restructuring has made rural America more economically dependent and more economically and socially diverse, has replaced relatively autonomous communities with regional units of social and economic function, and has triggered the incorporation of rural services into national systems. Prospects for growth in natural resource and goods producing industries (those that rural economies are most dependent on) are dim, but service employment will likely continue to grow. New rural development strategies should consider the job-creating potential of small business and entrepreneurship, especially in finding and filling local "niches," the importance of knowledge-based enterprise, and the need to create new networks and partnerships to support avenues of alternative development. To these ends, rural schools must provide sound basic education and train students to be innovative, to have multiple skills, and to work as members of small problem solving teams. There are also needs for continuing education, educational attention to the locality, and educational partnerships to improve both education and community development. School Based Development Enterprises have produced school-community economic development partnerships in rural areas across the country. Contains 117 references. (Author/SV)

LEARNING TO FIND THE "NICHES"

RURAL EDUCATION AND VITALIZING RURAL COMMUNITIES

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Prepared for the National Rural Education Research Forum
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ABSTRACT

LEARNING TO FIND THE "NICHES":

RURAL EDUCATION AND VITALIZING RURAL COMMUNITIES

By

Daryl Hobbs, University of Missouri

Even more than the rest of the society, rural America has undergone substantial restructuring during the past two decades. This restructuring has dampened future prospects for the most widely practiced rural development strategy of the past - rural industrialization. Odds now favor "job creation" over "smokestack chasing" for many rural communities. But human capital is a key and educational innovations are a key to producing it.

We emphasize that rural restructuring has contributed to rural America having become more economically dependent and more economically and socially diverse. Concurrently rural regionalization has changed the role and function of rural communities. Regionalization and dependency have been reinforced by rural institutions having become more completely integrated into national "systems". These changed conditions affect both rural education and prospects for rural economic development.

After reviewing industrial restructuring of the society and economy we identify various factors and conditions that influence the prospects and opportunities for rural community economic development today. We emphasize that prospects for growth in natural resource and goods-producing industries (those that rural economies are most dependent on) are dim, but that service employment will likely continue to grow. New rural development strategies should take into account the job-creating potential of small business and entrepreneurship, especially in finding and filling local "niches". We also emphasize the need for more "knowledge-based" enterprise and the need to create new networks and partnerships to support alternative approaches to rural development.

We conclude by identifying some ways rural schools and rural education can more effectively support community economic development. Specifically we emphasize the need for providing sound basic education and training students to become more capable of innovation, entrepreneurship and working as members of small problem solving teams. We also emphasize the need for continuing education, more educational attention paid to the locality, and educational partnerships that can contribute to both improved education and improved prospects for community economic development.

The paper concludes with a review of some innovative approaches to linking rural education with rural revitationalization. A resource bibliography is attached.

Those rural communities who have survived the barrages of social and economic change of the past 80 years, continue to confront threats to their vitality and even existence as a new wave of national economic restructuring sweeps the land.

The threats to rural communities' survival during the first half of this century were largely attributable to the simultaneous industrialization of agriculture and the urban economy. The mechanization of agriculture released farm labor that booming urban industry was able to absorb. Substantial rural population (and economic) decline resulted as rural people moved to where the jobs were. Rural to urban migration, especially of youth, became as predictable as death and taxes. Industrialization of the economy, mechanization of agriculture and increased productivity of each went hand in hand. As farms changed so, of necessity, did agricultural communities. All the while rural and urban differences were becoming less distinct - rural America was becoming phased into an industrially based mass society.

Rural schools played a prominent role in this rural-urban inversion. Rural communities invested in the education of their youth who took their literacy and skills with them to cash in in urban labor markets. It is difficult to overstate the extent to which rural America subsidized the nation's economic growth through a continuing stream of literate and skilled workers imbued with a work ethic (Bowles and Gintis, 1974). Clearly the country was well served by this movement - the benefit to rural localities is much more difficult to assess. As human capital theorists were to later emphasize (e.g. Schultz, 1961; Mincer, 1979; Bowman, 1979) this tide of rural to urban human capital, if not the

engine of national economic growth, was certainly a major source of it's fuel. This era spawned much of the conventional wisdom we continue to exercise today about the relationship between education and economic development: conventional wisdom that now tends to inhibit the innovation in both education and economic development that current circumstances necessitate. To paraphrase one author (Castle, 1986) our rural institutions have been remarkably faithful to the purposes they were created to serve, but the times have changed and so have the problems.

We will emphasize that our recent history has generated an economic development and an educational orthodoxy both of which appear to have outlived some of their usefulness. The value of those orthodoxies for rural economic development and rural education is particularly suspect because changed conditions make it increasingly improbable that rural industrialization will come to the rescue of rural economies. It is no more likely that rural communities will be able to continue to afford and justify all the features of the conventional, comprehensive school. Creativity and innovation is needed in both areas. Creative coupling at the community level of education and development in the service of rural revitalization may be one of the more fruitful innovations. To employ a term of currency, there is potential for substantial synergism by making that connection.

Because recent events have so shifted the landscape of economic development we will direct our attention initially to recent trends and how these are contributing to new economic development prescriptions and practices - both for rural communities and for the nation. From our

perspective this alternative economic development agenda is opening the door widely for creative coupling of education and community economic development.

Creation of a New Rural Plateau

The problems created for rural communities by the long-term mechanization of agriculture and the exodus of trained manpower began to come clearly into focus by the late 1950's. At that time rural America was still predominantly agricultural but the consequences of uni-directional change had become obvious (Dillman, 1986). Media articles began to appear with regularity forecasting the "death" of rural communities. The first rural development legislation, uncoupled from agriculture, appeared during the Eisenhower administration and gained momentum through the range of "social" programs spawned during the War On Poverty (Hobbs, 1979). Concurrently the Interstate Highway system was begun. A round of rural restructuring was under way that would have a profound effect on everything rural - from schools, to employment and lifestyles.

With the stage thus set assimilation of rural America into the mass society accelerated from 1960-1980. For many reasons, including such major infrastructure investments as the Interstate system, greatly improved highways, many urban based goods-producing industries, in search of lower costs of production, especially labor, found communities with open arms in rural America. Rural communities had become anxious to fill the economic void created by a shrinking agricultural base. They not only laid out the welcome mat, but through their own industrial

development efforts they added inducements and recruited industries wishing to expand or relocate. Thus a marriage was consummated. Industries, especially mature product, goods producing industries, largely dependent on relatively low skill labor, moved to the countryside. By the middle 1970's manufacturing employment had emerged as the single largest source of rural income (Pulver, 1986). From 1960 to 1975 growth in rural manufacturing employment exceeded that in metropolitan America by a substantial margin (Bradshaw, 1982). A new key to short-run survival and economic vitality of many rural communities had been found.

Concurrently other changes were contributing to further urbanizing rural America. Important among them was the rural population turnaround, which, during the 1970's, produced an unprecedented net movement of people from urban to rural areas (Wardwell, 1982). The reasons were multiple - more rural factory jobs was one; large numbers of retirees, free to have guaranteed retirement checks sent to whatever address they chose, began to choose rural addresses; yet another contributor was the many urban people who moved further from their city-based jobs to outlying rural communities in search of what they perceived to be the superior quality of life of the small town. Other factors such as the search for domestic energy and the national growth in demand for outdoor recreation also played a part. All added new components to the rural economic base. These factors diversified rural economies and motivated talk of a rural renaissance during the 1970's. But the "rural revival" proved to be short-lived as the agricultural crisis of the 1980's hit, some factories, having demonstrated their mobility by moving to rural

areas, again became mobile in favor of off-shore locations (Bluestone and Harrison, 1982), and an energy crisis was transformed into an energy glut.

Thus by 1987, save for those rural communities fortunate enough to have "chosen" a location within commuting range of growing metropolitan areas, and those which continue to attract ex-urbanites in search of recreation or a country retirement, rural communities generally find themselves confronted with a shrinking economic base. A shrinking economic base translates into fewer jobs, an ability to support a smaller population, and declining revenue to support needed public services, including education. The decline has occurred simply because over the past 15 years, there has been virtually no employment growth in the nation's goods-producing industries (manufacturing, construction, mining, agriculture, forestry and fisheries) -the enterprises rural localities had become most dependent on (Garnick, 1985; Pulver, 1986). Consequently many rural communities today no longer see economic development as only desirable - it has become essential.

But the question has become: what kind of rural economic development is feasible, possible? Can rural communities expect to swim against the current of national and international economic trends? Hardly any of the traditional components of the rural economic base are prime candidates for notable growth. While rural localities did capture a larger share of manufacturing employment during the 1960's and 1970's, this proved to be at the back end of the curve since concurrently nearly all net national employment growth was being generated by the service sector (Bender, 1987). Nationally, industrial restructuring was and is occurring

(Tienda, 1986). Entrepreneurship (Drucker,1985), flex-system production (Reich, 1983), advanced services (Noyelle,1983), venture capital, small business development (Smith and Pulver, 1981), finding "niches", knowledge-based development (Deaton, 1986) etc. have begun to replace "smokestack chasing" in the lexicon of both national and rural economic development. Competitiveness has become the goal and new approaches are regarded as necessary to achieving it. But what tools does rural America have to work with in its quest for economic development? What is the "lay of the land"?

The Changed Contour of Rural America: A Different Social and Economic Landscape

The 1960's and 70's transformed rural America, but did not "solve" its perennial economic problems although many communities and regions experienced temporary relief. But the transformations did shift the playing field confronting rural communities in their quest for continued existence. We review some of the features of the changed landscape because there are indications that many administrators and policy makers continue to think of a rural America and a national economy that no longer exists (Castle, 1986). Chances for progress are likely to be improved if efforts are based on a rural America that is really "out there" rather than one that is presumed to exist, or remembered to have existed. Some features of the 1987 model of rural America include:

1. Rural community dependence - Most of the causes of rural community change originated from outside the community (Wilkinson, 1986).

Farm product, timber, energy and other natural resource prices are not established locally - they are determined by national and international markets; rural communities did not decide on their own to either move a factory to their community or to close it down (Summers, 1982). The forces of national and international change have caused rural communities to become more dependent - dependent for their economic existence on factors over which they have increasingly little control. Small rural economies have had few defenses against change - their increased external dependence has made them more vulnerable.

2. Rural diversity - Recent economic changes have not occurred uniformly across rural America. There has been uneven development. Rural industrialization was largely concentrated in the South and West (Rosenfeld, et.al. 1985; Bluestone and Harrison, 1982). Growth and decline in energy development took place mostly in the West and Southwest. As agriculture became more commercial, it also became more geographically concentrated. The farm crisis of the 1980's has been predominantly a crisis of the Upper Midwest. Because of growth of other sources of rural income agriculture now ranks well down the list among rural income producers although many rural communities continue to be principally dependent on it. Retirement income now accounts for several times more rural income than agriculture (Bradshaw, 1982; Summers and Hirschl, 1985). Rural communities within 50 miles of major metropolitan areas are learning how to cope with growth while spatially isolated farming communities struggle to survive. Enclaves of urban affluence have sprung up in rural localities having outdoor recreation amenities. But rural America continues to harbor a disproportionate share of the

nation's poverty. Much of the rural poverty is concentrated in what have been labeled persistently poor counties - counties that have remained among the bottom 10 percent in income since 1950. These counties are largely populated by minorities - the Southeast having a major share (Daft, 1982).

Therefore talk about rural America in general is not very productive; local circumstances and opportunities vary too greatly. A strategy that makes sense for one rural community might well be a failure in another (Nachtigal, 1980).

3. Regionalization of rural communities and services - A persistent image, firmly embedded in nostalgia, portrays rural America as composed of relatively autonomous and self-sufficient communities having a high degree of social cohesion and identity. But, stimulated by improved highways and dominance of a "bigger is better" notion of efficiency, many communities have lost social and economic functions to larger towns. Instead of being "complete" communities, they have become partial communities at best. Application of the industrial themes of centralization, specialization and consolidation contributed to more rural services becoming concentrated in larger towns and small cities. Schools, health care, retail trade, vocational schools, government administrative services, etc. have become more centralized. Commuting to work in other communities has also become a widely practiced rural adaptation to shrinking local job prospects. Consequently today's rural resident typically patronizes a number of towns, spends a lot of time on the road, and participates in what might be termed "regional communities". Not only have many smaller communities lost economic and

service functions but they have correspondingly lost a part of the social attachment their residents feel toward the locality. The concept of rural community has changed substantially. (Summers, 1986; Wilkinson, 1986).

4. Incorporation of rural services into national "systems"- There is a national tradition of local/community control of services, especially education. But the general thrust of change has been to substantially reduce local autonomy and to incorporate more rural services, fiscally, administratively, and programmatically into state and national systems (Apple, 1982; Spring, 1982). Part of the impetus has been increased state and national funding, intended to "equalize" quality; another important contributor has been increased professionalization of services, especially education. A benefit to rural communities has been additional fiscal support for their services; costs include reduced adaptability of local services to the environment they serve and greater dependence (Castle, 1986). To a great extent this trend contributed to standardizing education - an effect which also reduces the potential for needed rural institutional innovation.

Since rural America, both economically and socially, has become more incorporated into the national "system", changes occurring nationally also have an important influence on rural localities. We turn now to some of the national changes which have rural implications.

The Current Economic and Social Environment

Although different authors have coined different terms to describe changes, there is a growing realization that megatrends are occurring and, like rural America, the entire national economy is undergoing transformation. Economic internationalization and a corresponding shift away from mass production of standardized goods to more of a service based economy are two of the more frequently cited features (Thurow, 1985).

Evidence of the restructuring is to be found all around us. Economic news presents a mixed bag. On the one hand it stresses that more jobs are being created, that the number of people employed stands at an all time high, that the economic recovery is continuing. But concurrently there are other trends that are prompting concern about national economic competitiveness. Gross national product continues to grow, but its rate of growth is slow. In most economic sectors labor productivity has stagnated and has fallen well behind other major industrial nations (Thurow, 1985). There is a contention that the U.S. has shifted from being a center of higher value production to lower value production (the growth of service employment is frequently cited as a reason). Reich (1983) for example, observes that while the U.S. is gaining automobile assembly plants with Japanese name plates, much of the higher value production of the sophisticated components is occurring in Japan. The lower value assembly of those components is taking place here. Growth of the service sector has meant that many of the new jobs being created are at or only slightly above minimum wage (Bluestone and Harrison, 1982). However services is a complex category since compensation (and skills) of service workers varies from the minimum

wages of counter workers at fast food restaurants to the highest levels of compensation for say, neurosurgeons and corporate lawyers (Noyelle, 1983). Because of the surge of low wage employment, family income (in constant dollars) has declined over the past 15 years even though there has been a substantial increase in the number of multiple income families as women employed outside the home has become the norm.

National Transformations: From Mass Society to Multiple Option

Dillman (1986) has portrayed these transformations on the following chart. He shows three fundamentally different eras that have characterized the U.S. this century. The earliest of these - the era of community control (fundamental to many of our ideas about rural communities)- is pretty well past, while another - the one he refers to as an information age is in ascendance.

Dillman, is joined by others (e.g. Reich, 1983; Drucker, 1985; Thurow, 1985; Naisbitt, 1982) in noting that during the 1920's the mass society began to gain dominance, and a long term process began of incorporating local uniquenesses, interests, and needs under a national industrial and management-dominated umbrella. Local concerns and ways of doing things became subordinated to those of the larger society. Once in motion the twin principles of management and mass gained momentum and so transformed the society that by the 1960's the U.S. could be fairly characterized as a mass society. But analysts observe that the mass society is now losing its dominance, its place being taken by what Dillman calls an information age - an era likely to be dominated by information and information technology. While the mass society operated

on the principle of centralization, information age technology creates a potential for decentralization. The standardization of everything that was a hallmark of the mass society is eroding as an operational principle. In its place a multiple option society is in the making - one in which it is no longer as clear as it once might have been who is employed and who isn't, who is a student and who isn't, who is married and who isn't, etc. (Naisbitt, 1982; Annison, 1982).

So the U.S. is now regarded as in a period of transition. But transitions are never as smooth as they appear to be when portrayed on a chart. Transitions can be confusing and new directions unclear. It is the transition from one set of operating rules (orthodoxy) to another that contributes to the mixed performance of the U.S. economy today. Change creates opportunities for additional change and it is the transformations underway that inspire repeated calls for innovation in the very institutions we have come to take most for granted. But as Icheiser has observed - nothing so persistently evades our attention as that which we take for granted.

Our Inheritance From the Mass Society - Dominance of Management

Robert Reich (1983) refers to the era of the mass society as the era of management. Peter Drucker (1986), himself a major contributor to the scientific management literature, echoes that observation. The idea and practice of scientific management was a key to the U.S. achieving it's past position of international industrial dominance. It was the creation of assembly lines and learning how to manage (coordinate) large numbers of specialized workers that was a catalyst to increased industrial

output. The application of principles of management to mass production resulted in greater production efficiency. Output increased significantly, and "economies of scale" became one of the more prominent organizing principles. Efficiency was declared to be associated with the size of the organization. The larger the organization the greater the presumed efficiency. The average cost of management declined the more units it effectively managed. Labor productivity also increased with the efficiency and wage rates increased accordingly. National economic growth and a growing middle class which sustained growing mass consumption were important outcomes.

The effectiveness of the principles of management in the workplace led to their being extended and becoming and integral part of doing things throughout the whole society (Edson, 1982). They became the society's organizing principles: applied not only in the work place but in schools, health care, social services, government bureaucracies, even churches and charitable organizations. As suggested by Reich:

> "Managerialism offered America a set of organizing principles at precisely the time (the 1920's) when many Americans sensed a need for greater organization, and these principles soon shaped every dominant American institution precisely as they helped those institutions become dominant. The logic of routine, large-scale manufacturing first shaped it's original business environment and then permeated the larger social environment. An American society embraced and duplicated it because it was the very engine of prosperity." (1983:149)

The principles of mass and management were combined to create the mass media, mass transit, mass merchandising, etc.

The Effect of Management on Education

As the principles of management were being extended to education and being adopted by schools a perceptible shift in educational practices, methods, and goals occurred. Schools became institutions to be managed, efficiency became a standard for judging management effectiveness, and management was found to work best (be more efficient) if both inputs and outputs became more standardized. How education occurred became a measure for evaluating its effectiveness. Uniqueness (of student, teacher, locality, etc.) was presumed to contribute to inefficiency and was therefore to be discouraged. Innovations were encouraged but were largely addressed to methods of improving efficiency (output per unit of input). Consequently by the 1960's schools had become strongly committed to the economic principles of standardized mass production and attendant notions of efficiency - an organizational ideology which inspired the title of David Tyack's educational critique "The One Best System" (1974). It was the extension of this organizational ideology of the school to rural localities (consolidation was broadly instigated to achieve organizational efficiencies) (Sher, 1977) that was an important feature of what we referred to above as the incorporation of rural institutions into a national system. Locality agendas, including rural localities, became subordinate to the national agenda.

Consequently schools were becoming efficient and effective agencies of industrial socialization as well as providing for basic education and, in more recent years, for student's marketable skills. By the 1960's educators and economic leaders alike were becoming committed to employability of graduates as a major expectation of the role of schools. A key to success in the mass society was mobility - geographically,

socially, occupationally. Providing students with the capability of being mobile became a prominent public expectation. A mass society also produced a mass labor market that the products of the schools were to be prepared for.

Where the regular school was failing to provide marketable skills and mobility, vocational training schools and programs were added to provide an alternative track. To a very great extent therefore education and the economy consummated a symbiotic relationship. It was not so much a case of negotiating an explicit partnership regarding the content of education and training as it was a case of parallel development through employing common methods of production. Students who successfully worked their way through the school system found few surprises when they entered the world of work.

Both the schooling experience and the skills acquired contributed to the human capital an industrial society was demanding. Human capital embodies the notion that students acquire both work and organizational habits and attitudes to function in the world of work, and also the manual and mental skills that are applicable to production (Bowman, 1979).

Education and Economic Development - A National Perspective

Evolution of the relationship between education and economy makes it difficult to interpret and understand change in either one without recourse to the other. Many contend that the economy's influence on the school has been more profound than the school's influence on the economy. The role of the economy in shaping the ideology and practice of schooling is emphasized by one author who notes that:

> "Between 1880 and 1920 a relationship was established between work and schooling that became permanently embedded in both the structure and ideology of American public schooling. This relationship - manifested in a new belief that public schools could, and indeed should, prepare youth for work - rapidly became a part of the predominant orthodoxy that continues to shape and limit educational thought and practice today." (Edson, 1982:145)

But the contribution of education to economic growth has also become a cornerstone of economic orthodoxy and public values. Schultz (1961) won the Nobel Prize for his work identifying how much of America's past century of economic growth could be attributed to the "human capital" produced by schooling and education. Schultz and others documented that the amount of the nation's economic growth couldn't be accounted for solely by increases in the quantity of land, labor, and capital (Williamson, 1979). Human capital theory asserts that it is changes in the quality of labor (skills, habits) that accounts for the difference.

In addition one of the most firmly held beliefs among Americans of all socio-economic levels, despite quite a bit of evidence to the contrary, is that education is the path to upward mobility, the "way to get ahead", the great equalizer (Bowles and Gintis, 1974; Jencks, 1972). The conviction is that both individual and public investments in education are rewarded in the market place.

The importance of the connection between economy and education is underscored by the amount of public attention being focused on each today. It is doubtful for example, if one could find many state governors who wouldn't identify the two major concerns of their state as education and economic growth. States might differ only in the order they report those two concerns, or which they feel is cause and which is effect - more investment in education to produce economic growth, or more economic growth in order to be able to afford education. However a consensus is moving toward the side of education being a "cause" of economic development, to wit a lead story from the St. Louis Dispatch:

> "The future of Missouri's economy and job opportunities hinges on dramatic improvements in the quality of the state's public education, says a report issued Thursday by a high-level panel commissioned by Governor John Ashcroft... There will be no significant economic opportunities unless we have a strong education system and a high literacy rate' said Missouri Secretary of State Roy Blunt, a co-chairman of the panel, which is called the Missouri Opportunity 2000 Commission."

The foundation of public concern appears to be the recent performance of both education and the economy. We described above the concern for a growing lack of competitiveness in the economy. But on the education side, the Nation At Risk (1983), and many subsequent critiques of the performance of the educational system have captured national attention. The nation has been stimulated to wonder why, as its investment in education has increased both absolutely and relatively over the past two decades, educational performance, measured both by student test scores, and indirectly by the productivity of the graduates, has declined (Thurow, 1985). This perception of economic and educational performance problems has emerged in tandem, and is inspiring some new

perspectives about the education - economic development interrelationship.

Responses to perceptions of performance deficiencies have taken two general forms: preservation and change. Preservationists argue that we must get back to "basics" in both the economy and education - that the solutions lie in doing a better job of what we did in the past - reindustrialize the economy and concentrate on the 3 R's in education. Advocates of change argue on the other hand, that the methods and emphases of the past are a part of the problem and that there must be fundamental change in methods and approaches both in school and at the work place; that we must "work smarter" and that we must be more innovative, creative, and entrepreneurial both economically and educationally. We will take the side of change in suggesting ways in which education, broadly conceived, and schools in particular might participate more directly in attempts to revitalize rural communities.

RURAL DEVELOPMENT AND EDUCATION IN THE 1980'S

The predominant strategy of past rural economic development efforts leaned strongly toward rural industrialization and facilitating the out-migration of rural youth for whom employment prospects at home were not bright (Hobbs, 1979; Tweeten, 1980). Rural development was to be achieved a combination of addition (adding industry) and subtraction (facilitating outmigration so there would be fewer to divide an often shrinking rural income pie). Education was allocated a prominent role in the migration strategy (skilled and educated youth had much better

prospects for economically successful migration) but only a modest role in industrialization. The effect of education on industrialization was generally indirect. Evidence indicates for example that rural communities making greater investments in education were somewhat more effective in attracting industry, ceteris paribus (Smith, et. al. 1980; Tweeten, 1980).

The industrialization strategy, much more than outmigration, involved federal, state and local collaboration. Federal government made large infrastructure investments that facilitated industrial relocation (programs such as the Appalachia Regional Commission played a prominent role). Investment in vocational education facilities was also a part of this initiative. States recruited industry and worked on making an attractive industrial environment, including tax concessions, and localities recruited and added other local inducements (Summers, 1982). These helping hands of government added to the inclination of many industries to move from areas of higher cost to lower cost labor - and they moved.

The fact that these initiatives were associated with rural industrialization success has made the strategy difficult to set aside (Sher, 1986). While we used the past tense in describing these efforts they actually remain the predominant rural development strategy today. There are few rural communities of any size that don't retain an Industrial Development Commission. However federal financial support for rural development has slowed to a trickle. State governments have taken up much of the slack under "New Federalism" and have intensified their industrial development efforts. However, as noted in the Post-Dispatch

quote above, a broader notion of economic development closely tied to education investments. has begun to replace the industrial relocation strategy.

The Opportunity Structure for Rural Community Economic Development

Within this context we cite the following as some of the factors on which an alternative rural economic development strategy should be based:

1. For the past 20 years there has been virtually no employment growth in goods-producing industries. Natural resource industries have exhibited a similar trend (Garnick, 1985; Tienda, 1986; Tweeten, 1986). Those trends are likely to continue. However there is some potential for rural communities in "adding value" to the raw materials they have traditionally produced.

2. Conversely employment in service industries increased rapidly in both metro and nonmetro areas from 1969-1984. Much of this growth appears to be associated with enduring changes in demography, household income, consumer tastes and technology. Nationally this growth will likely continue, but where and what is a question that confronts rural communities.

However non-metro service sector employment growth has trailed the rate of metro area growth during the past 8 years after matching the metro growth rate from 1969-1976. The earlier rapid rural service employment growth was associated with the corresponding growth in goods-producing industries. As rural goods-producing employment growth slowed, so too did service employment (Bender, 1987). However Smith and

Pulver emphasize that there is a substantial potential for nonmanufacturing business development in rural areas (1981). They emphasize the presence of "niches" available to exploit both for expanding the community export base and in providing services for which there is a locally viable demand. One source of income and employment multipliers that many rural communities have overlooked is the increased amount of cash transfer payments received by retired persons. Summers and Hirschl (1985) report for example that approximately $4,000 of Social Security payments (not counting related income from other sources such as retirement programs, dividends, interest, etc.) is sufficient to produce one job. This compares with the need for over $91,000 in manufacturing payroll and $65,000 in agricultural sales to produce one additional job.

Because of the growing significance of service sector employment, some analysis has been directed toward differentiating the services sector (Armington and Odle, 1980; Noyelle, 1983). "Advanced services" (Noyelle, 1983,) which includes those having a substantial scientific, knowledge, or technological foundation, have become a major component of metropolitan economic development but have contributed little to rural community development (Tweeten, 1984). Some contend however that there is a potential for more knowledge-based rural development.

3. Knowledge based rural economic development is being advocated more strongly (Deaton, 1986; Hobbs, 1986; Reich, 1983; Tweeten, 1984) as a concomitant of industrial restructuring. It is argued that the intentional application of knowledge and technology as principal production inputs holds an important key to future economic development at all levels. The admonition is that we must work "smarter". Some of

the spectacular growth in "high tech" industries has reinforced this orientation. But knowledge based economic development is far more comprehensive than "high tech". Productivity in virtually all sectors can be substantially increased by the more effective and deliberate application of knowledge (Deaton, 1986; Thurow, 1985).

While many are justifiably skeptical of the rural development potential of technology based enterprise (e.g. Tweeten, 1984) it is useful to recall that one of the most significant knowledge based industries of this century was the hybridization of agricultural seeds and livestock. This industry had its origin in such rural places as Coon Rapids and Hampton, Iowa, Dekalb, Illinois, etc.

Important to the rural development potential of knowledge based enterprise however is fashioning new linkages between rural communities and/or entrepreneurs and sources of specialized knowledge, such as for example state and regional colleges and universities (Hobbs, 1986).

4. Although it has been recognized for several years that a majority of the nation's new employment is being generated by small business (Birch, 1979; 1985), that realization is just beginning to occupy a more visible position among economic development strategies. Job creation is beginning to replace "smoke stack" chasing as a strategy. That shift is supported by the better odds for success in job creation, retention and expansion. As indicated by Campbell:

> "Today of the 360,000 potential businesses to be chased, ten percent expand or relocate annually. However, of these 36,000 expansions and relocations only 5 percent will relocate in another state. Aiming for these 1800 relocations are many of the 12,000 - 15,0000 development and redevelopment councils, commissions and agencies." (1985:43)

Conversely Campbell and associates cite a Wall Street Journal article which reports that, of the 17 million American small businesses, about one million have both the inclination and capacity for substantial growth and significant job generation. They suggest that one million small firms with a capacity for growth present better odds than pursuing one of the 1800 relocations.

However some recent research (Armington and Odle, 1982; Miller, 1985) has questioned how much employment growth is actually attributable to small independent enterprise. These researchers find that a substantial amount of the growth in businesses classified as small, is actually owned and/or controlled by larger firms. Despite these caveats, "thinking small" has become an inhabitant in the domain of economic development strategy at all levels. It is also a perspective more in accord with rural realities.

5. Recognition of the importance of small business to job creation has contributed to the "entrepreneur" becoming the new darling of economic development. Strategies are emerging which emphasize finding, training, and supporting entrepreneurs who have a capacity to initiate new enterprises with growth potential (Pulver, 1985; 1986).

A strength of the small business-entrepreneur strategy for smaller rural localities is that small enterprises can meet important local needs, be more responsive to local influences, adapt to local conditions and may be less likely to migrate (Sheridan, 1985).

Although small businesses are more likely to "belong" to their community, and to cluster around less "cyclically sensitive industries" (Sheridan, 1985) there are some downsides. They tend to be concentrated

in low wage industries and their risk of "failure" is presumed to be high. However the late Albert Shapero (1983) debunks the presumed failure rate of entrepreneurs. He contends that the reported failure rates are inflated - that many of the "failures" are "repeat offenders"; entrepreneurs who begin several different enterprises before they find one that makes it. They contribute to failure rates without having actually failed.

Also relatively little appears to be known about the difference in failure rate between small communities and large ones. Small communities can be presumed to present fewer risks if the enterprise meets local needs.

Important to rural economic development is that small business/enterprise is within the resource capability of most rural communities, can provide an economic transition, and promises more certain, although possibly less spectacular, returns on investment than putting all the economic development eggs in the basket of industrial relocation. Several researchers also emphasize that there are more niches for knowledge based and sustainable small enterprises, that combine both higher wages and growth potential, than have been filled in rural areas (Deaton, 1986; Flora and Darling, 1986).

6. Economic development, especially at state and local levels, has largely been the domain of business people and economic development specialists. But a viable and equitable community economy is everyone's business and it is now being emphasized that economic development efforts are more likely to be successful if the base of collaboration is broadened - if more segments of the community are involved (Flora and

Darling, 1986; Green, 1984; Deaton, 1986; Sher, 1986; Wilkinson, 1986). Some analysts (Summers, 1986; Wilkinson, 1986) contend that there is a difference between development of the community and development in the community. Economic development can occur within the community but contribute little to a stronger sense of community. The argument is that development of the community can contribute to economic development but that the reverse doesn't necessarily follow. They contend that new local economic development partnerships must be forged. Flora and Darling emphasize the value of creating a broadly representative community umbrella organization as a necessary feature of development both in and of the community.

The Southern Growth Policies Board (1984), Green (1984) and others emphasize the need for new and different kinds of public-private partnerships in the name of economic development. Even as uncoupling is being described as a feature of industrial restructuring, new forms of coupling (networking has become a buzz word) are being emphasized as essential to achieving goals of broad interest such as economic development.

In summary the current opportunity structure for rural community economic development is a combination of good news and bad. The bad comes in the form of little growth potential for those sectors that have served as the backbone of rural economies. The good news however is that emerging perspectives on economic development better "fit" the circumstances of most rural communities and present therefore viable alternatives to the past preoccupation with industrial development. We turn our attention now to specific features of rural community economies

which must be taken into account, incorporated into needs assessments, in mounting appropriate and locality relevant new community economic development initiatives.

Some Rural-Specific Economic Development Constraints

Virtually all rural communities, save those who have been literally swallowed by metropolitan sprawl, are characterized by population dispersion. The dispersion poses unique problems in providing quality community services at a low cost per capita (Tweeten, 1986). A part of the rural community development agenda must be addressed to how to overcome the costs of space in continuing to provide needed public services, especially education.

Compared with metropolitan areas rural counties have approximately twice the rate of self-employment as metropolitan counties. Self-employment is often the only way a trained person in a small community can market their skill (Sher, 1977). The prevalence of self-employment however causes widely used economic indicators of economic distress such as unemployment, to be invalid measures (Korsching and Sapp, 1977; Korsching and Lasley, 1985; Tweeten, 1986). The actual rate of unemployment in a rural area has been found to be several times higher than the official reported rate (Cole, 1984: Korsching and Lasley, 1985). This poses a distinct disadvantage to rural workers since being "officially unemployed" is often a condition for eligibility for various services including subsidized training.

Consequently the degree of rural community economic distress may be much higher than reflected by unemployment statistics. Underemployment of large numbers of self-employed persons is a more prominent rural problem than unemployment.

In general rural communities have lower per capita income, higher poverty rates, higher dependency rates and lower labor force participation rates. These are all triggers for various kinds of public labor force training and placement programs and policies. Yet because of population dispersion and the prevalence of rural self-employment, access to these services is difficult, if non-existent, in many rural localities. Tweeten concludes:

> "My conclusion is that public general education, research, and welfare programs have had a large and generally positive socioeconomic impact but that public labor force policies .... for disadvantaged workers have had, at best, a mixed record." (1986:8)

Therefore either improved access to such services or alternative means of providing them, is of great potential importance to rural communities, especially those undergoing major economic dislocations as in the case of farm crisis communities or those experiencing a factory closing.

Rural communities are characterized by another feature which must be embodied in any intentional effort to enlist local education efforts in the cause of economic development. Rural communities have been labeled "Micropolitan" (Tweeten and Brinkman, 1977). These micro labor markets are typically characterized by a diversity of occupations and trades but with few occupants of each. Consequently there is a limited replacement or expansion demand for any trade or skill. A community might offer a good economic niche for say, a trained body and fender person, but would

be unable to accommodate all the graduates of a body and fender class. But matching this potential for productive placement in the micro-economy runs counter to prevailing methods of skill training. Training is typically offered to "classes of students" following the dictates of efficiency in training. But the micro-market doesn't have the capacity to absorb all the trainees - the option for most is either to leave, or to seek employment in an occupation or trade other than what they were trained for. Neither of those options produces much of a return on the locality's training investment. There is a need in rural localities to modify approaches to training to better meet local needs and market capacities.

We turn now to some opportunities for schools for join forces with other sectors of their communities in the quest for revitalization.

Supporting Rural Revitalization: Some Roles for Small Schools

Because rural schools have generally become a part of a national system of education, their education and training role has typically been cast in the context of national, rather than specific local, manpower and educational needs and opportunities. Despite our interest in ways schools might contribute more directly to local economic development, we emphasize first that rural schools will continue to have a paramount role in preparing students to participate in the broader society - including migration to sources of advanced education and/or diversified and growing employment opportunities. Even if rural economic development were to "take-off", it is unlikely that all, or even most, rural youth would be able to fulfill their educational and occupational aspirations within the

community. For students intending to remain in the community, equipping them for geographic and occupational mobility is no less important. Persons lacking abilities for migration are not likely to make productive contributions to the local economy either.

But if there has been an imbalance in the orientation of community schools it has been on the side of neglecting the locality as an object of educational and training attention. That imbalance is largely a consequence of the standardization of educational curriculum and procedure that has evolved. The locality is a fertile and accessible but underutilized educational environment. As Eliot Wigginton (1986) has described so well and convincingly in his portrayal of the Foxfire experience, it is likely that the lessons of school will be more enduring if they are connected with the world of experience and familiarity. We are equally convinced that local economic development efforts will not travel far on ignorance of the locality and how it operates.

We divide our discussion of the role of the schools into two parts: (1) changes in educational content, methods and styles that would better meet changing human capital needs of both community and society, and (2) specific methods to more directly connect education and activities of the school with community economic development.

Some Added Components of Human Capital

Industrial and societal restructuring have not diminished the salience of the idea of human capital. Indeed more attention is being directed to the importance of education and human resources than ever.

But it is the kind of human capital has that become an issue as well as the need for more of it.

> "The real issue is that human beings are relatively immobile on the globe compared to financial capital. Because of this, investments in skills, knowledge, and team learning are coming to be the key determinants of national well-being... (There is a) need to shift citizens into higher-valued production." (Reich, 1983:266)

The quantity and quality of human capital available is an especially significant constraint to rural community development - migrat' n drained it and rural industrialization did little to create a local demand for it.

But we suggest that meeting this human capital need will require more than producing, or retaining in the community, more graduates from the existing conventional programs. Some adjustments are required - new and different skills and new methods of providing them are essential to serving new approaches to economic development and responding to some of the niches in rural localities. Some of the components of a human capital construct relevant to job creation and rural economic development might include:

1. The need for basic education to provide the skills on which to build other competencies. This is the foundation. Everything else is secondary. Without a quality basic education students will be hampered in whatever they do and wherever they go - including remaining in the locality.

The declining economic base of many rural communities is further jeopardizing the ability of their school to provide a sound basic education. Consolidation of schools has been the orthodox solution. But

in many parts of the country population dispersion makes further consolidation impractical (Nachtigal, 1982). In the face of other threats to the community rural people have gained a renewed appreciation of the importance of the school to the life of the community. Correspondingly resistance to consolidation has grown.

Many rural communities will therefore need to seek creative ways of providing quality basic education through the secondary level. Sharing of teachers and other services has become a widely practiced adaptation (Tevis, 1986). Telecommunications technology in many forms has become a promising and cost-effective alternative for meeting the need. Undoubtedly other innovations will appear as alternatives to closing a school and/or consolidations.

Industrial restructuring has contributed to a growing recognition that all students have a need for academic fundamentals. There has been a tendency to place vocationally oriented students in a separate, less academically rigorous track. There is a need for vocational students to have much the same training and background in the basic skills and sciences as their college bound peers. To be lacking those capabilities is a virtual guarantee of less remunerative and productive employment.

We add the need for adult basic education. Lacking a basic education foundation, it is likely that the only alternative to unemployment will be in what are often termed "dead-end" jobs. The base of literacy, skill, competence has to be broad both locally and nationally. This is especially important for rural localities because adults are there and usually have a stronger commitment to staying in the locality. In fact too often in the past rural communities have been populated by the

"People Left Behind". Community economic develcpment requires that the smallest possible number be "left behind". Shifting adults to higher value productio[illegible] important rural economic development strategy. As one author observes: "To work, modern economies need a mass well-educated labor force. An educated elite does not suffice. Illiteracy hurts the literate." (Thurow, 1985:187)

2. Students, future workers, must be more capable of innovation. To be innovative one must understand the problem - not some narrow slice of it embedded in a highly structured and organized production process. One must understand how "the pieces fit together", if one is to understand how they "might fit together" differently and more effectively.

Innovation is more likely to occur in an environment which expects innovation and which stresses flexibility and adaptation. Highly structured training in highly structured organizations is unlikely to be very productive of flexible and innovative individuals. Flexibility is an acquired skill as well as an adaptation. If flexibility is discouraged, innovation is likely to be discouraged as well.

If we wish to teach flexibility and adaptiveness the training environment must incorporate those features. McDonald and Thompson (1984) report on their experience in the computer lab of one New England small school. The lab was open for student and faculty use. The authors remarked on the apparent lack of order (structure) in the lab: many small groups and individuals simultaneously working on different problems. The instructor replied: "I call that my school store style of management.

School stores tend to run themselves, don't they?" That is a sharply variant management style from what is most often confronted in schools.

3. There is a growing demand for generalists, in addition to new kinds of specialists. The need for persons having multiple skills in especially great in smaller rural communities. Micro labor markets can absorb few narrowly trained specialists; there is generally a need for more "jacks (jills) of all trades". This is especially for training future entrepreneurs. The self-employed and entrepreneurs especially, need to have multiple skills including business management, record keeping, etc. Yet those are emphases often found lacking in vocational training.

In the rural environment starting one's own business may be the best, and only, way of marketing a trade. Yet there has been an unwritten, but long term, bias in education and training - that employees are being trained. But as we have noted that frequently misses the mark in smaller communities. "Looking for a job" can obscure the presence of a viable self-employment opportunity.

In writing of the need for broadening vocational training Stu Rosenfeld recently coined the term "renaissance technicians" (1986). He writes that:

> "High school vocational education will have to stop thinking of itself primarily as a terminal program aimed at immediate employment and instead think about placing greater emphasis on preparation for additional technical education... Unlike the Renaissance man of the Fifteenth and Sixteenth Centuries, who could acquire a wide range of skills and diverse knowledge because the world was simpler, the Renaissance Technician of today and tomorrow must acquire broader based skills and knowledge because the world is more complex and changing more quickly. To the Renaissance Man, diversity and adaptability were luxuries; to the Renaissance Technician, they are

necessities, critical to the successful modernization of the South's economy." (1987:2)

4. Innovation stands a better chance of occurring if one is working as a member of a small group on a larger problem. This is an essential component of what Reich calls "flex-system" production (1983). It implies an individual capable of being a contributing member of a small production team whose task is not only to produce, but also to solve problems. While innovation is almost always a product of some individual's inspiration, possibilities for innovation are enhanced by an individual's participation in a small, problem-focused group.

If individuals are to learn how to work effectively in small, problem oriented groups, their training cannot be limited to individually acquired skills in an environment which is structured to emphasize interpersonal competition. A part of their training should include team work. Also a system that concentrates its attention on evaluating individual performance and attainment with no attention to evaluating group performance and/or individual's contribution to it, is unlikely to be effective in teaching team work.

We might add a parenthetical note. We contend that rural schools have a distinctly greater probability of producing educational innovations than their larger counterparts, precisely because they are small and have the greater potential flexibility and adaptability inherent in small organizations. Besides rural schools are confronting problems which necessitate innovation. Rather than the small rural school problem continuing to be defined by how they can catch up with their larger counterparts, rural schools in coming years may be the source of

innovations having broad educational application. Instead of followers rural schools could become leaders.

The relationship of organizational size to innovation is supported by a National Academy of Science study (Gellman Research Associates, Inc., 1982) which reported that small firms were 20 some times more likely to produce innovations from government contracts than were larger firms.

5. Continuing Education - In periods of rapid change the half-life of any skill is substantially diminished. We have begun to understand this and are now placing greater emphasis on adult education and training. Our traditional ideas about who is a student and how old they are, are beginning to change. But we are only partially there. To place an equal emphasis on continuing adult education will include a re-evaluation of the school and its purposes. Recently the superintendent of an Iowa rural school reported that 10 years ago their school had an enrollment of 450 in grades K-12. But because of the farm crisis, population loss, and low birth rates their K-12 enrollment dropped drastically. In response they changed their school priorities and were now continuing to serve 450 community residents - 50 in pre-school, 250 in K-12, and 150 adults (Tevis, 1986). That change reflected a substantial change in the concept of the school in the community.

Training of adults especially, needs to be more cognizant of skills that can fit local market places or which can be linked to local economic development efforts, because adults are generally less mobile than youth in the short run.

Rural schools generally do not have the resources to expand the school program to provide adult basic education. But there are many other sources of such training, e.g. manpower programs, university extension courses, community colleges, etc. While such programs are generally available they are seldom effectively coordinated to serve specific locality resource needs. The school as the community's most visible and prominent education agency, could take a more active part in helping to broker such outside resources and in tailoring those programs to specific community needs. In effect, through collaboration with other resource agencies, could become more of a community learning resource center.

6. There is a need for community education and for combining classroom training with experience. A school makes a contribution to its community's development when it places some educational emphasis on the locality - its natural resources, its economic base, its organizations and institutions, its history... how it works. Understanding of the complexity of the modern world begins at home. Unless students (and community residents) understand their locality they will have greater difficulty understanding what goes on beyond it. As we have emphasized, rural communities have become inextricably linked into the national and international economy in many tangible ways - from credit cards to wheat prices. Feasible community economic development is not likely to occur without community understanding of the limitations and opportunities produced by these linkages.

It is not valid to assume that merely living in a place translates into understanding how that place operates. It is fair to reason also

that for students, increased dependence on a text book driven curriculum has been at the sacrifice of an understanding of locality. We don't subscribe to the notion that this is a zero-sum game - that devoting attention to understanding the locality occurs at the expense of mastering the basic core curriculum. We feel that Wigginton (Sometimes a Shining Moment: 1986) makes a compelling case for the educational value of making connections between concepts and local realities.

Whether more attention to locality is supported by local education officials or not, there are powerful reasons why it is seldom done. One is that the professional staff of rural schools is already spread thinly in covering the core curriculum and has little time to devote to producing additional materials. A second is that professional training generally fails to provide teachers with the conceptual tools to link classroom with community. But we suggest there are community development benefits to be gained from turning to other sources for such materials. For example: (1) Students as a resource. The value of experience in learning is generally conceded. It has been especially stressed that students not only learn, but gain motivation, by working on things that adults value. Yet students are typically the most-under-utilized resource of a school because they are seldom thought of as a resource. (2) Turning to citizens and organizations in the community for help. There should be no reason to believe that citizens would be any less willing to contribute to the instructional program of the school than to raise money to buy band uniforms. The process of producing such materials can have an important adult education value as well and contribute to establishing development relationships between school and

community organizations. (3) Existing materials. In most communities, and certainly in every county, there are groups, organizations and agencies which have produced reports, plans, and educational materials for some other purpose. Included are such organizations as the Cooperative Extension Service (of the state land grant university), Soil Conservation Service, regional planning commissions, local historical societies, county government, etc. Implicit in using any of these sources of educational materials is a spirit of cooperation and collaboration which can break down institutional barriers and make a contribution to community development.

The school professional staff's lack of time to produce such materials can actually be a blessing in disguise. Turning to other sources can make an added contribution to student and community development.

The above has been an explication of some principles, extracted from a variety of sources, which, if implemented, could be expected to add strong support to rural community economic development efforts. How such principles would be applied would be expected to vary from community to community depending on local circumstances. To conclude we turn now to a brief description of some specific projects and innovations which have attempted to explicitly combine local education and local economic development.

Some Promising Innovations:

We know of no innovative approach which incorporates more of the principles suggested above than the idea of School Based Development Enterprises (SBDE) advanced by Jonathan Sher (1977) and championed by

many others including especially Paul Delargy of the University of Georgia. The concept has been applied successfully in rural schools from Georgia to Alaska. The Foxfire program and books are perhaps the most well-known example of an SBDE.

In brief the SBDE idea involves the school participating with its community in doing a needs assessment to determine what enterprises the community needs and could feasibly support. In further collaboration with community (or outside agency) the school establishes and operates a business enterprise both to provide the community with a needed business or service and to provide meaningful, experiential, vocational education for participating students.

In effect the idea of an SBDE embodies many of the concepts that are incorporated into the more recent idea of business incubators (Brooks, 1986; Brockhaus, 1984; Buck, 1984; Green, 1984; Meyers and Hobbs, 1986). Incubators "hatch" new businesses by providing various kinds of assistance to fledgling entrepreneurs until an enterprise can make it on it's own. The basic idea is not for the incubator to remain associated with the business but to "spin it off" and turn its attention to other start-ups. Incubators typically involve public-private collaboration (Brockhaus, 1984; Green, 1984). That concept is now being widely used in technology based enterprises and a number of public universities have established such incubators (Buck, 1984; Meyers and Hobbs, 1986). The idea of incubators has promise for rural community economic development but has not diffused widely. As noted the SBDE concept is similar in orientation and intended purpose. We will return to some further thoughts about SBDE's below, but first some additional innovations.

Rosenfeld (1985) provides descriptions of innovations in four rural communities which have produced explicit school-community economic development partnerships. One of these, Hartwell, Georgia, involves a number of SBDE's oriented toward further capitalizing on the community's potential for tourism. Enterprises include a youth-operated retail store, a tourist excursion train, and a community theatre. Important features of this experience is collaboration with the Small Business Development Center of the University of Georgia and utilization of JTPA funds.

In Byng, Oklahoma the students built the school:

"...Spread over 72 acres, the district uses some 48 separate buildings for the three elementary schools, one middle school, and one high school. The students themselves, with the support and cooperation of local construction companies and trade unions, built 40 of the buildings including cafeteria, gym, library... This unusual school represents not just student labor, but the cooperation between school administrators, vocational educators, and community that permeates the town on all education-related matters." (Rosenfeld, 1985:9)

In Shelbyville, Tennessee, with the assistance of a grant from a local industrial firm "Service Plus" was established which involved summer placement of teachers in agencies throughout the community. That experience not only added to teacher salaries and to the availability of community services but also improved teacher's ability to understand student's problems and to incorporate a community perspective in their teaching.

In Potosi, Missouri, Contract Vocational Education involves enlisting business people and local trades persons as one-on-one vocational teachers. The approach adds a wide diversity of trades and occupations available to students for training, short-cuts job placement

for some students, is cost-effective, and brings school and business community into collaboration.

There are many sources of creative ideas that have worked in some places. For example: a publication by the American Association of School Administrators - Creative Ideas for Small School (1981); a publication on Exemplary Rural Education and Economic Development Linkages by the National Institute of Work and Learning (1980); a joint publication of the Institute for Educational Leadership, Inc., and the Small Business Foundation of America, Inc., (Danzberger and Hitch, 1985) which details numerous ideas and experiences for exchange programs for small businesses and schools.

However the specific ideas, while useful to know about, are not as important as the intention of school and community to become active partners in improving the quality of life of their community. Rural communities are short-handed in their efforts to achieve sustainable economic development and can not afford to overlook any pertinent resource. In an era when knowledge-based economic development is advocated as the key to industrial restructuring and economic competitiveness. creatively fashioning new relationships between school and community has to occupy a position high on the list of priorities.

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BIOGRAPHICAL SKETCH FOR DARYL HOBBS

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Daryl Hobbs was born and raised in rural Iowa and received his PH.D. degree in Rural Sociology from Iowa State University in 1963. He served for 3 years on the faculty at Iowa State as a specialist in rural development. He joined the faculty of the University of Missouri in 1964 and served as chairman of the departments of Sociology and Rural Sociology from 1967-1970. In 1973 he became Director of Rural Development for the University and was involved in organizing a number of rural economic development and agricultural projects.

The Office of Social and Economic Data Analysis which Hobbs directs, has a computerized information file on Missouri counties including population, economic, agricultural and other trend information. The purpose of the system is to provide Missouri communities and organizations with current information.