INFORMATION FOR CONTRIBUTORS
Feature articles highlight research or programs of merit as examples to professionals, researchers, and educators in rural development in the southern region. They should deal with one area or subarea of the four major concerns of rural development outlined by USDA:
Community Services and Facilities
People Building
Economic Improvement
Environment Improvement
Opinion articles examine critical issues confronting Research and Extension practitioners in rural development, emphasizing implications for program planning and research.
Research notes are brief summaries of empirical research projects underway or recently completed.
Program notes are brief summaries of noteworthy rural development educational or assistance programs.
News and notes report events and personalities of interest to the region.

The Southern Rural Development Center, one of four such centers in the nation, focuses on specific rural development problems of the region. It serves the thirteen southern states and Puerto Rico by developing knowledge essential to rural development and by providing technical consultation where needed.
The SRDC is jointly sponsored by Mississippi State University and Alcorn State University. Its clients are the Research and Extension staffs of the 27 land grant institutions with rural development or community resource development responsibilities.

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University Response To Community Needs

The Southern Rural Development Center is currently involved in a study to determine methods of facilitating the process by which universities provide research information to local decision makers to assist them in choosing among alternatives for providing community services and facilities. As a part of this effort, SRDC issued a call for papers on the topic "Researchers Responding to Community Needs: Expediting the Process." The response to the call for papers far exceeded our expectations, a fact which we feel is indicative of a widespread interest in applied community service research among university personnel.

As our topic indicates, we are interested in "expediting the process" of universities making research information readily available to local decision makers. In the strictest sense, this meant speeding up the response time to requests from local decision makers for research data. This is important because no matter how thorough and accurate community service research might be, it is of little use to decision makers if it is not available at the time they need it.

However, we also defined "expediting" as any method of facilitating the process of getting community service research information out to local decision makers. This could involve anything from strengthening the university-decision maker partnership by involving decision makers more actively throughout the research process to altering the traditional university rewards system to encourage researchers to conduct the type of applied community service research local decision makers need.

The nine articles included in this issue describe various ways university research has been, or could be, responding to the needs of local decision makers for timely, accurate data to be used in the decision-making process. Some of the articles present specific case examples of ways universities have assisted local leaders by providing information concerning the provision of community services or facilities. Others describe the needs of local decision makers for assistance from universities and suggest ways that assistance can be provided.

The articles presented here and the descriptions of applied community research projects which can be found through a search of the relevant literature are encouraging signs that universities are responding to the needs of local government officials. But the need for such research information continues to grow as the problems local officials face grow in number and complexity. It is our hope that this publication will help create awareness both of what is being done in this area and of what needs to be done.

Rapid Response To Economic Research Needs Of Local Decision Makers.

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Associate Professor
and
Dr. Gerald A. Diemert
Professor
Agricultural Economics
Oklahoma State University

Services provided to citizens by rural local units of government (primarily counties, cities, and schools) are becoming increasingly more comprehensive and more technologically sophisticated. Such services are becoming more comprehensive as residents in small towns and rural areas develop desires for the same type of public services enjoyed by urban residents. They are becoming more technologically sophisticated as technological advancements are made in the equipment and management systems utilized in the provision of community services.

Technological innovations related to public services are adopted by local decision makers as they work to upgrade the quality of services available to constituents and as state and Federal regulations require such adoption.

Most rural decision makers are eager to make more comprehensive and more technologically sophisticated services available to local residents.

Oklahoma Agricultural Experiment Station Journal Article No. 13697.

However, such actions are usually costly, and most decision makers work within rather severe budget constraints. "Communities (and other units of local government) often struggle with choices of resource allocation within a given level of resources provided by local, state, and Federal sources" (14).

Small units of government do not typically have planning staffs or other technically trained personnel to provide assistance to decision makers as they address these problems. To the degree that university personnel can deliver such assistance, they can make significant contributions to the well-being of rural residents.

Economists are well trained to address problems related to efficient allocation of limited resources. However, the traditional approach of most economists to such problems is to use sophisticated optimizing programming procedures. Such procedures have some very real limitations when utilized to address real problems of rural decision makers in a limited time frame:

1. They typically have data requirements considerably in excess of that information readily available to rural decision makers.
2. Much time is often required to set-up programming procedures to address a particular problem.

3. Such procedures are quite complex and, consequently, can be mystifying to laymen who may view the "black box" results with some skepticism.

A Practical Methodology

As an alternative to programming procedures, the authors have developed and utilized a methodology for rapid assistance to local decision makers as they work to allocate resources within budget constraints by addressing their needs in terms that they can generally understand. The methodology relies on budgets which can be used to evaluate the economic feasibility of alternative service provision systems.

Agricultural budgets have proven highly successful in farm management applied research and extension efforts (8). With no significant conceptual modifications, budgeting procedures can be very useful in providing needed information to public decision makers.

A budget-based methodology for evaluating alternative public service provision options must include:

1. definitions of constituent needs and desires for particular services,
2. designation of alternative systems for the provision of these services,
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<td><strong>Total Annual Operating Costs</strong></td>
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3. costs of the alternative systems designated, and
4. costs and revenues associated with alternative financing options.

An applied researcher can compile such information related to most localized community service problems readily.

In many instances, decision makers are interested in evaluating alternates to existing service provision systems. For example, decision makers may wish to consider public options to a private ambulance service which is planning to discontinue service. In such cases existing needs for the service (number of ambulance calls per year) can be directly noted. Where such direct local data is not available, information from similar systems in the area can be used to estimate local needs. Other sources of information useful in estimating public service needs include numerous research publications. Such publications include information on water systems (4, 11), sewer systems (10), solid waste management (5, 16, 17), ambulance services (2), fire services (1, 19), and hospitals and clinics (3, 15) to name a few. Future needs for a public service can generally be estimated from projections of expected future populations.

Examination of other area systems and decisions with local decision makers can usually lead to design of alternative systems for consideration in a feasibility analysis. Applied researchers must be careful to draw out the opinions of local decision makers when defining alternatives. Alternatives which researchers may consider unworthy of consideration may, for political reasons, be very important to local decision makers.

Once local needs for a service and alternative systems of providing the service have been defined, budgets can be synthesized for the alternative systems. System costs must be broken down into capital costs and operating costs. These costs can be derived by visiting with engineers, contractors and operators of similar systems in the area. Considerable cost information can also be obtained from research information such as the publications cited above in the discussion of estimation of local public service needs.

The purpose of all the procedures discussed above is to facilitate feasibility analysis of alternative public service delivery systems. Estimated capital costs for individual systems can be annualized for alternative interest rates. Annualized capital costs can then be added to estimated annual operating costs and compared to alternative potential revenues to evaluate system feasibilities. Appropriate alternative interest rates can be based on commercial interest rates and on subsidized rates associated with Federal assistance programs. Alternative revenues can be based on revenue schemes used by other similar community service systems in the area and on opinions of local decision makers about rate structures which might be acceptable to their constituents.

**An Example**

An example of a quick response rural community service study is discussed in this section. The general methodology of budget analysis of alternatives was used in this study.

County officials of Rogers County, Oklahoma requested assistance from the Oklahoma Cooperative Extension Service in evaluating costs of existing ambulance services within the county and of alternative systems which might satisfy the county's ambulance needs (10). Meetings were held with county officials to define alternative systems which they felt were appropriate. Data were collected from the three primary ambulance services (Claremore, Catoosa, and Okmulgee) Numbers of calls, types of calls and charges and collections were noted. Based on cost data from a recent 23-county Oklahoma emergency medical service study (2), alternative budgets were developed for each system similar to those shown in Table 1. Potential revenues for the systems were estimated as shown in Table 2. Potential losses and excess returns were estimated for the systems as shown in Table 3. This information was presented to local decision makers for use in planning ambulance service in the county. Results were discussed in an informal session with Rogers County officials. In the discussion, it was stressed that cost estimates could be modified within the structure of the analysis to better represent local costs as perceived by decision makers.

**Concluding Remarks**

Practical applied research activities such as the one discussed above can be conducted in 30 to 60 days. Cooperative Extension personnel at Oklahoma State University have conducted numerous such projects related to many common community service systems (ambulance services, fire services, water systems, solid waste systems, law enforcement systems, community clinics, industrial parks). They have also conducted similar projects related to some more unusual community needs. They have done economic feasibility work for rural apartments in rural communities, for rural mini-bus systems to serve the elderly and handicapped and for energy conserving renovations and the development of an alternative energy source for a rural school system.

The general methodology presented herein works very well for satisfying most rapid response research needs of rural decision makers related to the allocation of limited resources among alternative community service systems. Efforts are being made to computerize the more common applications of this methodology for access on portable terminals in the field (12). Computerization of such models should result in even more rapid response than is currently possible.

Data availability is a major problem faced by applied researchers as they utilize this methodology. Data are somewhat variable on local community service needs and costs are seldom available from conventional data sources. It is often difficult even to determine the population of a rural area served by a particular community service system. Also, costs of labor and materials used in the provision of specific services may vary considerably among local areas. However, substantial information can often be obtained from such local sources as utility companies, city and county government records, county extension offices, banks, businessmen, and contractors and builders which can be used directly or indirectly to fill data gaps.

Other types of research methods which are familiar to most economists can often be used in conjunction with the budgeting based procedures discussed herein to further assist local decision makers. The authors have...
adapted a demographic model used by Hamilton, et al. [7] to derive estimates, by age cohorts of future populations, for local areas for use in estimating future community service needs. Computerized routing models (6) can be used in the planning of solid waste systems and school buses and other rural transportation systems. Location models (13) can be used to determine minimum response locations for fire, ambulance and police stations. Community impact models (9) can be used to estimate potential local effects of firms locating in an industrial park. In summary, economists are equipped to provide rapid response to economic research needs of local decision makers. To do so successfully, however, they must be willing to:

1. listen to the locally specific problems of local decision makers,
2. utilize, as much as possible, methods which can be understood by local decision makers (who often have a surprisingly sophisticated understanding of their specific problems),
3. be imaginative in the cultivation and utilization of non-conventional data sources, and
4. present results as straightforward as possible, directing them specifically toward the local problems. Of course rapid response by university personnel to research needs of local decision makers is dependent upon administrative support for such activities. Administrative support may be largely dependent on professional recognition given to persons conducting such rapid response research. This recognition may be difficult to generate, but there is evidence that it can be obtained when innovative applications of research tools are made to local problems.

References

The recent articles published in social Development Research and Education by Gray and Mundy (11) and Chapman and Inglater (2) illustrate the widespread interest among rural development researchers in responding to the research needs of local decision makers. The response has largely evolved around the task of providing decision makers with reliable and valid quality-of-life data that can be used in the policy-making process. The potential relevance of these activities is significant. The production, mobilization, and dissemination of community-based data by researchers assumes an important status in a political milieu where accountability, needs assessment, management-by-objectives, and program evaluation have become planning tools in the fight against "bureaucracy"—if not unavoidable responsibilities—facing contemporary decision makers.

Although the efforts that agricultural economists and rural sociologists have made to meet decision makers' needs are clearly documented in an extensive literature (3-10), a perplexing and unanswerable problem remains: Have the assembled data been extensively used in the decision making process? It may seem that the question is unnecessary: Decision makers need data and researchers are willing to provide data. Simple? Perhaps not.

The research utilization literature abounds with numerous testaments to the fact that applied social science research has not been extensively used by decision makers (11-13). Witness, for example, the conclusion rendered by a 1976 National Research Council review of NSF's applied social science research projects: "On the average it [i.e., NSF research] is relatively undistinguished with only modest potential for useful application" (12). The gap between dissemination and utilization, which exists even when one considers that non-utilization even occurs when the research has been requested by decision makers, represents a curious paradox that Patton (13) has described as an "emergent" phenomenon: "The titles of several recent journal articles reflect the problem: 'Policy-Relevant Social Research: What's the Point?' (3), 'Applied Social Research: In Combat with Waste and Suffering' (15), and 'Why Evaluation Research Isn't Utilized' (16). Perhaps House most aptly described the situation when he observed: "Producing a frame of reference is one thing; Getting it used is quite another!" (17). Some indication of the problem as it relates to rural development research is evident in a recent effort by the North Central Regional Center for Rural Development to establish a research interest network on "information discovery and utilization procedures in community development" (18). The objectives of the network include: (a) a review and evaluation of alternative models for information discovery and utilization; and (b) the development of specific procedures for producing community-based information that have both scientific and political-trust validity.

Applied social scientists have often argued about the extent to which they should become involved in purposeful change efforts (19). Recent evidence, especially notable in the social indicators movement and the strengthened research-extension-decision maker liaison that has been brought about by Title V of the Rural Development Act of 1972, suggests that increasing numbers of social scientists are working with decision makers in the knowledge production - dissemination - utilization process. It would be irresponsible and bloody to suggest that most of these social scientists are not honestly concerned about knowledge utilization. A lack of concern would prove counter productive to, and essentially undercut, their purposes and objectives. However, the problem may not be a lack of researchers' concern about research utilization; the problem may involve a limited understanding of how to optimize the utilization of their research.

Our suspicions regarding the tenuous linkage between knowledge production and utilization were fueled by an informal discussion on February 4th among a small group of decision makers who were involved in a Title V project on "information discovery and utilization techniques were disseminated to rural development workers in a 6-county area in north central Iowa. Although the project was a success, there were some troublesome lessons that we learned about the knowledge production - dissemination - utilization process, most of which came as after-the-fact revelations. A detailed description of the process is outside the realm of this paper—and has been presented elsewhere (20). Our purpose here is to propose several guidelines for enhancing research utilization. The guidelines are: (1) provide consistent scientific literature and our experiences in responding to decision-makers' needs. We hope that these guidelines will help researchers and practitioners (e.g., community development specialists) in their efforts to improve the utilization of scientific knowledge, a topic which Zaltman and Duncan (21) have recently labeled as one of the "neglected topics" in the social sciences.

The Logic of Research Response

Before we move to a discussion of research utilization guidelines, it may be useful to consider the basic assumptions that underlie the decision response to decision makers' needs. There appears to be a logic, an often unwritten logic, that affords the impetus for researcher response. The logic typically involves the belief that: 1) Decision makers often make poor decisions; 2) Poor decisions are the result of the non- utilization of sufficient scientific knowledge by decision makers in the decision making process; and 3) Better decision making success is that research provides a technique for dealing with the quality-of-data issues that are used in the decision-making process. Applied research has served as the premise for a wide variety of applied research. The logic is well-articulated as in the example of a current effort to provide community quality-of-life data to local decision makers.

The objectives of this research have been guided by the belief that far too many policy decisions are made in ignorance of available information. The result is often short sighted-solving one problem by creating several new ones (22).

Underlying this study has been the belief that the process of problem solving will be less costly and more effective if more precise valid data are available. We, therefore, propose the following four guidelines for decision makers needing knowledge of what, ... the problems, and where... the problems are most severe. In describing the role of knowledge for those who farm policy, Amatia Ezioni noted that "knowledge is the to the world what a map is to the road." In this sense, valid knowledge can tell us where we should go. Moreover, there is a need to have quantitative and qualitative information as benchmarks to note where we have been, thus providing a type of accountability system (23).

Although the logic may not represent faulty thinking, it may constitute the basis for weaving a simplistic "If-then" perspective into the decision making process.

The Relevance of a Collaborative Approach

A collaborative approach to applied research suggested here is not simply another "frontier" and is not necessarily an avant-garde research strategy that "sounds good," nor is it a concept that "makes sense in theory but is impractical in the real world." A collaborative approach is being increasingly provided to students of applied research change as a meaningful way to achieve research utilization. Patton, for example, has emphasized the need to identify and organize relevant decision makers and other information users in the early stages of the evaluation research process (13). Patton refers to this step as the "personal factor" and then proceeds to propose a set of recommendations regarding how to systematically involve potential research consumers throughout the duration of the research project. Patton's approach, which has been field tested and proven to be highly effective for getting research utilized. Perhaps one of the key reasons that researchers (educators) can exert some control over the research process. People are less likely to reject something to which they have contributed.

Prerequisites for Implementing a Collaborative Approach

What is the role of researchers in implementing collaborative approaches in their research? Two critical prerequisites refer to the adoption of the research mind. Researchers should: 1) truly understand the nature of the local decision making effort; 2) be willing to honestly reexamine the relevance of several traditional assumptions about the conduct of applied social research.

A nodal question can be posed in response to the first problem: How can the local decision-making process be characterized? The answer has great significance because it constitutes the reality frame in which the researcher will attempt to disperse knowledge. There is abundant evidence to support the contention that the decision-making research results be used in the decision-making process. If no, why? If so, what are the best methods for achieving this utilization?
process, especially at the local level, represents the process of "muddling through" (24). Although most researchers would prefer to have decision makers at least "muddle through analytically" (and perhaps implementa-
tion of a collaborative strategy might help produce that goal), the fact remains that decision making (at all levels) can be largely characterized by the predominant use of one or more of the following methods: habit, intuition, and incomplete analysis (25). The methods, when taken together, often involve "operating by the seat of the pants." The problem is further compounded at the local level when one considers Hahn's assessment of local decision makers: most local officials are busy, part-time amateurs (26).

The researcher who is honestly concerned about research utilization should use an understanding of the local decision-making process as the basis for reasoning several assumptions about, and approaches to, the applied research process. It may prove to be a painful process; many of the assumptions and approaches are carefully diffused to researchers during their graduate school training. After careful consideration, the researcher may need to adopt new ways of thinking. Only several assumptions and approaches will be considered here. They include the belief that: 1) the more sophis-
ticated the research design, the better the research (other things being equal); 2) research design is the sacred province of the researcher; and 3) research results should be disseminated in the form of the traditionally written research report.

To even question the belief that the use of sophisticated research designs is not always in the researchers' best interest may constitute heresy. But when research utilization is the key variable under consideration, we must ask ourselves: Research for whom? Research for what? Kaplan, a noted philosopher of science, has emphasized that scientists should select a research method that appropriately fits the research problem (27). Likewise, ap-
plicated researchers need to realize that ultra-sophisticated research methods may not always be necessary, given the applied research problem that has been posed and the nature of the research audience (i.e., decision makers) that is facing the problem. In fact, research on research utilization has shown that the variables of "quality of research design" and "research utilization" are not highly correlated and may even be negatively related (28) (29). The findings suggest, among other things, that increasing the research design sophistication will not automatically result in utilization, may even be counterproductive to achieving utilization, and that other variables explain most of the differences in research utilization. Patton (13) has authored a strong statement regarding the implica-
tions of the findings:

[the research findings]...some close to positing a clear negative relationship between methodo-
lological sophistication and utiliza-
tion of research for policy for-
formation; the greater the im-
provement of research on a policy question, the greater the confusion about what the find-
ings mean.

The foregoing discussion should not be taken as an indictment against sophisticated research designs. It may be vital to construct and implement a sophisticated design for researching a problem even when the decision making audience lacks the training to understand the design and the statis-
tical analyses that will be used in the research. But to undertake sophisticated research on a policy problem in the face of a research consumer audience that does not possess a sufficient understanding of the proposed research design, it may be necessary to "pull back" and engage decision makers in basic education. It does not take an inordinately long time to explain to decision makers: Why the design is necessary; What kinds of information and knowledge will be lost (if alternative (and inferior) designs are used); What kinds of statistical analyses will be undertaken; How the data derived from these analyses will be interpreted.

Researchers who have truly adopted a collaborative style in their approach to applied social research will discuss research designs with decision makers. But the "discussions" should not be limited to one-way (research to decision maker) communications. The collaborative approach involves negoti-
tiating with decision makers about research design. Once they begin to understand the "pros" and "cons" of various research alternatives, decision makers will be in a position to offer advice to researchers about research strategies and approaches. If researchers are willing to take this advice into account and not consider making research designs decisions of their own, the "ownership" by deci-
sion makers in the research will have been enhanced. Furthermore, the level of research understanding on the part of decision makers will usually be substantially increased.

The concern for research design issues is important when considering research utilization because design decisions affect the production of knowledge. Research dissemination decisions can also affect the extent of research utilization. We shall now turn our attention to that topic. Social science studies can refer to any number of research methods textbooks and be sure to find a chapter or section on the topic of "The Research Report" (30) (31). The textbook authors invariably outline the basic components of the research report and emphasize the importance of the report in the conduct of inquiry process. It is widely known that the shelves of libraries are lined with volumes of research reports. Ironically, many reports remain relatively unused. Moreover, many practitioners and other potential users of research reports have complained about the need for researchers to adopt new and innovative strategies for disseminating data.

Whether a product of tradition, convenience, or both, researchers have largely continued to package their research findings in the classic research report. The problem has been underscored by recent activity in the social indicators field. Numerous quality-of-life data books have been published, many of which contain reams of data accompanied by little or no interpretation. The reports have been distributed to decision makers to be presumably used in the decision-making process (32) (33). The documented low utilization of some of these reports is not surprising (34), and perhaps should have been anticipated.

The applied researcher who adopts a collaborative style will be open to talking with decision makers and other users about alternative strategies for disseminating research findings. At times, the applied researcher may find it beneficial (from a utilization perspec-
tive) to conduct dissemination work-
shops in the field for the extension worker. Ebers (35) comments on recent activities to disseminate social indicator data to decision makers in New York State:

This program...exists mostly in terms of seminars and workshops rather than in terms of any printed materials... We feel that most community leaders respond more effectively in face-to-face type workshops than they do by reading documents which are "never" on the particular topic a given leader may be wanting to pursue.

Another example of an alternative dissemination technique involves the use of a "newspaper format" by researchers in the Department of Agricultural Economics and Rural Sociology at the University of Illinois to disseminate findings of a statewide quality-of-life survey (36). The Researcher as Change Agent

One of the distinctive features of the collaborative approach is that the researcher functions as an intervener, one who attempts to facilitate the diffusion of new knowledge and encourage subsequent action based on that knowledge. Implicit in the col-
laborative approach is the need for researchers to understand and imple-
ment basic principles of the planned change process. Why? Collaborative researchers will often find themselves in the curious position of being a change agent who not only attempts to encourage the utilization of research by decision makers, but who very often introduces decision makers to a
Principles Regarding Change

Respect for the change target: to identify salient needs and then show how the proposed change will help meet those needs. The relative advantage of change will then be emphasized.

Researchers should advance the implementation of a performance gap on the part of the change target; that there is a perceived discrepancy between how the change target is performing and how the change target believes it should be performing.

Principles Regarding Resistance to Change

Cultural, Social, Organizational, and Psychological

There should be top-level support in the change system for the proposed innovation or resistance will be encountered.

Resistance targets should perceive that they will, or can be provided with the necessary technical skills to implement the change or resistance will be encountered.

Researchers and targets who are proponents of the change should make an effort to understand the reasons why targets who are opponents do not want change. In this way, informed action can be taken to reduce or eliminate the causes of resistance.

Researchers should strive to reduce change targets' ignorance of what the change involves.

Principles Regarding Change Strategies

Researchers should understand that there are different, basic strategies for bringing about change: facilitative strategy, reconstructive strategy, and persuasive strategy, and power strategy.

The decision to implement any one strategy (or use different strategies in a temporal sequence) should depend on the researcher's analysis of the change target (and system) on the following variables: degree of commitment, perceived need for change, capacity to accept change, capacity to sustain change, resources, availability, magnitude of the proposed resistance, nature of the change, time requirements, change object, and resistance to change.

Principles Regarding Knowledge Acquisition and Use [37]

Researchers should maximize the relevant, and minimize the irrelevant, information on the initial message of what the research process will involve.

Researchers should minimize the potential dangers of misapplication or premature application of the knowledge.

Researchers should not offer help to the user, but should attempt to "help people help themselves" in the critical areas of: diagnosing needs and problems; creating an awareness of the self-actualizing universe; and encouraging users to risk trying something new if it promises improvement of the situation.

Conclusion

The guidelines for research utilization that we have attempted to present in this paper do not provide ready answers to the problems we have posed. The "hunch" we have had for some time is that researchers might try to think in terms of the collaborative approach. What we are suggesting is that researchers recognize the collaborative approach as a viable, meaningful strategy for conducting applied social research. Call it an "alternative paradigm." Unfortunately, no approach to problem-solving is without difficulties. Researchers operating in a collaborative strategy will find that their research role is often needed to be watched with decision makers. Such compromises may be in the researchers' best interests. Perhaps more serious is the potential risk of research quality. This situation can create an impasse in the collaborative effort and may even induce conflict. To solve these and other problems associated with undertaking collaborative research, researchers must make a commitment to their fellow researchers—a commitment to authorship that is necessary to any collaborative research process. A rich data base regarded potential "do's and don'ts" of collaborative research will then come to the fore. The recent case study of an applied social research project in Vermont, authored by Blyzek and his associates (38) could well serve as a model for documenting collaborative research efforts.

Our discussion has only superficially treated the collaborative approach to applied social research. There are a host of issues and questions that need to be further explored, such as: What implications do a collaborative strategy have for the "linker" (information user to information generator) role of the Extension worker? Will collaborative researchers be adequately rewarded for their work within the academic reward system? What are the unique ethical problems posed by collaborative research? What, if any, are the negative effects of the collaborative approach on the decision-making process? These are examples of questions that must be systematically addressed and studied in the future.

References

3-10. Although it was impossible to document all the relevant literature in a limited space, several recent works are referenced here.
18. A June, 1979 flyer distributed by the Northern Regional Center for Rural Development announcing the formation of a new research interest network that will be entitled, "Information Discovery and Utilization Procedures in Community Development: Alternatives for Joint Effort by Citizens and Professionals," Prentice Hall, Englewood Cliffs, New Jersey, 1978.
Encouraging Rural Community Services Research

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and
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For a number of reasons, one of the most important of which is a shift in population migration trends, local decision makers in rural areas increasingly are being forced to make choices among various alternatives for providing community services. Often they have to make these choices with little or no empirical information on which to base them. The community service research assistance available to local decision makers in the past has been limited, particularly for smaller communities. Filling this gap in much needed research assistance is a fertile field of endeavor for university researchers. But in order for university researchers to live up to their potential to provide this type of research, they must receive increased encouragement from their institutions.

Beginning in the late 1960's a reversal occurred in the trend of population migration away from rural areas. Between 1960 and 1970, in countries with a city of 25,000 population or greater, outmigration exceeded immigration by 6.7 percent, while their total population increased 1.2 percent. Nonmetropolitan counties i.e., those not adjacent to Standard Metropolitan Statistical Areas (SMSA), had a net loss due to migration of 12.3 percent and a net population decrease of 4.5 percent. A comparison of the 1960-70 figures with those for 1970-73 reveals the reversal in population movement. In counties with no city greater than 25,000 population immigrants exceeded outmigrants by 2.2 percent and net growth was 1.2 percent. Entirely rural, nonmetropolitan counties had a net migration of 2.9 percent and a 3 percent net population increase.

While writing in 1975, noted that: "The trend (population migration) in the United States since 1970 was not foreseen in the literature or scientific and public discussion of even three or four years ago. Its rapid emergence is basically the result of innumerable private decisions—both personal and commercial—which collectively and subtly have created a pattern of population movement significantly different from what went on before. Long-held social truths—such as the view that the basic movement of population is out of nonmetropolitan areas and into metro areas—are not easily cast off. But this one seems to have reached the end of its unchallenged validity."

Mississippi's population trend is similar. During the 1960's there were only 10 counties with a net inflow of people. Seventy-two of Mississippi's 82 counties had net migration outflow. Forty-seven counties had net outflow rates greater than the 10.5 percent recorded for the entire state. In the 1970's the trend changed. Between 1970 and 1976 only 44 counties had net outflows. The net outflow was only 0.1 percent.

There are several reasons for this change. Soaring costs in large cities, social problems, and increased market demand for final products in nonmetropolitan areas have resulted in decentralization of manufacturing and other industry. Many retired people are settling in rural areas because of lower living costs and a more pleasant
environment. The expansion of state colleges in rural areas has stimulated the population and economic growth of many regions. The convenient access to recreation facilities has had an added attraction. Birth rates tend to be higher in nonmetro areas. Social problems, lack of housing, and deterioration of schools and other public services are causing many to leave the city. Although the news media more often attaches these problems to large northeastern cities such as New York, Washington or Chicago, smaller cities such as Atlanta, Houston, and Memphis have similar troubles. Even smaller cities—Jackson, Baton Rouge, Montgomery—are not immune.

The people who are now moving to nonmetro areas have different characteristics than those who left two or three decades ago. They are better educated, more trained in the physical arts, and accustomed to a higher standard of living. They move to nonmetro areas by choice whereas those who left 20 years ago did so because of economic necessity. The imminent prospects of new industries and nonfarm employment expectations that certain services to which they are accustomed in urban areas should also be provided in the country.

For example, tens of thousands of people who live in nonmetro areas on tracts of less than 10 acres. The rural resident of 20 years ago probably worked on the farm, had a garlic or dumped it in a gully, but the family on a small acreage does not have a problem with farm trash because it would either disturb neighbors or violate local laws. The problem with farm trash from small areas where more garbage is generated per day due to the use of convenience foods. A solid waste disposal system, even publicly or privately operated, is necessary to maintain public health as well as community appearance.

Similar demands for increased police and fire protection in rural areas have occurred. The immigrants have more invested in their homes and personal property than those who left. Insurance costs and the need for police and fire protection. Better quality education and improved health care must also be more available and immediately exerted on local decision makers to provide the professional workforce. The ability of local governments to plan and finance delivery of new and improved community services lags behind the demands for these services. Local government budgets are already strained. Many rural towns are governed by part-time mayors, few have full-time professional city managers. Simply, most county supervisory hold other jobs. Few towns or counties have full-time planning personnel.

There are 288 incorporated cities in Mississippi. According to the Mississippi Municipal Association, there are about 20 full-time mayors in the state. There are only five city councils (Meridian, Picayune, Grenada, Jackson) with full-time city clerks. Mayors and aldermen typically receive a token per diem payment for attending meetings. Most city or county officials look at the planning and development districts (PDD's) to provide technical assistance in devising and establishing service delivery systems.

Most planning and development districts are severely hampered by the lack of access to technical data as well as being under-staffed. In 1978, there were 124 professionals employed in Mississippi's 11 PDD's. However, nine employees were technicians in the 29 in 11 counties and over 50 in service programs; 26 were primarily administrators with the PDD, and three coordinated CERTA programs. Thus, only 57 full-time employees were essentially available to assist local decision makers with complex service delivery decisions. These were primarily trainees rather than technical advisors.

In Mississippi, more technical assistance is probably available at the state level than such agencies as the State Board of Health, the Research and Development Center, et al. Yet, a void still exists. State agencies often seem to service larger cities, and PDD's service the smaller cities. The smallest towns are almost always left underserved.

A virtually untapped source of information and assistance for local decision makers is the state's colleges and universities. The research capability and range of subject expertise can be found in the faculty and staff of our institutions of higher learning is tremendous. A void should be found to make this expertise available and responsive to the information needs of local decision makers. The universities do not need to compete with the PDD's and state agencies, but rather to supplement and provide technical and economic information pertinent to rural community service issues.

The Extension Service has the responsibility of disseminating information from research findings. Extension workers typically use either work generated at the land-grant institution in their own state, the findings from other land-grant colleges, or USDA research findings. However, state-specific research that would be most useful to local decision makers facing community service choices is very scarce; too little attention has been devoted to adapting work done in one region to another. This often leaves the extension rural development specialist with little or nothing that he can offer to local decision makers involved in community service decisions. Researchers need to become aware of the tremendously fertile area open to them in community service research studies.

In most cases, local decision makers would welcome the information that researchers could assemble on various community service programs, service utilization, investment required, costs of operation, alternative delivery systems, location, and quality of service would be invaluable to a decision maker trying to choose a service delivery system. This knowledge would help this area's needs and budget constraints. This type of information would also be used by policy makers in justifying their actions to the voting public.

Providing local decision makers with usable information on community service programs would help researchers to make the way researchers have traditionally operated. Areas of major change include the types of technical assistance, interaction with other researchers and agencies, format for presentation of results and changes in the rewards system.

Instead of searching the literature for researchable problems, the researcher will have to establish contact with local decision makers. This can be done through various personnel employed by the Extension Service, development districts, state agencies and others who have frequent contact with local leaders. These people usually have a good appreciation and knowledge of problems facing local decision makers. They are valuable sources of information as well as contacts for the community service researcher.

Community service problems are varied, and solutions usually require inter-disciplinary research. For instance, a solid waste system may require the input of economists, engineers and sanitarians. Researchers from different fields need to work together to identify viable alternatives for local decision makers. Opportunities must also be provided for the exchange of experiences and developments in community service research on a regional or national basis.

The community service researcher will also need to make contact with representatives of state and Federal agencies. Often there are regulations and guidelines which affect the establishment or improvement of community services. The researcher needs to be aware of these agencies. These components can be blended into alternatives that are developed for decision makers.

One major issue left to be discussed is how researchers and local decision makers can work together to identify viable service delivery systems. The researcher will fit all situations, but a few suggestions will be discussed. It has not been mentioned that researchers will need encouragement from college deans and department heads to become involved in research. This would not require any new structure. Researchers could include their problems in their departmental business meeting. PDD and other agency personnel who work with local decision makers. Researchable problems can be identified and alternative solutions developed. However, as mentioned earlier, community service agencies are often inter-disciplinary. A researcher would be left to his own devices in soliciting assistance from colleagues in other departments. In addition, this unstructured approach would lack coordination and direction. A more structured approach would be to designate a task force or working group to develop this. The task force should consist of both Extension and researchers. This group should coordinate community service research activities at the institutions of higher learning. The group should have the authority to change and reschedule the research input from the appropriate disciplines required to develop alternative solutions. The task force could then publicize its services through the mass media and the county Extension system as well as other agencies that work with local decision makers. This would give local decision makers a specific individual group to contact for assistance. However, the task force would have to be extremely careful with the way it contacts other agencies and organizations working on similar problems.

One thing is certain: community service decisions will be made when local residents demand action. It is the responsibility of those who have information and can develop information pertaining to a problem to do something. Thus, the responsibility of information that is available to local decision makers.

References


Facilitating Citizen Input In the Community Needs Assessment Process

Public involvement in shaping policy decisions has always represented a desired characteristic of American society. History reveals, however, that the citizenry has maintained a threadbare relationship with those determining policy makers. As a consequence, administrators, planners and lawmakers often have lived to determine public policy based upon their own personal understanding of the public's sentiments. Perhaps at no other point in time is public input more important than now. Two key factors appear to point to this conclusion. First, as Warner and associates note (8), local citizens and decision makers are being delegated greater responsibility in determining the future direction of their communities. Community block grants and revenue-sharing programs represent federally legislated means at assisting community leaders to better address problems and needs of local residents. In order to successfully respond to these problems and needs, local leaders need the input of all sectors of the community.

Second, a number of recently conducted statewide surveys reveal that government-citizen relations rank as one of the major problem areas in our states and communities (1,2,7). Most respondents view the lack of citizen participation in community decision making as a primary contributor to the government-citizen relations problem. These findings point to the need for exploring alternative methods for maximizing citizen input in local decision-making processes.

In an effort to bring people's opinions to policy makers, planners and government officials, a survey titled "Focus on Florida: The Citizens' Viewpoint" was conducted throughout the state to ascertain what Floridians consider priority concerns for local governments. More specifically, the study sought to identify residents' perceptions of community problems and needs, their views on the adequacy of local services and facilities, and their priorities for state and local government spending.

Designing the Survey Instrument

When undertaking public opinion research, it is important that one be attuned to the wide variety of current and foreseeable issues confronting public decision makers. One of the distinct features of the "Focus on Florida" survey instrument was that it represented the combined efforts of researchers, policy makers and Cooperative Extension agents throughout the state of Florida. A three-step process was utilized in the design of the questionnaire.

STEP 1: Personal interviews were conducted with 18 Florida Senate and House Legislative Standing Committees (e.g., Education; Natural Resources and Conservation; Health and Rehabilitative Services; Commerce; Agriculture; Community Affairs), 22 state agencies and organizations (e.g., Division of State Planning; Transportation; Agriculture; Culture and Consumer Affairs; Natural Resources; Community Affairs; Association of County Commissioners) and with executive directors of the State Regional Planning Councils.

In the more than 30 separate in-depth meetings that were held, some 66 persons in planning and policy-making positions outlined items on which they felt citizen input was needed.

STEP 2: A number of individuals were informed by letter of the purpose and objectives of the "Focus on Florida" study and were encouraged to submit recommendations on issues which they felt were worthy of inclusion in the survey instrument. Eighty-six county commissions, 30 county/city planning board members and 39 county Cooperative Extension personnel responded to written requests for assistance.

STEP 3: On the basis of input received from these 153 individuals, the "Focus on Florida" research team designed a 10-page survey instrument consisting of over 150 close-ended questions. Several areas of concern were addressed including government-citizen relations, housing, business and industrial development, health services, law enforcement, planning and zoning, education, recreation, community services and transportation. The broad range of issues examined helped guarantee that a comprehensive understanding of the needs and concerns of residents of Florida's communities would result from the research effort.

Sampling Procedures

A sample of 9,800 names representative of all adults in Florida was selected from a statewide list of licensed drivers. The sample size was chosen to ensure that the number of usable questionnaires would approximate 6,000 or about one questionnaire for each 1,500 of the state's adults. On the basis of earlier works (4), the research team anticipated that 61 percent of the families contacted by mail since they had moved out of state, left no forwarding address or were unreachable sample, it was expected that 70 percent would respond. Given the high level of interest in the scientifically drawn sample of about 9,800 was needed to meet the 6,000 sample goal.

An initial mailing of the "Focus on Florida" questionnaires and cover letters was made to the survey sample in March 1978. This was followed by a reminder postcard two weeks later. A letter with a replacement questionnaire was sent to respondents in the last part of April while a final letter with a replacement questionnaire was sent by certified mail in mid-May.

Of the 9,800 persons selected, 2,130 (21.7 percent) had moved out of state, moved without leaving a forwarding address or were deceased. Of the remaining 7,670 persons, 5,354 or 69 percent responded initially and returned the questionnaire. In addition to the 9,800 residents chosen for inclusion in the statewide sample, another 1,241 persons were specifically selected from rural counties of the state. This was done to allow presentations of results to be made on all of Florida's 67 counties. Without the supplementary list of residents, sample sizes in most rural counties would have been inadequate to report results to decision makers in those localities. Of the additional 1,241 selected, 419 were classified as "undeliverables." Some 372 persons from the remaining sample of 822 responded to the survey.

Dissemination of Survey Results

Regardless of the scientific and comprehensive nature of any study of citizens' concerns, all is lost if researchers fail to effectively communicate results to public decision makers. All too often researchers are content with the production of a lengthy summary report of survey findings. The cumbersome nature of these documents often precludes their dissemination to and utilization by administrators, planners and lawmakers.

In order to maximize the usefulness of the survey findings to officials at all levels of government, the "Focus on Florida" research team made the summary report in a tabloid (i.e., newspaper) format. The 16-page document represented thorough but concise statement of Floridians' perceptions of community problems, needs and uses and the expenditure of public monies to address these local concerns.

The attractiveness of the tabloid-type report was seen as twofold. First, the expense of producing multiple copies was minimized. Second, the 10,000 copies of the publication were printed at a cost of only 19 cents per copy. The large volume printed helped guarantee that maximum distribution of the summary document would be attained. Second, the formats and ease of the report generally was considered to be appealing to public decision makers. It was felt that their receptivity would serve to enhance utilization of the report in their planning and policy-making deliberations.

To date, the "Focus on Florida" tabloid has been disseminated to a number of key individuals and agencies.

1. Staff members of the 18 House and Senate Legislative Standing Committees who assisted in the initial phase of the study;
2. Personnel in the 22 state agencies who expressed a keen interest in the outcome of the statewide survey effort;
3. Executive Directors of Florida's Regional Planning Councils;
4. The membership of the Florida Rural Development Council;
5. County leaders, including the chairs of each of Florida's 67 counties;
6. All county Cooperative Extension agents;
7. The directors of county planning boards;
8. Each county's community development director and/or grants coordinator;
9. Some 4,500 survey respondents who requested a copy of the findings. (Worth noting is the fact that this represented nearly 76 percent of the total number completing and returning the questionnaires.)

Assessing the Usefulness of the "Focus on Florida" Study

From the very first stages of the research, the intent was to produce a highly service-oriented guide to planning that was presented to the counties and cities by the survey, the summary report was twofold. First, the expense of producing multiple copies was minimized. Second, the 10,000 copies of the publication were printed at a cost of only 19 cents per copy. The large volume printed helped guarantee that maximum distribution of the summary document would be attained. Second, the formats and ease of the report generally was considered to be appealing to public decision makers. It was felt that their receptivity would serve to enhance utilization of the report in their planning and policy-making deliberations.

Moreover, while past research efforts generally have failed to elicit the concerns of rural residents, the Florida study took great pains to guarantee that the voice of rural Florida would be heard. Their policy appears to have been successful. Of the 5,926 persons who responded to the questionnaire, 26 percent were identified as rural under 2,500 while 16 percent resided in towns of 2,500 to 10,000 persons. An additional 25 percent of the survey participants lived in towns or cities of 10,000 to 50,000 persons.

There is clear indication that the "Focus on Florida" study is performing a useful role to planners and decision makers:
1. Since its release in May 1979, a total of 81 requests have been made for additional information on the "Focus on Florida" study. Sixty of
those requests were from local, regional and state level officials.
2. Although some 1,000 tableaux were distributed to public decision makers throughout the state of Florida, requests for supplementary copies have been received from a number of these persons. Twenty-four of those requests were from local officials, six were from regional planning council agents and eight were from state agency representatives.
3. Requests for county-specific data have been made by 22 of Florida's 67 county Cooperative Extension Service offices. This county information is being shared with county Extension Advisory Committees for the purpose of identifying local problems and establishing appropriate educational thers to address these local concerns.

Requests for further information on the "Focus on Florida" study are continuing. These requests are for more detailed data regarding a specific area of concern or from a limited geographic area (i.e., county or multi-county). These requests indicate that the survey data are being used in the local decision-making process.

Enhancing Government-Citizen Relations: A Final Note

Americans have long prided themselves in having a democratic form of government characterized by citizen participation and decision making. The success of such a system can be measured by the extent to which citizens' needs and perceptions are considered in the public decision-making process. In the process of doing so, it is important to acknowledge that the majority of leaders in various political and social institutions believe citizen participation is essential. In this context, it is important to define what is meant by "participation." In general, these definitions require that most leaders are convinced of the need for citizen involvement.

In addition to political emphases, much social science literature dealing with community needs assessment focuses upon citizen participation. The community development literature strongly maintains the importance of citizen involvement as an attribute of the "good" community (6,9). The issue then is not whether there should be citizen participation, but how citizens' views might be effectively incorporated into the decision-making process.

In a rapidly changing, complex society, the viewpoints of the citizenry become more difficult to ascertain. Judging from the results of several recent statewide surveys, public officials have often failed to incorporate citizens' views into the decision-making process. Statewide surveys completed in Kentucky, Illinois and Florida have found that residents view government-citizen relations as a key concern in their states and communities (1,2,7).

In both the Kentucky and the Florida studies, government-citizen relations ranked as the most serious problem area, while in the Illinois study this area was the second most serious. A major component of these government-citizen relations may well be attributed to the lack of opportunities for citizen participation in the local decision-making process. In addition to the Florida, Kentucky and Illinois surveys, statewide surveys have been recently conducted in North Carolina and Michigan. Significant proportions (as high as 75 percent for Kentucky) of respondents in these five states have evaluated citizen participation in community decision making as a major problem (1,2,3,5,7).

The dilemma demonstrated by these findings is that while everyone agrees that citizen participation is important, few believe decision makers actively seek the involvement of local citizens. Comprehensive needs assessment surveys such as those conducted in Florida, Illinois, Kentucky, Michigan and North Carolina are a partial solution to this dilemma. The use of such surveys as a device for gathering citizen input has been well received by residents of these various states. For most respondents, the survey represented the first opportunity to provide input outside of the ballot box. Comprehensive surveys conducted in a regular time intervals might serve to bring decision makers more closely in touch with the needs and concerns of their constituents. Moreover, citizen surveys could enhance the accountability of the decision-making process in our states and communities.

Cooperative Efforts Produce Planning Payoff For Local Community

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Many communities throughout rural America have adopted comprehensive land use plans to manage the pace and nature of growth. Kentucky statute recommends that such plans be revised every five years, and this process must maximize citizen participation. The chief administrative officer (CAO) of a local planning commission usually acts as the community planning officer. This person has a key role in the procedure developed to incorporate preference survey data with other sources of data in the revision of the land use plan. We hope to illustrate how local officials can utilize the resources of a university or other agencies to maximize the information available for decision making and to greatly expand their ability to effectively deal with increasingly complex community problems on limited budgets.

The Community Setting

Jessamine County, adjacent to the Lexington-Fayette SMSA, a rapidly growing metropolitan area in Central Kentucky. In 1973, Jessamine and four other contiguous counties were reclassified from nonmetropolitan to metropolitan status. Since 1960, Jessamine County has experienced the most rapid rate of population growth among the contiguous counties, and the greatest rate of in-migration. Jessamine County, then, is a good example of a county in transition. A flood of newcomers has altered the socioeconomic composition of the population and the dominant white Anglo-Saxon Protestant view of the community. This is illustrated in two ways. In 1971, county-wide comprehensive land use planning was approved after years of debate. The enabling ordinances were passed following the development of several trailer parks in the northern portion of the county and the construction of a sewage treatment plant in the same area to service Fayette County's population. In 1976, a request to rezone 209 acres from agricultural to residential use led to an eight-hour public hearing and opposition from various groups, including the school system and farm organizations. The request was denied on the basis of the development's impact on the delivery of public services. The hearings indicated there was public concern over the issues of growth and development and considerable variation in citizens' opinions.

The rapid growth in Jessamine County also has affected the capacity and quality of the community services delivery system. The 1981 school enrollment is projected to exceed capacity by 1,140, and a land fill which in 1970 was projected to suffice for 50 years will be forced to close in 1980. A county-wide assessment of community services and facilities seemed imperative if the land use plan was to accurately reflect the ability of the community to absorb population growth.

The chief administrative planning officer of Jessamine County developed a multi-stage plan (see Figure 1) for assessing the capacity and quality of community services and facilities, and citizen opinions on the quality of life in Jessamine County. The plan involved an extensive utilization of University of Kentucky and other agency resources.

A Survey of Citizens' Preferences

After several consultations with community development specialists of the university, it was decided that a preference survey of Jessamine County households would be conducted under the supervision of a graduate student in the community development program. The survey would focus on citizens' evaluations of the quality of community services and facilities and their attitudes toward population growth, industrial development, and land use controls. Specific issues or questions were developed from a series of indepth interviews with county and city officials and key citizens in the community.

The survey was mailed to 20 percent (1,225) of the households in Jessamine County. The sample was derived from complete mailing lists with each fifth household receiving a copy of the questionnaire. The sample was stratified by geographic location in the county, the two incorporated
places and the unincorporated areas of the county. The response rate, fol-
lowing a postcard and second mailing, was 640 (93%) for a response
sampling of between 10 and 13 percent of the households in the three
geographic subunits of the county. Initial discussions with the CAO of
the planning commission had begun in late September 1976. The survey
of data results were delivered to that office by mid-August of 1977, or six
weeks after the first interview schedule was mailed.
A descriptive report of the data for the entire county was prepared for the
planning commission, and public offi-
cials who had assisted in the construc-
tion of the survey instrument received
more detailed reports of how their
constituents viewed the issues facing
Jessamine County and their thoughts and
business associations received
reports detailing citizen preferences
with respect to issues of special
concern, and a series of press releases
were developed. All of these reports
were prepared by the development
specialists of the university.

Other Sources of Data
The administrative officer of the
planning commission also utilized
other university and government agency
resources to analyze recent trends in
Jessamine County. Several graduate
students in the College of Social
Professions conducted a survey of
community facilities. The survey iden-
tified the agency, clients served, staff,
the programs or services provided, source of funding, and the admin-
istrator’s assessment of major problems in the delivery of services or equipment
requirements. This survey defined the
nature of community services and
identified areas of future concern which would eventually have to be
addressed with community action.
Graduate students from the geo-
graphy department at the university
assisted in the development and
implementation of a county road and
bridge survey. The students then
prepared a series of maps depicting the
results of the survey utilizing the
cartographic equipment available
through their department.
The relationship between the plan-
ing commission and several depart-
ments at the university provided
benefits to all participants. The CAO
of the planning commission received assistance in acquiring and analyzing
technical data on facilities, services, and
community attributes. The participating departments could place
graduate students in “real” work
settings which permitted them to
apply their academic learning to
concrete problems in the field. Since
two of the cooperating departments
required their graduate students to
participate in a field experience or
colloquium, the cooperative efforts
with the Jessamine County Planning
Commission also provided the students
with academic credit for their work.

The administrative officer of the
planning commission also utilized
the services available to the community
through the Soil Conservation Service,
the Corps of Engineers, and the
Kentucky Historical Society. The
Soil Conservation Service, upon request,
converted the point of reference of its
published “Soil Analysis for Jessamine County” to include a “Development
Suitability Analysis” which was used by
the planning staff to make recom-
mandations for future urban land use.
The Corps of Engineers provided
maps overlay land use inventory, a product of LANDSAT, which were
used in the presentation of current
land uses. The Kentucky Historical Society agreed to survey Jessamine
County during the revision of the land
development plan rather than in 1980. The survey received a high priority due
the rapid rate of change with a resultant threat to historical sites. This
information formed the basis of the
“Historic Preservation” section of the
plan.
The administrative officer of the
planning commission utilized the
technical resources of public agencies
to produce a data base for the develop-
ment of a comprehensive land use
plan. The development of this research
data base required considerable co-
operation from the various participants,
including some negotiation and com-
promise as to composition and time of
activities. For example, the timing of the preference survey reflected the
sequence of events in the revision of the
land use plan and led to its mailing
during summer vacations. Yet, the
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Direct Citizen Participation
During the period of survey prepara-
tion a series of public meetings were
held in various localities throughout the
county. Participants received an in-
formational packet describing the demographics and economic changes in Jessamine County and a copy of the
goals and objectives of the first plan. These materials were designed to encour-
age citizen participation in the for-
mulation of goals and objectives which would shape the design and operation of the
land plan.
Following these public meetings and after the analysis of the preference
survey, two citizens advisory com-
mittees (CAC) were organized to
finance overall plan, goals, and
goals. One CAC represented the unincor-
porated areas of the county, and the
other had representatives from one of
the two incorporated cities in Jessamine.
The other, larger incorporated city had
its own community land use plan.

Citizen committees of representatives from
community organization, the different
geographic areas of the county, and special
interests (developers, large farm operators, real estate
agencies). The committees reviewed the
results of the citizen public meetings,
the preference survey, and the other
agency surveys to serve as a basis for
the discussion. Information as to
land use plans developed by other communities and similar pattern of
rapid growth and urban sprawl was also
provided to the CACs upon their request by
community development
consultant from the university.

Discussion and Summary
The administrative officer of the
Jessamine County Planning Commission
developed a multistage approach to
the development of a comprehensive
land use plan. By utilizing the resources of the university and other agencies, a
large data base was developed at
relatively no direct cost to the planning
commission. In the case of the survey
and microcomputer, the geographic
students, the detail of the maps far
exceeded that which could have been
purchased. Surveyors often include
the amount of money allocated to this
phase of the project. The cooperative
relationship also made available to the
planning commission the use of the
university’s computer facilities and
assistance in interpreting the data
base.
The data base described geological, historical, geographic, economic, and
environmental information on the commu-

"What Comes After The Survey? A Practical Application of the Location Model in Community Devel-
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cy Development Society, 10, 1, (1979), 3038.
of the planning commission received assistance in acquiring and analyzing technical data on facilities, services, and community attributes. The participating departments could place graduate students in "real" work settings which permitted them to apply their academic learning to concrete problems in the field. Since two of the cooperating departments require their graduate students to participate in a field experience or internship, the cooperative effort with the Jessamine County Planning Commission also provided the students with academic credit for their work.

The administrative officer of the planning commission also utilized the services available to the community through the Soil Conservation Service, the Corps of Engineers, and the Kentucky Historical Society. The Soil Conservation Service, upon request, converted the point of reference of its published "Soil Analysis for Jessamine County" to include a "Development Suitability Analysis" which was used by the planning staff to make recommendations for future urban land use.

The Corps of Engineers provided maps of the drainage basin, a product of LANDSAT, which were used in the presentation of current land use. The Kentucky Historical Society agreed to survey Jessamine County during the revision of the land use plan rather than in 1980. The survey received a high priority due to the rapid rate of change with a resultant threat to historical sites. The Soil Information formed the basis of the "Historic Preservation" section of the plan.

Thus, the administrative officer of the planning commission utilized the technical resources of public agencies to produce a data base for the development of a comprehensive land use plan. The development of this research data base required considerable cooperation from the various participants, including some negotiation and compromise as to composition and timing of activities. For example, the timing of the preference survey reflected the occurrence of events in the revision of the land use plan and led to its mailing during summer vacations. Yet, the pace of production and dissemination of the geographic students, the detail of the maps far exceeded that which could have been purchased by the amount of money allocated to this phase of the project. The cooperative relationship also made available to the planning commission the use of the university's computer facilities and assistance in preparing the data base.

The data base included geological, historical, demographic, geographic, social and economic information on the community. Demographic analysis described recent population changes in Jessamine County and projected future rates of growth. The Community Services and Facilities survey assessed the state of public services in Jessamine County and highlighted problems. The preference survey in conjunction with the public meetings and the Citizens Advisory Committee described how members of the community assessed these changes and envisioned the future path of their community. The final version of the comprehensive land use plan utilized all of this information to describe the changing face of the community and to project a preferred path of future development. Other groups also benefited from the development of this data base. Local businesses (such as the medical association and the commercial banks) utilized the preference survey results to determine the demand for their services. The local PTA and school board examined the survey results to see how parents of school-aged children evaluated the county's educational programs.

Finally, the participating universities developed a unique opportunity to provide their students with experiential education. The students fulfilled curricular requirements and were able to see a "real-life" pay-off from their work. Even after the groundwork preparation and the data base was completed, the planning commission enjoyed the benefits of some of the students as summer employees. These students brought to their work a knowledge of the community and its problems not often found in summer or part-time employees. Of course, the students reaped the advantage of part-time employment within commuting distance of their school.

This program indicates that local officials may have an unstaked reservoir of technical assistance available through universities or other agencies. While the foundation for the operation of this multipart program required negotiation and compromise on the part of all participants, the potential payoffs seem worth the effort.

Citations

Land Grant Universities: Extending Their Capabilities in Rural Communities

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Millions of public tax dollars are channeled annually into land grant universities across the nation. How are these dollars benefitting rural America? The land grant concept evolved from the belief that a university education should be available to the populace, not only to an elite few benefactors. Through land grants (Kelley and Hearne, 1949). To accomplish this goal, the Morrill Act of 1862 established the universities to meet the practical concerns of the public, especially in the areas of agriculture, the mechanical arts, home economics and related fields. The research and extension functions were each specified in the Act. The research function was established in 1887, and the Extension Service was established in 1914. Over the years, land grant universities have enjoyed success in communicating research to relevant audiences in the field of agriculture. Public officials are asking if this same problem-solving strategy is appropriate to bring the resources of the land grant universities to rural communities. Can the land grant university extend itself through its research-extension functions to provide expertise to rural communities as a client group as effectively as such universities have done in agriculture? Do the land grant universities have a responsibility and commitment to such an extension of themselves? If so, do they have the capacity to provide such applied knowledge? These concerns were implicit in the discussions leading to passage of Title V of the Rural Development Act of 1972. Policy makers were aware that the research and extension functions of land grant universities in the area of rural development have often been carried out independently, thus hampering the ability to provide applied research findings to non-agricultural rural people. Research and extension have each pursued their own efforts through different funding streams. Faculty appointments have often been either research or extension rather than joint research-extension appointments. For example, when applied community development work through the land grant university is carried out primarily through area community development agents having 100 percent extension appointments and no academic affiliation, little interface between research-extension functions occurs among area staff. Having no structural linkages with researchers to facilitate the application of research to local issues, job responsibilities tend to become limited to the extension mode. In the case of Title V funding, several states separated their research and extension funds, allowing the monies to two distinct sections. In some of these states, research and extension activities had no ties. Thus, research which was applicable to local communities or which addressed local issues was less likely to have been conducted. Adding to these structural difficulties are the problems inherent in applied social research. Capener (1975) gives several examples of these difficulties, comparing sociological research to biological research. He states that in general it is easier to get support for biological research, and the funding is more stable; more understanding is given the biological researcher over failures and time delays, and the object of biological research does not "talk back." When doing sociological research, a difficulty often arises in trying to communicate both strengths and weaknesses to groups who do not want to hear about their weaknesses. Klemmer and Reddy (1976), in discussing these problems, provide a list of suggestions as to how the applied social scientist can "maximize the benefits of research while minimizing the regrettable consequences," including selecting topics relevant to the needs and concerns of the area chosen to be studied and providing to the group ways the results can be applied.

Research and extension are also often kept apart because of different "rewards structures." As Christenson et al. (1977) note, extension sociologists are caught in a dilemma because their colleagues in research and teaching positions in journal articles while extension supervisors value materials on action-oriented programs. Klemmer and Reddy (1976) suggest that a faculty member will be oriented to extension work only when he has nonacademic reference groups who reward "applied" work.

While rural sociologists have maintained their way of thinking that they can" do applied," Nolan and Galilher (1973) feel that rural sociology is not having much policy impact in the future of rural society. They suggest that lightweight (1972) spares rural sociologists critical comments only because "most sociological research is so trivial that an analysis of its impact would be trivial." (Nolan and Gallilher, 1973:491). Can meaningful research be brought about by linking research and extension? Can they be effectively integrated? Historically, the two have been distinctly separate in rural development programming, but efforts undertaken as part of the Pennsylvania Title V program have demonstrated that the two functions can be linked together to provide knowledge and expertise to rural communities.

Title V Research-Extension Coordination

Because of the importance of research-extension integration to public officials who authorized Title V initially, administrative procedures were chosen to ensure that such coordination occurred. This research-extension integration in Pennsylvania was facilitated when the Title V coordinator (Dean, College of Agriculture), who is responsible for both research and extension, was designated a Title V Project Leader to be responsible for both the research and extension components of the program. In addition, the community program was linked to the basic institution, Penn State, through the academic appointment in the Department of Agricultural Economy and Rural Sociology of the community development specialist, who lived in the target area. The community development specialist had a joint appointment with both local ties and university ties.

At the local level, the relationship between research and extension was linked by the community development specialist, public officials, and local communities who acted as a facilitator with local clientele groups (usually county or sub-county) in defining additional information needs and assessing whether this information could be made available through research.

An earlier version of this paper was presented at the Rural Sociological Society Meetings, September 1977, Madison, Wisconsin.

Daniel H. Ogund also contributed to this material.

* 1A 15-minute audiovisual presentation "Title V Rural Development: Pennsylvania's Story" discussing the Pennsylvania Title V Research-Extension program is available on cable to the rural communities.

Factors which helped to confirm this role included:

1. The specialist was knowledgeable in both research and extension methods, able to be in both modes through a joint research-extension appointment. In the community, this research orientation took two forms primarily: (a) interpretation and application or (b) initiation to obtain data to assess an issue.

2. Not only did the specialist have direct academic ties through the faculty appointment in the department, he also knew faculty members personally.

3. Departmental faculty have demonstrated a continuing commitment to strengthening the research-extension link and have been responsive to research requests. In addition, the department "rewards structure" was such that applied research projects were not regarded as "second class." Joint research-extension projects were given additional funds, and the availability of applied and theoretical research conducted by individual faculty members stimulated this responsiveness.

4. A positive bond was created through Title V at the university for a research-extension specialist, explicating the two functions, and providing direct backup for the community development specialist. These characteristics at both the local and university level helped to strengthen the research-extension linkage. In addition, there were three primary ways in which research-extension integration was achieved:

- Title V Research-Extension Programming

The first approach was most successful. The community development specialist was encouraged to conduct research related to local issues for university researchers. While these projects remained somewhat specific to the community, such work usually provided answers that applied to other rural communities. Projects which had begun this way included research related to health, water and sewage systems, public assistance, and local government. This approach was based
on the initiative of the field specialist.

The second way in which the extension program
supplemented the Title V program occurred when the assistance of the
community development specialist was
sought by a researcher at Penn State to
carry out applied research. This
situation occurred in the Title V program when surveys of health
practices and attitudes were conducted in
Armstrong, Butler, and Indiana
counties. Concerns of health-related
agencies and extension staff were
solicited before questionnaires were
developed. After the data were collect-
ed, the survey information was used to
develop local health education pro-
grams and to document the need for
additional primary health care. For
example, facts from these surveys were
used in planning a community owned
and operated medical center which is
staffed by a physician, physician’s
assistant, two dentists, pharmacist, and
the necessary ancillary personnel.
Once opened, the center was financially
self-sufficient in eight months.

The final approach was illustrated
when the field specialist, operating in
both research and extension modes, carried out surveys of local audiences
to determine interest for specific
programs. For example, a survey was
done in the spring of 1976 to determine
the interest of local producers in
setting up a farm market in one
county. Because of the interest shown,
the farm market was organized and
began operating in the summer of
1976. The market, now firmly estab-
lished, is successfully operating for its
fourth season. Initiating one’s own
research can both assess the viability of
an issue and give direction to program
development. A needs assess-
ment survey was carried out at the
onset of the Title V Project (for more
detailed information, see Thomson, et
al., 1975). Surveys of local government
officials were also carried out to
determine educational interests and

Conclusions

Land grant universities can no
longer do “business as usual.” The
land grant university has the capability
to respond to the concerns of rural
communities. By doing so, it provides
rural area expertise through research and
extension which is not readily
available to such communities. The
Title V rural development program is
one visible way in which an American
taxpayer taps the expertise of a land
grant university for the good of the
programs at both the field and univer-
sity levels takes place.

To carry out an integrated research—
extension program, the input of
field staff as facilitators both for local
groups as they define their informa-
tional needs and for the researchers
who seeks to make research applicable
to rural communities is crucial. The
field specialist brings individual exper-
tise and also provides access to addi-
tional expertise available through the
land grant university. Identification
with the university and recognition as a
professional enable the specialist to
operate in the field as an objective
third party, able to deal with a variety
of agencies without being associated
with partisan politics or private
interest groups.

In the Pennsylvania Title V pro-
gram, the linkage of research and
extension was also facilitated by a
research-extension specialist employed
by the program who responded to
field requests, and several other
faculty who provided backup support.
In addition, the field specialist could
operate in both the research and
extension modes as a part of the
defined job responsibility.

One note of caution: In an effort
to provide an integrated research-extension
program, university-affiliated personnel
must avoid creating false expectations
of what universities can provide to
rural communities through research
and extension. Furthermore, lag time
between the requests and response
must be carefully monitored so that
information is available when it can be
used. This lag can be partially over-
come by a perceptive field specialist
who anticipates potential issues and
begins to identify informational needs.

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Research and Rurality: A Case Study in Dissemination

In proving to university researchers just how difficult it is to meet the real needs of rural communities, our experience in producing a six-volume set of books on rural health care was a valuable lesson.

We were a group of well-intentioned and experienced investigators from the Health Services Research Center at the University of North Carolina at Chapel Hill, working with uncommonly thoughtful technical assistance provided from the Office of Rural Health Services of the North Carolina Department of Human Resources. With a grant from the Robert Wood Johnson Foundation of Princeton, New Jersey, we intended to write guidebooks for medically-undererved rural communities describing the development of outpatient health programs owned and operated by nonprofit community corporations, and staffed principally by nurse practitioners and physician assistants, backed up by licensed physicians in nearby towns. In our children's minds, an excellent group of writers, editors and investigators ready, and money in the bank...our problems began. This article may help define some of the obstacles faced by university researchers in providing useful and current information to rural users, by taking as an example our experience with the project that produced the six books on The Rural Health Center Development Series.

The need for written materials on primary health care in rural areas seemed self-evident. For at least 40 years the “G.O.P.” of American folklore had been leaving small towns and villages. Specialization, high-billed salaries, professional support services and other factors had combined to keep the new generation of health professionals from settling around urban and university medical centers.

Rural communities were making their own attempts to solve “the primary health care crisis,” but because of their relative isolation they could not learn from another one’s failures or successes. The Robert Wood Johnson Foundation funded us to collect, organize and disseminate information about new developments in rural health care for four primary reasons: the Office of Rural Health Services, at that time the only state agency of its kind in the nation, was more than halfway toward its initial goal of developing 20 small outpatient health centers across North Carolina staffed by nurse practitioners or physician assistants—the so-called “new health practitioners.” Second, three major health education centers within 100 miles of one another—Bowman Gray School of Medicine in Winston-Salem, the UNCG School of Medicine in Chapel Hill, and the Duke University Medical Center in Durham—were training those new health practitioners, many of whom would locate in the community with government policy-makers. Thus, we had to define our terms carefully. For example, what exactly did we mean by “rural”?

Our operational definition was that isolated rural residents lacked access to primary care physicians. Geographically this tended to pinpoint those communities outside a Standard Metropolitan Statistical Area and at least 30 minutes by car from the nearest hospital, public health department, or doctor’s office.

Residents in these circumstances said that what they needed was “a doctor.” In fact, many small towns had spent years, if not decades, trying to recruit doctors. A few of them had been ironically successful at it—they had recruited two or three doctors, one right after another, and each had left the community after 18 months or two years. That turnover, of course, was a major part of the problem, and it suggested part of the answer.

The overwhelming evidence was that most rural communities had not been able to attract or keep a physician. In fact, some overcrowded inner city areas, will never be able to keep a physician, no matter how desperate their demonstrated need.) Did this fact indicate that the true need was for something other than a primary care nurse practitioner with advanced clinic training, for example, or a small "satellite" primary health center that practice 30 miles down the road? We thought the answer was yes, but we knew that 24 rural health centers in 11 states for extensive interviews and documentation of their origins, budgeting, staff and patient utilization rates,

The sites visits to rural communities from Maine to New Mexico and from Florida to Alaska introduced us to the first of the problems that often confront university researchers trying to respond to rural needs.

Problem Number One: Who Needs What?

From the beginning we were disturbed to find an enormous gap between the university researcher and the rural citizen—a difference in education, lifestyle, hobbies, future plans, geographic mobility, and so on.

In our books we had to find an approach to bridge this gap. We began to learn the perspective of our colleagues in the Office of Rural Health Services. Their mandate from the state legislature specified that new primary health programs initiated with state support must be located in areas where they will have a chance to become financially self-sufficient. In addition, the ORHS demands an exceptional level of citizen support and involvement in its local health programs.

In communities where these two conditions seemed present, the ORHS would initiate a series of discussions, often lasting six months or more, designed to mobilize and educate local civic leadership. What kind of health care were people really talking about: hospital care; care of the aged; outpatient care; emergency medical services? What was the nature of local employment patterns, and health insurance coverage, and the age trend of the population? What was the potential medical service area, not in terms of municipal boundaries on a map, but in terms of residents’ daily movements for jobs, shopping, and school? What would local people pay for an office visit—$8, $12, or what? As community leaders asked and answered these questions themselves, they began to define more precisely the nature of the local health care need, the services they and their neighbors would utilize and pay for, the number of patient visits that would need to be drawn per month or year from a given service area in order to support a small community health program. Ultimately they could answer their own question about what kind of health professionals would be needed to respond to the local need.

In effect, we utilized a technical assistance style for our books, presenting a range of options in order to suggest that what might work in east Texas might not work in Vermont. To be truly useful our suggestions had to be concrete, but overall the books could not be prescriptive; they had to facilitate the search for the kind of health care system that would be medically appropriate and financially stable in each particular community. This remains the best technical assistance style, moving slowly, respectfully.
PREP'S A Needed Prerequisite In Local School Decision Making

Dr. Thomas H. Satterfield Program of Research and Evaluation for Program Effectiveness (PREP) College of Education Mississippi State University

If rural education is going to make positive advances, it must have the capability to make the best possible decisions at the local district level. One major concern in the decision-making process is the availability of good data to be used in that process. This paper describes the current state-of-the-art for delivering assistance to rural school districts in the areas of research and evaluation which can lead to good data for decision making.

Rural school districts often lack the resources necessary to develop an organization—often titled “Department of Research and Evaluation”—to provide the data required by decision makers. Establishing such a unit requires the presence of several resources. First, trained personnel must be hired to direct and operate the research and evaluation activities of the unit. In most cases, even in large systems and especially in medium and small systems, seldom will a local school district have available personnel who possess sufficient training to adequately operate such a unit. In addition, needed computer resources, key punching, and data analysis may not be present. These two primary resources are directly related to a resource which is of paramount concern to all educational decision makers’ money. For all but the largest school districts, the financial requirements for acquiring good data would eliminate any effort to create an effective research and evaluation unit.

Current Approaches

One approach to this problem is the traditional practice of using a single outside consultant. No doubt many unique problems which arise within a rural school district can be aided in their solution by the input of an outside consultant. However, most consultants from a university setting are performing consultant services that are in addition to their full-time responsibilities with their parent institution. In the final analysis, there is only so much one person can do. Another problem rural school districts have had in using individual consultants is that there is no long-term commitment on the part of either party. Therefore, when an on-going relationship is found to be necessary for providing good data for decision making, no such long-term, intensive relationship exists.

A second approach to solving the problem would be to form a consortium. However, many decision makers have problems with the typical consor- tium approach. First, the consortium approach does seek to maximize service and minimize cost in an on-going relationship, the scope of the services is often extremely limited. Too often, the term consortium has become synonymous with inservice education. Stated another way, a consortium of rural public school districts often consists of a pool of instructors who conduct workshops or training sessions that allow local faculty to meet certification or recertification requirements through inservice training with the least amount of difficulty. Needless to say, the inservice training of faculty is of prime importance, but it is not the only service a consortium can and should provide, if sound decision making is the goal. When innovative attempts have been made to expand the services a consortium provides, these attempts

Identifying and Disseminating Information to Appropriate Audiences

With a adequate budget, a new commercial product can be marketed to virtually every rural household in America almost instantly through the mass media. New public policy recommendations can be taken to state or Federal administrative agencies or legislators. But a new concept, one to be implemented at the community level outside SMSAs, must be disseminated through a wide variety of devices rather than through a few “broadbrush” measures providing extensive market coverage.

The experience in North Carolina had shown that local civic leadership could come from many directions in the development of new rural health programs — farmers, morticians, housewives, pharmacists — each had been the catalyst for different types of programs. So we suspected that our approach in disseminating the books would have to be broad, rather than focused on a specific rural constituency.

We spent many months merely collecting lists for direct-mailings: university training programs of family practice physicians and new health practitioners, agriculture extension agents, rural hospital administrators and public health department directors, local interests groups, rural electrification associations, county commissioners, health planners, rural civic development associations, legal services offices, church and fraternal and civic organizations; and the professional journals — over a hundred of them — in important disciplines: public health, medicine, law, architecture, health, the family, home, hospital care, planning, and so on.

This approach takes longer and demands careful thought of a willing publisher, but — like the health center development process itself — caution is probably still the wisest approach. That approach had resulted in a product we were proud of, six books that had been reviewed again and again before publication by health care professionals, community organizers, health program administrators, and rural civic leaders. Their verdict was that our books were clear and readable, accurate and comprehensive, pragmatic and useful. They were also — problem number four — too long in coming.

The Time Lag

The original Robert Wood Johnson Foundation grant to the UNC Health Services Research Center was announced in December 1974; the grant period began January 1, 1975. The nationwide mail survey was conducted and analyzed that year, and our site visits, and the extensive reports we compiled from them, were completed in 1976. The six manuscripts were written, edited, rewritten, re-edited, critiqued by reviewers, and revised and edited again in 1977 and early 1978. Not until October 1978 did we deliver manuscripts and illustrations to the publisher; the publisher then pushed hard to complete copypasting, typesetting, proofreading, layout, printing and binding in seven months. The first books were shipped from the warehouse in May 1979.

Of course the exigencies of rural health care were not suspended during that 4 1/2 year period. Scores, perhaps hundreds, of new health programs and patient programs were initiated during that time. Some succeeded — by design or by accident — and some failed. Few did everything right, and some did everything wrong, despite the honorable intentions and exhausting work of their sponsors.

Also during that period, thousands of new health practitioners graduated from training programs; new Federal emphases on primary care opened hundreds of new medical school positions for family practice physicians; and the Rural Health Clinic Services Act of December 1977 provided vast amounts of new Federal funding for the support of rural health programs. Although the vast majority of rural communities still lack adequate access to primary health care, the crisis is not as acute today as it was in 1973 and 1974.
have usually centered on administrative affairs such as central purchasing and payroll accounting. A few consortia have been created to provide media centers or professional libraries. However, in all of these efforts, there is a noticeable lack of attention given to providing the support necessary to aid the local decision maker. Finally, many consortia have as a primary purpose the identification of Federal dollars to ensure their existence. It is possible to identify the demise of many public educational consortia with the termination of Federal funds, the correlation would undoubtedly be astonishing.

The Philosophy of PREPS

The Program of Research and Evaluation for Public Schools (PREPS) is one method of providing good data to local decision makers. PREPS is a consortium of 23 public school districts in Mississippi working in cooperation with the Bureau of Educational Research and Evaluation in the College of Education at Mississippi State University. PREPS is designed to address the data needs of local decision makers. However, this consortium is not Federal funded; its primary concern is not inservice education; and it has steadily grown during the four years of its existence. PREPS is a service concept in education which calls on problem solving and task force approaches in addressing an issue.

In education, many efforts in working with public schools could be best described as answers seeking a question. PREPS seeks to alter this pattern. In short, the consortium is in identifying and describing their own problems and then bringing to bear on the identified problems the technical expertise which can lead to a satisfactory solution. However, PREPS' role in the resolution of the problem is to provide quality data which can be utilized by superintendents in the local decision-making process, not to make decisions for schools.

Although the idea of finding one person who possesses all the technical expertise to direct such an effort is a noble one, a task force approach appears more appropriate. Therefore, although one person must assume responsibility for every activity in PREPS, the staff has been organized in such a manner that each staff member has a unique contribution which can be focused on the problem-solving process. By utilizing a task force approach, PREPS tends to place maximum emphasis on the quality of the resultant data as opposed to the quality of any individual's efforts. To those who are familiar with the growth of land grant universities in America and the associated development of Cooperative Extension Services, the model described above should be clear. The Cooperative Extension Service follows the problem-solving approach in addressing an issue and uses the methodology of a task force to assure that the best possible data are provided the agricultural decision maker and the farmer. PREPS is an attempt to take a portion of this most successful model and apply it to the educational community.

The Organization and Function of PREPS

When Mississippi passed its accountability law in 1974, superintendents in the state began to realize the need for good data to aid in the decision-making process concerning the many programs within their districts. As is common for many administrators, they had allowed themselves to become so involved with answering bureaucratic reports and putting out brush fires that the processes of planning and decision making had to take a back seat. However, because of the realization that good data was needed as a basis for making good decisions, PREPS was created. Mississippi State University, with its commitment to service as a land grant institution, became the home of the consortium at the members' request. However, one should never lose sight of the fact that the active leadership of the local superintendents is the force which has caused PREPS to grow from 10 schools the first year to 23 schools in its fourth and current year of operation. These superintendents form an advisory board which not only aids in directing the actions of PREPS, but serves to advise the Dean of the College of Education on current issues in the public schools and education in general.

PREPS is organized as a special function in the Bureau of Educational Research and Evaluation (BERE) within the College of Education at Mississippi State University. School districts join the program by paying an annual membership fee which entitles them to a common set of services. Should a member school wish to purchase additional services, it can do so from a standard fee schedule. Each school appoints one person within its district to serve as the coordinator for the local program. This person is responsible for conducting all activities associated with PREPS for that district.

The common set of services alluded to earlier generally fall into three categories. First, the PREPS advisory council selects each year one overall research project which it feels will have the greatest impact for all the member districts. Each district then cooperates with their respective districts or data which are utilized in the research project. The second area, and the most important one according to the member superintendents, is the local project. Each district selects one project which it feels will be most useful in providing the data it needs for making decisions within the district. Once the problem is identified, PREPS staff members aid in designing the study, the data collection process, the statistical analyses if necessary, and any other procedures which are relevant. Local staff are trained to carry out much of the clerical work, thus reducing the external cost to the district. In addition, two on-site visits are scheduled each year by the PREPS staff to monitor the progress of the local project and to provide assistance when necessary. In addition, member districts are provided access to a toll-free telephone line on which they can call at any time to discuss any questions they may have.

Finally, PREPS has an education function which is directed at promoting the delivery of good data to be used in the decision-making process. Each summer each district presents its designated local project in a "Research Sharing Conference." Much to the delight of the PREPS staff, this conference has become the highlight of the year as public school officials have the opportunity to share their problems and their plans for solving these problems based on the data provided through their local projects. A second effort under the education function is the "Fall Training Workshop." Each year the superintendents and coordinators are surveyed to identify the training needs they view as most important. Based on this input, a training workshop is planned to which training is provided to the participants so that they can become more effective in their local districts. A member school district is allowed to send as many local staff members as it wishes to the Fall Training Workshop. There have been as many as 80 participants from the districts in these workshops.

During the 1979-80 academic year, a new option will be offered to member school districts in the area of education. With the Mississippi accountability law calling on local schools to develop local evaluation and accountability plans, PREPS has developed a program in terms of the stated objectives, the superintendents felt some training in test construction would be beneficial. Therefore, each
The Need for Economic Demographic Forecasts in Community Development Planning

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Local government officials are faced with a wide range of social overhead capital decisions each year. Officials in both declining and rapidly growing areas must make decisions on new and replacement investments to maintain the desired levels of capital stock of sewers, water, roads, schools, etc. Their decisions are based on their perceptions of the future needs of their communities. Because of the long-term financing arrangements for public sector capital, the decisions they make in a given year will result in a long-term financial burden for the community. Thus, local decision makers must make a concerted effort to forecast economic-demographic changes in their community accurately. However, regional forecasting models vary widely in both complexity and cost (1,4,6,8).

Thus, the local officials must also make an investment decision concerning the extent to which additional expenditures on a forecasting model for the region will improve the wisdom of their capital investment decisions. That is, what will the benefit be to the community of having, for example, a 10 percent more accurate forecast of economic-demographic change. If this benefit can be estimated a priori, then a rational decision can be made on the most desirable level of expenditures for a forecasting model. Of course, this assumes that the relative accuracy of alternative forecasting techniques (e.g., linear extrapolation, economic base, input-output, etc.) is well known so that the change in forecast accuracy achieved by using sophisticated regional models rather than linear extrapolations may be properly assigned a value. Unfortunately, only a few studies have investigated this question (2,7,8).

Decision Rule for Selecting a Forecasting Model

Making the assumption that a detailed study of a region will result in more accurate forecasts of economic-demographic change, the local decision maker needs to be aware of the benefits of increased accuracy. Only then can a rational choice be made between using a rule of thumb forecast or a more accurate forecast based on a detailed modelling effort. A more formal decision rule for selecting a forecasting model would be something like the following.

Assuming that a forecasting model project is independent of other public projects, an economically efficient forecasting model is one that uses a methodology equating the marginal benefits of increased accuracy of the model with the marginal costs of production of the model. As an example of how this decision rule might be implemented, consider the situation of planning for public capital investment in the "boom towns" of the West where coal mining and related activities have brought about rapid change in employment and population. Officials in these rural areas are concerned with the need for investment in their public facilities to cope with the boom in economic activity. Their dilemma is a three-part problem as described by Cummings and Mehr (3, p.225):
1. Estimation of the change in population over time.
2. Front-end financing for public facilities (schools, roads, sewer systems, etc.).
3. Defining the demand for the investment in public facilities and deciding which demands should be satisfied.

Figure 1 illustrates the problems that local decision makers face when undertaking long-range planning. The problems that Cummings and Mehr emphasize are the definition of the demand for public facilities and the question of which demands to satisfy. Their major research question was, "Does the municipality facing rapid change attempt to meet the infrastructure demands of the peak population p, with the implied long-run overcapacity, or should they plan for the long-run stable population, p*, or is there some middle ground?" (3, p.226).

Cummings and Mehr conclude that conceptually, "Investment in an urban infrastructure should be carried to the point where costs associated with the last increment in investment equals the increment in the present value of all relevant future social good violation costs. The social good violation costs are the social costs involved with the failure to maintain public services or facilities at desired per capita levels."
Cummings and Mehr use an indirect method to measure the social costs of violating the desired per capita levels of infrastructure. They measure the difference in wage levels between areas they assume are stable and have desirable levels of urban infrastructure with the area experiencing rapid growth. The higher wage level in the boom town is assumed to be compensation for the difference between the maintenance derived from stable area urban infrastructure and boom town area urban infrastructure. Their preliminary empirical work indicates that this compensation amounts to a weekly wage increase of four cents per dollar that per capita public capital stock in stable towns exceeds that in boom towns (p.236-237).

The authors then spent $1,295 per capita on urban infrastructure while the boom town spent only $295 per capita, then the $1,000 differential would result in a $40 per week or about $2,000 per year per worker valuation of the benefits of attaining the stable com- munity level of urban infrastructure per capita. With 1,000 workers involved during the construction phase of the project, the benefits from the addi- tional public expenditures would be about $2,000,000 per year.

However, Cummings and Mehr do not consider the problem of population forecasts and the implications of the forecast accuracy for the optimal investment strategy. For public investment purposes, if the forecast is low then the underinvestment will result in lower than desired per capita levels of public infrastructure, and social costs involved may be estimated using the Cummings and Mehr methodology. Alternatively, if the forecast is too high, then the overinvestment in public capital will result in higher than desired levels of per capita public infrastructure, and the social cost may be estimated as the opportunity cost of utilizing those resources devoted to the higher than desired levels of per capita capital stock.

The social cost may be computed from the present value of debt service costs that is incurred from making a local investment in public capital greater than the desired level. For example, assume population of a community was forecasted to grow by 1,000 per year in 1981. Further assume that the per capita public capital stocks are to be kept at a $500 level. This implies new investment of $500,000 is required. If the actual population change is only 600, then only a $300,000 investment is actually needed to maintain desired public capital stock levels. The social cost to this community of having a forecast that is 60 percent accurate is the present value of the debt service cost of providing the $300,000 excess in public capital stock. All else remaining the same, the higher the desired level of public sector capital per capita, the greater the potential benefits from more accurate forecasts. If there is underinvestment in public sector capital, the estimation of social costs becomes more tenuous.

Assume that our model yields a forecast of 500 immigrating workers with an average family size of two resulting in a population change forecast of 1,000. However, if 700 workers actually move into the region with an average family size of two, the actual population change is 1,400. In this case desired per capita public capital is $500 and investment is made on the basis of the forecast of 1,000 additional residents; total investment would be $500,000. But, the desired level of investment should have been $700,000 given the actual population change of 1,400. The underinvestment represents a social cost. Given the Cummings and Mehr estimates, private wages for the 650 additional workers would have to rise by about $2 per year for every dollar that per capita public capital falls short of desired levels. Indigenous workers would have to be similarly compensated.

If the impacted community had an initial population of 10,000 with employment of 5,000, the social cost of the underinvestment in public sector capital can be derived as demonstrated in Table 1.

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<th>Desired Per Capita Public Capital, $500</th>
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<td>$500 x</td>
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<tr>
<td>Forecasted Change</td>
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With the computer based models, local decision makers may provide information to researchers concerning local fiscal characteristics (such as per capita expenditures for different government services, tax rates, etc.). In addition, local decision makers provide data to researchers concerning the direct employment expected from construction and operation phases of the new industrial development. Thus, they utilize the local data to drive their models. These models capture the interaction of the local economy and generate forecasts of total employment, income and population change associated with the impact.

Conclusions

Once the desired level of per capita public capital in a given year, k, values are determined by local government officials, then the ability to maintain those desired levels over time depends on the forecasted values of employment and population for the area. The value of more accurate forecasts increases directly with k and with the magnitude of economic-demographic change in the region of concern. Local decision makers are in a good position to estimate both k values and the potential benefits to more accurate forecasts of changes in employment and population in their area. Local government officials and researchers must be aware of these potential benefits prior to making a decision on the time and resources to be devoted to making forecasts of economic-demographic changes in a local area.

For an example of this kind of research in the Southern region, see KGO Gates, User's Guide Community Economic Growth Impact Model, University of Florida, Dept. of Food and Resource Economics.

References