The information agent extension system implemented in the Rhode Island Department of Education resulted from modifications made to the model developed by the National Center for Educational Communication (now the Office of Research and Development Resources in the National Institute of Education). The Rhode Island system houses its agents in the Department of Education, rather than in local agencies, utilizes persons who were formerly subject matter specialists, and regards information services as one component of overall program development assistance. Evaluation of the system indicates that: 1) the role transformation from subject matter specialist to information specialist can be accomplished; 2) the extension system is effective, since it provides necessary information which has an impact upon local schools; 3) the information system functions best when it adopts top and middle level management personnel as its local targets; and 4) that consultants function most effectively when they stress that information services are properly regarded as part of total program development assistance. (Author/PB)
ROLE DEFINITION AND EFFECTIVENESS OF
PART-TIME INFORMATION CONSULTANTS IN RHODE ISLAND

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Presented at the Annual Meeting of the
American Educational Research Association
April 17, 1974, Chicago
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Overview

A major problem facing state education agencies today is the need to develop the capacity for educational change and the resources necessary to provide leadership and service to local education agencies (LEAs) in planning and implementing educational improvements. Traditionally, state education agencies (SEAs) have been responsible for regulatory functions such as teacher certification, school approvals, student attendance requirements, and minimum curriculum and textbook guidelines. In addition, many SEAs have operational functions such as the administration of vocational and special education schools.

Since the passage of the Elementary and Secondary Education Act of 1965, however, increasing numbers of SEAs have attempted to develop a capacity for substantive educational leadership. Among the leadership functions undertaken have been: (1) development of planning and needs assessment procedures, (2) identification and diffusion of successful programs, (3) provision of information services and technical assistance, (4) provision of professional support services for innovation, and (5) redesign of inservice education delivery systems. In many instances, however, the SEA's capacity remains only partly developed and often not integrated into a coherent design. Capacity to perform leadership and change functions has generally evolved in bits and pieces, frequently in response to provisions of many different Federal acts providing categorical aid to education.

Until late 1972, the Rhode Island Department of Education (RIDE) was
not unlike the majority of state education agencies. It did have a small number of personnel whose responsibilities included curriculum development assistance. For the most part, however, a service and leadership function was dormant within the Department. Most of the Department's divisions were assigned regulatory or operational functions.

The Rhode Island Department of Education had a Division of Academic Services which housed subject matter content consultants or supervisors and personnel responsible for the administration of the several categorical federal and state grants. An analysis of the operation of the Division of Academic Services revealed that (1) little integration existed between programs because federal categorical funds were not directed at identified critical state or local educational needs; (2) LEAs were not receiving regular, well defined, well organized assistance in identifying their needs, exploring program alternatives, conceptualizing programs, and preparing applications for federal grants; and (3) subject matter specialists tended to delude themselves into believing that there was no need to tap a larger universe of special information and talent.

The Rhode Island Department of Education addressed the above situation by a major reorganization of the Division of Academic Services which had as its basis the development of an information storage and retrieval system and the development of an outreach or extension system. The information system was developed with a grant from the National Center for Educational Communication (now the Office of Research and Development Resources in the National Institute of Education). An additional major resource to the Division was the development of one of four pilot teacher center grants awarded by the Office of Education's Bureau of Education Professions Development.
The theoretical framework which supports the education extension system in Rhode Island is an adaptation of the basic model promulgated by the National Center for Educational Communication (NCEC). The NCEC model and the concepts underlying it resulted from extensive studies of the diffusion process by Rogers (1962), Havelock (1970), and Miles (1964) among others. The evaluation and refinement of the model over the last three years has been guided by the studies of Sieber (1972) and the NIE staff.1

The model developed by NCEC advocated the use of full-time information consultants located in local school districts. The primary purpose of these consultants (or extension agents) was to link the client to the state information center as well as to other state and national problem-solving resources. The agents were stationed in a specific school district rather than in a state department of education.

The Rhode Island model was designed using the linkage concept developed by Havelock. This concept combines the strengths of several other models such as those of Guba (1968), Rogers (1962), Lippitt (1958), and Benne (1961). The RIDE sought to develop a role within its organization which would facilitate the development of the linkage model. A basic thrust of the system was to advocate and establish the "process generalist" as opposed to the subject matter specialist in specific content areas as the predominant role of RIDE consultants. Delivery of information services was seen as only part, albeit an important part, of the RIDE consultant's role. From this perspective, the RIDE consultants can be considered as part-time information consultants or linkers as in the Havelock model.

1Tom Clemens, Charles Haughey, Robert Chesley
Two major variations existed with respect to the NCEC model. First, the part-time information consultants were not housed in local school districts but were based in offices in the State Department of Education. The small size of the state allowed for a central location of the consultants. Specific school district assignments were made, however, so that each consultant had linkage responsibilities for a small number of school systems which could then identify and tap (but not control) their consultant. From a diffusion theory perspective, therefore, the RIDE consultant was external to the potential adopting units which comprised his clientele.

A second variation from the NCEC model was the use of an already existing group of subject matter specialists. This decision to "transform" existing personnel created a different type of linkage agent than was perceived as existing elsewhere. This variation was seen as being of critical importance to the evolution of the role of the part-time information consultants.

The major distinction between the RIDE model and Sieber's recommendations is that, in the RIDE model, information consulting is a part-time function. That is, the RIDE consultants' full time responsibility is to serve their LEAs as process generalists, assisting them in program development. The information consultant portion of their role is viewed as one important aspect in delivering program development assistance. Other differences are more subtle, but nonetheless real. For example, "needs assessment" when viewed in the Sieber context refers to determination of "information needs". In the RIDE model, needs assessment refers to the comprehensive assessment of an LEA's educational program needs.

Implementation of the System

In essence, what the RIDE felt was needed was an organizational structure which, through the linking consultant, provided LEAs with well defined and well
organized developmental assistance. At the same time, however, it wished to maintain the Department's responsibility to the federal government for administering categorical grant programs. The result was a reorganization in late 1972 of the previously mentioned Division of Academic Services (Mellor and Mojkowski, 1973). The new organization divided the Division into two bureaus -- one which had as its basic task the delivery of program development services to LEAs and one which had as its task the administration of federal and state categorical grant programs.

The federal activity, housed in the Bureau of Federal and State Grant Programs, was isolated from its formerly synonymous association with program development. It was viewed in the new paradigm as a pool of resources with certain constraints upon its use. The prime function of the Federal and State Grant Programs Bureau was to administer the granting process and monitor projects for compliance with Federal and State guidelines.

Service to LEAs in program development was consolidated in the Bureau of Program Development and Diffusion. This Bureau was charged with the responsibility for assisting LEAs in all program development activities, whether funded from Federal, State or local resources. The Bureau contained the Education Information Center, the Teacher Center, and program development consultants assigned to specific school districts.

One key to the effective functioning of the Bureau as a dissemination, training, and support system was the Bureau consultant in his role as an extension agent or information consultant. The basis for the consultant/extension agents' functioning was the role statement, "The Bureau of Program Development and Diffusion Consultant as an Educational Extension Agent" (1973). The role statement provided the initial statement of "transformation" from that of a subject matter consultant to that of a process generalist. Thus,
while the consultant maintained his area of content specialization, it was of secondary significance to his basic responsibility of providing services (linkage and resource utilization functions) to LEAs in realizing their objectives in program development.

All consultants are former SEA subject-matter consultants who have undergone extensive in-service training in information consultant skills, utilization of Federal categorical grant resources, and means of assisting LEAs in program development. The training sessions drew heavily on Sieber's reports, the Far West Laboratory's information consultant training package, and Havelock's works.

Evolution of the System

The key term in the evolution of the Rhode Island extension agent system is that of "process generalist". The original role definition stressed the agent's responsibility in helping his client determine his problem and making data available so that he could develop alternative solutions, make decisions, implement programs, and evaluate the results. The agent's training stressed information retrieval skills, linkage to sources of funding, linkage to expert consultants and training programs, and interpersonal communication skills.

As the role of the extension agent evolved during the first six months of 1973, it became obvious that he needed special skills in such areas as needs assessment, program planning, dissemination and change strategies, and research and evaluation techniques. Coupled with this was the need for the consultant to provide the information services within a program development context. As a result of this need, a second reorganization of the Bureau of Program Development and Diffusion was undertaken in the summer of 1973.

The second reorganization changed the name of the Bureau to a more appropriate and broader term of "Bureau of Technical Assistance". However, the
The reorganization was much more expansive than one of nomenclature. The newly organized Bureau had specific responsibility for assisting (as opposed to just linking) LEAs in needs assessment, planning, and evaluation. An Office of Support Services was added to the Bureau to provide training and resource assistance to the consultant/linkers as they worked with LEAs. Consequently, the role of the consultant was broadened from that of information consultant and linker to one that included responsibility for providing assistance in needs assessment, planning, dissemination and change strategies, and research and evaluation techniques.

To some extent, the shifting role of the consultant was a product of the second reorganization of the Department of Education just as it was a partial cause for it. It is difficult to plot the effects of such interaction. To the degree that the reorganization was a product of the lack of resource support to the full implementation of the initial role statement, the changing role was the cause. To the degree that the reorganization motivated the consultant to adjust his or her clientele and the type of services provided, the reorganization was the cause.

Assessment

Management in the RIDE was anxious to plot the development of this new educational role and to measure its effectiveness in helping the Department establish a service and leadership role with respect to local school districts. The assessment strategy focused on two major concerns, the evolution of the role from that of a subject matter specialist to that of a process generalist and the effectiveness of the part-time information consultant role. It was assumed that the results of an evaluation of the consultant's effectiveness in his or her role as an information consultant would be generalizable to the consultant's
role in the broader program development process.

Evolution

Several variables were examined in order to plot the evolution of the role of the part-time information consultant. This evolution has taken place over a period of more than a year and in fact is still taking place. Four variables relating to information services were examined in terms of use of information services. These were: (1) client's position, (2) topic of information request, (3) role redefinition, (4) consultants' perceptions. Each provided a separate perspective on the change.

The first variable, the position of the clients served by the consultant, was analyzed using a random sample of thirty request forms for each period under consideration. On a general level, during an early five month period (February through June, 1973) of the operation of the Information Center, teachers comprised approximately sixty-seven (67) percent of the requesters for information (see Table 1). While part of this high percentage was the result of a full-time information consultant working in three pilot districts (thus having more day-to-day contact with teachers), part-time information consultants also were dealing quite heavily with teachers as opposed to administrators (teachers were operationally defined as those personnel having some direct instructional contact with students; all others, from building principal through local school superintendents, were defined as administrators).

During a recent four month period (September through December, 1973), the number of administrators served by the part-time information consultants rose to fifty-three percent. This increase provides some evidence that the part-time information consultant was changing his target audience. Several alternative hypotheses relating to the shift in clientele will be discussed later.
Table I

NUMBER AND PERCENTAGE OF CLIENTS
BY PERIOD AND POSITION

<table>
<thead>
<tr>
<th></th>
<th>Teachers</th>
<th>Administrators</th>
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<tbody>
<tr>
<td>Period 1</td>
<td>20 (67%)</td>
<td>10 (33%)</td>
</tr>
<tr>
<td>Period 2</td>
<td>14 (47%)</td>
<td>16 (53%)</td>
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The second variable, relating to the first, is that of the information topic requested by the client. As the client served by the consultant changed, so also was there a change in the kind of information requested by the client. In general, topics taken from teachers related primarily to direct programmatic or instructional concerns within a classroom or a small group of classrooms. These topics were very much content as opposed to process oriented. For example, an elementary classroom teacher might be interested in improving the reading instruction in a classroom, while a district level administrator might be interested in in-service training for his teaching staff in the area of new techniques and methodologies in teaching work attack and related reading skills.

Examination of the topics of information requests submitted by consultants shows a substantial shift in this direction. That is, as the position of the client changed, the type of request changed from one primarily concerned with content to one primarily concerned with process of system-wide delivery of support mechanisms for improving competencies in delivering content.

An analysis of information requests was done on random samples chosen from the two periods under consideration (February 1, 1973 - June 30, 1973 and September 1, 1973 - December 31, 1973). Following a sorting of requests by position and period, a content analysis was done on the requests from each.
period. The results indicate that, during the first period, requests were heavily content oriented and rather narrow in their focus (i.e., directed primarily at classroom improvement or individual teachers rather than a wider group of individuals or areas). During the second period there was a noticeable shift in the topics of requests and also in the scope of the requests. Topics frequently requested by the clients dealt with such concepts as needs assessment, educational planning and programming, staff development and evaluation.

A third and very important variable is that which has been discussed above in relation to a second reorganization of the Department of Education, which emphasized technical assistance in process or systems concepts such as needs assessment, planning, staff development, management, etc. This changing context (and, in a larger sense, this evolving definition of the role of a state education agency) was a principal motivation for the consultants' conscious alteration of their roles and, therefore, of their clientele. A close examination of the two role statements, written ten months apart, provides evidence of subtle yet substantial changes in the role of the consultant. In general, information services were forced to serve a larger purpose or context. Information for information's sake evolved into information for program development and educational improvement.

The initial role statement was quite specific in laying the foundation for the linkage role advocated by Havelock and Sieber. The role definition stressed linkage to content as well as process skills, particularly because the Bureau management recognized that process skills expertise was not fully developed in most of the consultants. It did emphasize the need for broad program development skills as a goal for the consultant unit as a group.
The second role statement shows a marked change from the first, not so much in content as in degree of shift from linkage to technical assistance in process skills. The linkage role remained important but more emphasis was placed on the consultant directly assisting local school districts in needs assessment and comprehensive educational planning. Linkage services tapped more specific technical resources such as sampling, statistics, testing and more sophisticated planning techniques.

The fourth variable related to the evolution of the consultant's role was the perceptions each consultant had of his or her own role. Observations were collected through semistructured interviews with the consultants. The interviews were relatively open-ended and revolved around four basic questions. The questions were:

1) Has your role as a consultant changed: a. from February 1973 to the present? and b. from September 1973 to the present?

2) If it has changed, how?

3) If there has been a change in your role as a "process generalist", how has this change been reflected in your relationships with your clients in local school districts?

4) What are your perceptions, feelings, and attitudes about the change from subject matter specialist to "process generalist"?

In response to the first question, six of the seven consultants interviewed perceived changes in their roles as linkers and program development specialists. The degree of change varied from slight to substantial and focused on two variables, the sophistication developed in implementing the role and the changes in the type of services provided to their clients.

All six consultants indicated that there was some growth in terms of
their linkage role and their process generalist skills. This growth resulted from their year's experience with the role as well as training provided by the Bureau. At least two consultants indicated that during the initial stages of the new program development role, local school district personnel were relatively cautious in their utilization of the services provided by the consultant. Relatively "safe" or innocuous requests were made by LEAs in order to test the system. For example, requests for information services or for federal grant availability were made by many LEA personnel.

As time went on, the consultants indicated, LEA personnel were more likely to involve them in issues and concerns more internal to the school system and more likely to have substantial impact on the educational program in the system.

While six of the seven consultants perceived changes in the type of services provided to their clients, they were not in agreement as to what had brought about such changes. Some attributed the change in clients and services to a better understanding of the mission of Bureau of Technical Assistance and to the emphasis the new role statement gave to assisting local school districts in needs assessment, planning and staff development.

Only three consultants saw the change in services to clients as a natural evolution of the role. Their reasoning was that the change is really mandated by the first role statement as well as by the original mission statement of the Bureau. A more real consideration raised by at least four of the consultants was the logistical inability to serve all educational personnel in the school districts. This situation has forced the consultants to focus their services on LEA administrators and encourage a "casacading" process into the classrooms. This variable, in particular, is of critical importance to a state education agency attempting to design linkage or intermediary systems to support its
service and leadership role at a reasonable cost.

The consultants as a group indicated a positive attitude toward their role and what they perceive as its present and future development. Considering the substantial role transformation, most indicated a reduction in anxiety about working out the role. There is some anxiety about future directions in terms of the evolution of the role but it is difficult to separate out that part of it resulting from natural anxiety about the future.

**Effectiveness**

In attempting to measure the effectiveness of the part-time information consultants two instruments were used, an assessment of information services and an impact survey. The assessment of services instrument focused on two major variables: (1) the quality of the information package provided to the client, and (2) the quality of the services provided by the part-time information consultant. Only the latter variable is related to this present study.

The assessment of information services instrument is mailed to every client approximately two to three weeks after delivery of the information package. While it is not the purpose of this paper to examine in detail the results of this assessment instrument, several fundings from it are germane to the question of the effectiveness of the part-time information consultant. The following generalizations are:

1) Ninety-five percent of the respondents indicated that the information request negotiation process with the consultant was successful and that the consultant provided a clear and useful explanation of the contents of the information package prepared for the client.

2) Thirty-four percent of the respondents requested additional information or follow-up assistance and eighty-three percent
of this group indicated that the consultant was helpful in providing follow-up assistance.

3) Eighty-six percent of the respondents found the services of the consultant to be very good or excellent.

The second instrument, the impact survey, attempts to determine and measure the kinds of changes resulting from information services, the scope of such changes and the degree to which clients perceive information services as assisting them in meeting future objectives. Only one administration of the impact survey has been completed as of this presentation. The survey is conducted on a stratified random sample of fifty clients of the consultants. It is conducted three times during the school year at regular intervals.

In measuring the impact of information services on educational change in local school districts, it is difficult to separate out competing hypotheses (i.e., the other factors impinging on LEA change efforts). The following generalizations are taken from an analysis of the results of the impact survey (return rate 60%) and are a result of such factors as the information itself, the quality of the consultant's services, the state of the client system, etc. These generalizations indicate some considerable impact of which a major cause is the consultant's services.

1) Eighty-two percent of the respondents indicated that they saved eight or more hours of research by using the services of the information consultant.

2) Eighty percent of the requests were in the area of curriculum development or program planning.

3) Eighty-three percent of the respondents reported some measurable changes resulted from utilization of the information provided by the consultants. The degree of change was rated as slightly above
moderate (X = 3.6 on a scale of 1-5 with 5 indicating a major change).

4) Eighty-four percent of the respondents indicated that more than one person made use of the information package, with thirty-six percent indicating that more than ten (10) persons used the information provided in their package.

5) Fifty percent of the respondents indicated that the information provided was a major component in the solution of their problem; twenty percent indicated it was the major component. Only ten percent indicated that the information played no part in solving the problem.

6) Nearly one hundred (100) percent of the respondents (29/30) felt that the services of the information consultants would be of assistance to them in the accomplishment of other objectives; over fifty percent indicated that it would be "of substantial assistance".

Conclusions

Clearly the problems of measuring the impact of specific resources or services on educational change militate against arriving at definitive conclusions with respect to the extension system developed within the Rhode Island Department of Education. Herlig's (1973) study of the educational extension agent in Kansas employed a more structured research design than the present study and supports the conclusions arrived at by RIDE management. Herlig concluded that the use of extension agents or linkers produces more utilization of information and a higher adoption rate.
Since Herlig's definition of an extension agent was more narrowly defined than Rhode Island's, it would appear safe to assume that Herlig's results are generalizable to the extension system in Rhode Island where greater emphasis is placed on information for program development and system-wide programs.

Based on the variety of data provided through the study, Rhode Island management concluded that:

1) the role of the consultant as a process generalist charged with assisting LEAs in program development, who uses information services as a core resource, is a viable one for the state education agency in its effort to improve and expand its service and leadership role.

2) the target client audience of this consultant should be LEA top level and middle level management engaged predominantly in broad system-wide issues.

3) the consultant should emphasize the provision of information services within the program development process to insure maximum utilization and impact.

4) with adequate training and support, existing subject matter specialists can be effective process generalists and information consultants.

Discussion

The Rhode Island Educational Extension System has evolved into a coherent design for delivery of services to LEAs. With the consultant/extension agent as the core ingredient, the Bureau of Technical Assistance has the capability of not only delivering information services to LEAs but
also of delivering all of the other ingredients necessary to assist LEAs in comprehensive educational improvement. The Bureau, through the extension agent has the capacity to assist LEAs in (1) needs assessment, (2) planning, (3) information retrieval, (4) selection of appropriate alternatives, (5) retraining of staff, (6) seeking sources of funding, (7) preparing proposals for funding, (8) developing dissemination and change strategies, (9) implementing programs, and (10) evaluating programs.

If SEAs are to utilize the extension agent system as an intermediary system for the development of substantive interfaces with LEAs, they will need to define the role established by Havelock, Sieber and NCEC more broadly and more substantively. While Havelock has advocated an aggressive linking role, the operationalization of that role in the three pilot extension agent/information center projects centered almost exclusively on linking clients to information services. The experience in Rhode Island indicates that it is possible, given training and support, to enhance the role of consultant to one which contains both linkage skills and problem-solving expertise and process skills.

As the sophistication of the SEA's research, planning and evaluation capabilities increases, the service and leadership activities will include, on a much broader scale than at present, concepts such as program planning and budgeting, management information and more sophisticated evaluation systems. In each of these broad process areas, the extension agent can continue to serve as a "process generalist", helping school systems to understand these tools and obtain expert assistance in using them to improve the capacities of local school districts to bring about significant improvements in education.
REFERENCES


