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ABSTRACT

In its first year of operation (1973-1974), the Merrimack Educational Management Development Center emphasized the identification of management needs at the local school system level. The Center's assumptions about educational management served as a basis for the program. Special attention was given to the transfer of industry-based management concepts to education. As proposed, the second year's program for the Center would use a novel mix of proven and accepted process techniques in working on field problems and developing new intervention strategies for conducting and managing the process of education. A highlight would be an effort to influence organizational changes. The Center's quarterly reports and the Havelock model for acting as a change agent are appended. (Author/SK)

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MERRIMACK EDUCATIONAL MANAGEMENT DEVELOPMENT CENTER

EDUCATIONAL MANAGEMENT DEVELOPMENT CENTER

Report of Year one

and

Proposal for Year Two

Submitted to:

THE CHARLES F. KETTERING FOUNDATION

by

THE MERRIMACK EDUCATION CENTER
101 Mill Road
Chelmsford, Massachusetts 01824

FOREWORD

The Merrimack Education Center's Report to I/D/E/A/ Kettering on the EMDC (Educational Management Development Center) project contains two sections. Section I provides information on the first year of MEC's participation, while Section II describes second year planning. The writing of the report follows an outline of questions being asked EMDC projects to ascertain what is being learned.

Efforts to date have provided MEC with background knowledge on similar management studies both within the Kettering EMDC projects and elsewhere. Actual activities at the Merrimack Education Center in year two are proceeding from an organizational level to the testing of various implementation and intervention strategies. The focus of the project will be to address directly the needs, problems and issues of local educational management. Specifically, the project will interface with target groups of Superintendents and Principals while identifying local issues such as evaluation and policy formulation for study.

Another aspect of the project will examine the utilization of various technical assistance modes. Problem-solving consultation, in-service seminars and dissemination are examples of Center linking activities scheduled in the assistance phase of the project. These activities will be directed to the improvement of educational management competencies at the local level.

Evaluation of all Merrimack Education Center EMDC efforts will be an on-going activity of the Center in its second year program endeavors. The evaluation mission will guide the direction of the project through both assessment and analysis of program and project. objectives.

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SECTION I

REPORT OF YEAR ONE

1973 - 1974

Merrimack Education Center
101 Mill Road
Chelmsford, Massachusetts 01824

October, 1974

A. PROBLEM DESCRIPTION

A Look at Some Old Problems - Management Development

Heightened awareness of complexities and uncertainities in management development has emerged from experience in the first year of the MEMDC project. And, these insights are supported by the literature. Although there has been considerable research reported on management education, most of the literature is theoretical and conceptual as contrasted to substantive information relative to practical needs.

Management development has been generally spasmodic, "separated from the school planning process, and initiated only in response to crisis situations."[1] There is a dearth of "programs that are continuous, based on assessed needs of the district, and accepted as an integral part of district-wide educational planning".[2] Nagel[3] has cited a paucity of research evidence that can be applied to real life situations, while Lutz and Ferrante[4] note a lack of interest in "developing and testing training models for generating the data necessary to prepare continuing education packages to help solve educational problems."

According to Farquhar and Piele[5], There is little evidence of "attempts to evaluate the effectiveness of various program contents in preparing school superintendents." A number of additional studies indicate that educational programs have either a negligible or negative effect upon the administrator-student.[6,7] When administrators were rated by superiors or subordinates on the job, it was determined that education preparation was unrelated to perceived effectiveness in number of years spent in college[8,9], number of years in graduate study[10], or the number of hours in graduate education courses. In addition, a negative relationship between total number of courses in educational administration and perceived effectiveness has been reported.[11]

Preparation programs for administrators have been indicted for leaning too heavily on "soft theory, soft data, verbal theory, and difficult to measure concepts."[12] In addition, Farquhar[13] has been able to find "little evidence that any real consideration has been given to experiences that will develop in prospective elementary school principals the knowledge, skills, and insights needed to assess the consequences of alternative strategies."

Management development programs have relied heavily on the acquisitional process whereby knowledge, options, and understandings are absorbed by reading or listening. And yet, as Dill[14] and Odiorne[15] have pointed out, managers learn by living, acting, watching and reflecting on the relationships between what they observe

happening and what they expect to happen. Emerging practices with an emphasis on problem-solving include case studies, computer simulations, didactic games, and other role-playing mechanisms to permit students to wrestle with actual situations in reality-testing environments. Numerous studies provide descriptions of these recent instructional approaches with new tools and techniques.[16]

There is a definite need for practical experiences combined with knowledge that a practitioner may draw upon within the educational environment. However, emphasis on either practical experiences or knowledge, to the exclusion of the other approach, is relatively unsuccessful for providing solutions to the problems of management underdevelopment.

Unique Problems of the Educational Enterprise

School systems are being severely criticized because they do not perform up to expectations when much of the failure can be attributed to impoverished training and development programs,[17] control of which frequently exists outside of their sphere of influence. In a time when the public education system is being attacked for its perceived inadequacies, the nation's schools spend only 3.3% of net current expenditures for central office administration.[18] We know, however, that resources are indeed being expended to operate and, presumably improve the schools in areas such as curriculum or teacher training. In calendar year 1972, American taxpayers spent over $51 billion to support 94,000 public elementary and secondary schools.[19]

Increasing demands for accountability demonstrate the extent to which local educational agencies are influenced by their communities. As an "open" system the school district has highly permeable boundaries and is susceptible to the influences of various clients.[20]

The school district superintendent occupies one of the most difficult positions in government. Although he is not an elected official, he is subject to the pressures of an official elected by the public. Public attitudes control general as well as financial support for education.[21] And yet, as Baldridge indicates, we have too long neglected this area of study and there are major gaps in our understanding of the relationships between organizations and their socio-political environments.

> *...Traditional research on innovation and organizational change has too often focused on the wrong clusters of variables. In particular, its orientation toward the early phases of the innovation cycle, its concentration on small-scale technical innovations, and its individualistic biases have hindered our understanding of major organizational innovation.*[22]

As a goal-diffuse organization, the school system encompasses particular dynamic events that promote fundamental changes. What actually goes on in school systems is a function of many diverse influences. These include traditional lore and craft knowledge, the perceptions practitioners have of the success or failure of trial and error innovation, and the particular needs and circumstances of specific schools and communities.[23] And yet, "in comparison with most complex organizations, schools and school districts have less role differentiation, fewer problem-solving experts, and a smaller number of support services.[24] According to the National Institute of Education's report on building local problem solving:

> *Few school districts are organized in ways that allow them to anticipate and analyze problems, to search for or generate knowledge that might be useful in solving problems, or to make management plans for the utilization of that knowledge...The capacity for systematic problem-identification and solution development and testing is uncommon in local schools...(Additionally,) a lack of capacity for sustaining the process of reform and renewal also characterizes the educational school district.*[25] (*emphasis added*)

There is wide variation from system to system with respect to organizational capacity to engage in systematic renewal, innovation, and reform. In general, resources and support capabilities are lacking for extended efforts in planning and evaluation. In a study conducted by the Massachusetts Advisory Council on Education, Paul Cook[26] cites three causes for the present school predicament: organizational fragmentation, school committee overload, and superintendents' overload. The MACE study indicates that new institutional arrangements are necessary to contribute to the schools' capacity to solve the problems that confront them. In addition, the MACE study proposes the encouragement of more professional peer group exchanges as a good base on which to build.

> *School superintendents are at least as capable as managers in private industry...In most cases, the superintendents' job is more demanding, in part because their authority is less clear and their accountability is to a more diverse and often unpredictable set of forces...(In addition) they lack the kind of staff support one would ordinarily find for middle-managers in any decentralized organizational system...the kind that is equipped to pool information, to focus major resources on common problems, and to provide an arena for serious peer group sharing of ideas and problems.*[27]

Innovation in Educational Management -- Delivery Systems

The problems involved in developing intervention strategies within the context of socio-political systems will always be hard problems. Though we have come a long way in developing our understanding of organizational innovation, we still need to know a great deal more about the processes involved. Schools decide to adopt and implement innovations in light of a host of organizational considerations. And, these factors are not always incorporated in the traditional models of change.

In a goal-diffuse organization, when goals are in some sense indefinable, it may be "inappropriate to adopt the standard rationalist approach of first defining goals then seeking means appropriate to achieve them efficiently".[28] It is necessary to "try out systematic innovations and assess their consequences"[29] much as is described by the "process approach".[30]

In the educational enterprise, knowledge and products flow from pure R&D in management and are switched, recombined, and transformed as they are applied.[31] Practices must be adapted and transformed by users so that use leads to the desired results. This transformation occurs within a situational context and is issue-oriented. Since local personnel do not possess these capabilities for "transformation", they are unable to adopt and implement management development practices to specific local issues.

Studies of knowledge production and utilization in education consistently point to the need for linking mechanisms and organizations to perform these transformation functions.[32] These linking agencies, or centers, provide the necessary support capabilities to assist the administrator who "gets his hands dirty" making daily decisions on the job. Traditionally, school district administrators have had to rely on personal contacts with researchers or with other administrators, upon workshops and professional meetings for their self-renewal. For this reason, educational systems are slow to provide educational inventions. "New Ways" must be found to make a greater impact on the development of management education.

The Merrimack Education Center MEMDC project is an outgrowth of these recognized needs. The MEMDC provides economical ways of offering new services to meet rising expectations for excellence and accountability. Sharing through the MEMDC collaborative assumes a deliberate relationship with an active program for the refinement and delivery of services. But, these processes play another and equally significant role. They provide the MEMDC

staff with a rich source of learning experiences. Our program priorities for next year, reflecting as they do some new thrusts and adjustments to older ones, are important products. The Center's first task for the project year is to stimulate and draw together local initiative in educational management.

B. THE EDUCATIONAL MANAGEMENT CENTER - SOME NEW POSSIBILITIES

Overview of the Project

In support of its mission to further the development of educational systems, the Merrimack Education Center, in 1972, undertook an exploratory study of educational management and leadership. During the first six months of 1973, MEC conducted a literature search of identifiable practices in educational management development. This study synthesized the knowledge base relevant to the broad spectrum of educational management. The literature review confirmed the need to link the developments of research in management practice with the world of the practicing administrator.

Two kinds of linkage are reviewed in Volume One of the study: producer-consumer linkages through Educational Management Development Centers; and, a second form of linking termed "networking". The networking concept provides a mechanism for linking multiple types of resources to assist in keeping EMDC's up to date concerning developments from other agencies working to improve educational management.

Consequently, in the Fall of 1973, the Merrimack Education Center submitted a proposal to the Charles F. Kettering Foundation to become part of a network of EMDC's. The prospectus identified industrial corporations and associations as "large pools" of knowledge and expertise in management development and proposed to link with these and similar agencies to obtain resources and services needed for improved educational management. It was recommended that a form of corporate/school linkage be established as a mechanism whereby successful management practices could be identified for adaptation to the field of education.

In the initial year of the MEMDC project, emphasis was placed upon identifying management needs at the local school system level. The MEMDC at Merrimack set out to adapt the brokerage concept for linking "producers" in the university or the corporate world with local educational agencies. This report describes the utility of this "linking" concept. The sections to follow, entitled What Has Been Done? and What Has Been Learned? attest to the viability of the linkage concept.

Project Participants and Governance Structures

Every effort is made to join the MEMDC with appropriate agencies in conducting developmental activities. Representatives of regional business organizations and of local institutions of higher education are brought together with representatives of the region's local public school systems. The twelve member Executive Board of the Merrimack Education Center, comprised of Superintendents of Schools elected from the region, serves as the policy recommending body for the Center and performs the governance functions of the MEMDC.

The MEMDC collaborative serves a geographical area in Northeastern Massachusetts comprised of twenty contiguous cities and towns; the Town of Chelmsford serves as the local education agency. The region includes urban, suburban and rural areas. Some communities have a city form of government, while others have the traditional New England town government structure. Still others have an intermediate form of representative government. Lawrence is the primary urban area, while districts in the western part of the region are primarily rural. Residents in the suburban towns include a large number of people who either commute to Boston or who are employed in the electronics industries which dot Route 128 and the newer Interstate Route 495 which encircle Boston. With these new industries springing up, and with open land available, the Merrimack Valley is a fast-growing region even as the population of Massachusetts as a whole is declining.

The population of the region is 99% white overall, and even Lawrence, with the largest concentration of blacks and Puerto Ricans, is over 90% white. Lawrence also has the largest French-Canadian population, and in some schools in that city bi-lingual education is a salient issue.

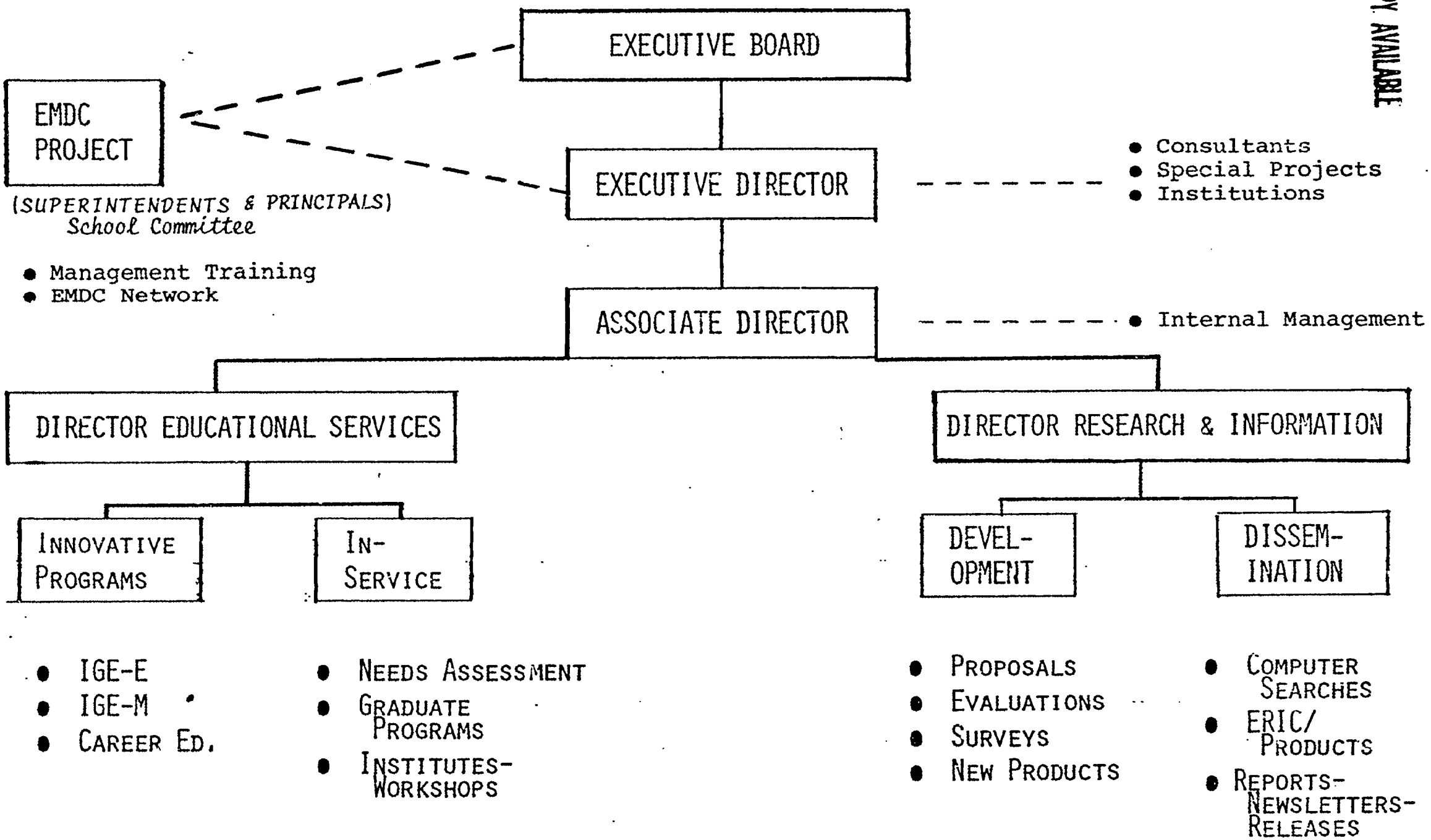
Overall the region is about 40% Catholic, with the percentage being somewhat higher in Lawrence. Parochial schools are rare outside of Lawrence, and in Lawrence they are closing at the rate of about one per year. The vast majority of students in the region attend the public schools serviced by the Center. Each of the school districts, including the several regional vocational and technical high schools, is within twenty to twenty-five minutes (driving time) of the Merrimack Education Center.

In general, the communities in the region are not wealthy, and tax support for the school system is often regarded as a burden. Although in Massachusetts the local school board is, by law, autonomous in establishing the school budget, some budgets were nevertheless cut substantially in town meetings this year. Difficulties have

FIGURE 1

MEC ORGANIZATION CHART

1974-75



arisen in five out of the 20 communities. Values held by citizens may be regarded as following in the New England tradition; localism is very strong, and there is some hesitancy in sharing. These values, which have been reflected in the school systems are beginning to change, however. A poetic description of the quality has been aptly phrased by Robert Frost, "Good fences make good neighbors" indicating the significance of the values of autonomy and sharing at the same time.

The Merrimack Education Center services 85,000 students and over 7,500 professional educators in an area of Massachusetts with well over 500,000 people. There are 150 elementary buildings in the district, 20 junior or middle school buildings, and 20 high schools 16 of which are comprehensive and four of which are vocational/technical schools.

As noted above, the Executive Board of the Merrimack Education Center performs the governance functions of the MEMDC. The organizational chart (Figure 1) illustrates the Merrimack Education Center's total operating structure. As a first step in institutionalizing management development, the MEMDC has been integrated into the MEC and is central to all other programs and activities. It operates in coordination with the Division of Educational Services and the Research and Information Services to provide a total system for delivery of services to local educational agencies.

MEC has prepared under separate cover an operational plan covering all program areas of the Center. This plan is the major internal management document developed in advance of 1974-75 operating year. Program plans are detailed and efforts are made to integrate all program objectives in order to optimize results in the organization.

C. *WHAT HAS BEEN DONE?*

We have noted a need for data on management education and the operating education system it serves. There is a need to improve the management skills of educational administrators as a major step towards improving the schools. However, management development techniques, by themselves, cannot ameliorate local school district problems. The mission of the MEMDC, therefore, is to help school systems build an organizational capability for problem-solving behavior. MEMDC provides linking mechanisms and institutions to connect the world of R&D in management practices and processes with the operating systems.

Implicit in the concept of the MEMDC is the notion that there needs to be a means of linking theory and practice to actual situations. Some institutions do in fact operate schools, while others, such as the EMDC's, serve as external resource or support systems. It is at the interface or the juncture of the two that project activities are aimed. Several project assumptions, inherent in the first year program development, reflect this perspective.

Project Assumptions - First Year

- Management problems facing educational organizations and those facing business/industrial enterprises are analogous; therefore, training practices may be transferred from one discipline to another.

- The literature on educational management indicates references to a larger theoretical base which is increasingly multidisciplinary.

- Management development programs in business and industry emphasize problem-solving (as opposed to theoretical development) to a greater degree than those of educational administration programs.

- Various forms of interface (e.g., of practitioners/researchers; of public and private; of education and industry) enhance the development of organizations.

- The peer evaluation process is capable of producing great change with a low degree of pressure.

- The technological revolution, further advanced in some corporate models, has yielded new administrative and instructional methodologies as well as provided multimodal, multi-media delivery systems that can be effectively utilized for training educational managers.

Research and Evaluation Design

The reader will not find here partial correlations, F tests, or block designs. For this first year we have unashamedly held to the view that "Research and Evaluation Design" is entirely too pretentious a descriptor for the work at hand. Rather, attention as well as some hard work have been applied to observation and frequent critical reviews. Operating in this mode, the evaluative process is virtually continuous and very much a part of the ongoing operation. There is a consequent loss of objectivity and a deemphasis on statistical results that would be unforgiveable in a summative evaluation. The advantages seem to us considerable and very much in keeping with the formative stage in which the Merrimack Educational Management Development Center (MEMDC) found itself in its first full year. It will be noted in a later section that evaluation has begun to evolve toward the structure, formalism and enforced objectivity that characterize the textbook notion of an evaluation design. Meanwhile, the pervasive evaluation activity has focused on some very basic questions: the expectations set forth as objectives and the hopes implied in the launching of the Center. Thus, the evaluation process asks: Have the expectations been realized or not, and have the hopes been found to be more or less promising?

Expectations: What the Center was expected to achieve during its first year was stated as a pair of objectives in the 1973 proposal. These objectives were:

- "To develop and test a Management Needs Assessment Process (MAP) for identifying needs and targeting management development programs."

- "To identify and broker selected programs from industrial corporations and adapt these programs to management development needs in the field of education."

Verification of the accomplishment of these objectives is simply a matter of describing events and activities related to each. The following section summarizes the approach taken and insights gained. (Appendix A contains activity logs which describe events and activities. It is worthy to note that in some instances where successful practices from industry were sought a management development process was uncovered that provides new insights to the management study. Such was the case when examining the New England Telephone Learning Center program. Appendix B contains the "Management Development Continuum" developed by the New England Telephone Learning Center.)

Hopes: We have recognized with increasing clarity during the year that an important set of hopes is implicit in the Center's existence. Among these hopes are the following that have commanded our attention as part of the evaluative process.

- Verification of key assumptions.

  Our proposal listed four assumptions that underlie the project. Taken together, they hold that potential and realizable benefits for educational management may be achieved by the transfer and/or adaptation of industrial practices such as a multi-disciplinary problem-solving approach and multimedia delivery systems.

- New perspectives

  Prudence prevented a promise that the new institution would deliver either insights or new points of view. Nevertheless, all associated with the enterprise did, in fact, attend to this goal.

- The collaborative climate is facilitative.

  Certainly, the past performance of MEC suggests that its mechanism for sharing scarce resources among participating LEA's might contribute positively to improvements in the quality of educational management. Again, the form and timing were not all that clear; no measurable objectives were offered. Nevertheless, there was an implied promise that we would find instances of the collaborative environment facilitating the transfer of management insights to education.

Assessing progress toward hopes does not lead one to rigorous designs. The feasible best approach is to observe MEMDC closely in search of events that raise or lower one's expectation that the hopes will be realized -- sooner or later. While such observations may be more subjective than a highly significant set of correlation coefficients, they can, if recorded now, begin to sketch out a pattern or trend. We have therefore summarized our observations on what has happened to the hopes implicit in the program as a whole. The following section contains these observations along with the descriptions of what has been done. They lead to new assumptions and some modified views of the problem.

D. WHAT HAS BEEN LEARNED?

In this section we relate some generalizations about the expectations and the hopes that were paramount in the first year of work. These are followed by what appear to us to be the major implications, at least those that have stimulated our thinking and have led us to some new views of the problem.

Expectations: The record of events amply shows that both objectives have been accomplished. The Management Needs Assessment Process (MAP) was completed and tested. Its acceptance is clear as is the emphasis it places on the use of peers as assessors. With minor adjustments the MAP is ready for use within MEC and elsewhere. Perhaps its greatest value thus far has been its ability to produce a better understanding within MEMDC of the problems faced by educational managers and their approach to them. We observe that for the manager to employ new practices related to his major problems -- even when such practices are on-the-shelf -- he must examine the problem in association with policies. It is evident that our managers readily see the links between management practices from another turf as requiring a careful appraisal of how past and future application of management techniques relate to policy. Will policies need to change and will their impact after this change be worth while? We conclude that it will be desirable to respond directly to what is a global perception of management

issues in the school environment. Our teaching and problem-solving models must explicitly relate to policy issues. It may, in fact, prove beneficial in stimulating managers to test new techniques to enter the problem through the policy door.

It is, of course, one thing to "discover" that policy issues are important to our managers and another to respond effectively. As of this writing we recognize opportunities in MAP and problem-solving activities to explore the connection between policy and practice. In addition we shall be able to introduce policy considerations in planning seminars designed to evolve a middle management course. But, these responses seem less than adequate. It may prove fruitful eventually to focus considerable attention on policy issues directly. Such things as a shared policy file and procedures for revealing the operational implications of alternative policies now appear to be worth considering. In addition to our continuing search for ways to relate to policy issues, discussions with those in the other Centers will probably be useful. We urge, therefore, that consideration be given to an exploratory review of policy production and evaluation at an early meeting of the Center directors.

The MAP, the Fitchburg Training Program and the course in Management by Objectives have all reinforced the not surprising conclusion that the Operational Manager is problem-oriented. If we are to communicate with him we must help him cope with what is hurting him personally. Theory must be related to practice very swiftly. Role playing exercises and problem-solving tasks have been found to be very useful if they clearly represent situations that have been a source of concern to those exploring new management tools. This has led us to focus strongly on problem-solving activities for next year. These activities along with the continuing input from MAP will produce an enhanced flow of problems that have meaning to our clientele -- and no doubt to others. A planning seminar will then bring together this experience and relate it to an instructional program focusing on problem-solving and use some of the various instructional materials we introduced during this last year, such as the MBO exercises. (See Appendix C).

Special note of our experience in selecting and adapting programs from industrial corporations is appropriate. While we did find and use games, exercises and AV materials and thus meet the objective, we have gained a somewhat better appreciation for what must be done. We find, for example, that there are great quantities of films, video tapes, audio tapes, etc., that have been or are being used in industry. Many of these items are applicable and usable in seminars and courses. We appreciate, however, that the problem orientation discussed above makes it necessary, in fact imperative, that these industrial materials be related specifically to the educational environment. An excellent

set of video tapes about supervision will have been devised for a wide audience in order to justify the investment costs covering its development. An educational manager will not easily or without guidance transfer the messages contained in that program to the educational environment generally or his/hers particularly. Although this is not surprising in view of what we have known about the need to "teach for transfer" our work during the past year has caused us to attend to it very seriously. Our planning seminar will attempt to cope with the now very clear need to relate excellent materials to the problem context of our managers. As an aid to devising useful approaches we are examining television training courses for business, government and industry offered by the Maryland Center for Public Broadcasting and other organizations. Packages of materials help students relate the video content to their work situations. In addition, guides for coordinators provide suggestions for group leaders who in small group discussion sessions relate program content to the job situations. The analogy to our situation is obvious: we may find it useful to build our own guides for students and coordinators that relate industrial-oriented management education materials to the educational environment. As this possibility begins to look more promising we look forward to our planning seminar where we shall be exploring these possibilities more fully.

Hopes: By now the reader will have noted that in the course of working toward the stated objectives there have been opportunities to examine reactions, events and outcomes having a bearing on several of the implicit objectives. Below we touch briefly on these and others less directly related to program expectations.

- Key assumptions.

After a year of direct involvement in various attempts to transfer industry-based management concepts to education we readily conclude that this promises to be a worthwhile undertaking. The conviction that this assumption is reasonable and seminal has grown. We have seen educational managers discover and use new approaches (Management by Objectives, for example) even as they make useful adaptations and search for new tools. But these initial assumptions are more firmly held because we have learned about the conditions under which the assumptions hold. We can confidently continue to search for and adapt industrial materials as long as we can relate them to problem situations. Our program for next year builds on this set of insights and heightens our expectations about what we and others shall be able to accomplish in the long run.

- New perspectives.

Our perspectives have been wrenched far beyond those changes associated with the assumptions discussed above. It is an important evaluative finding -- perhaps the most important one -- that MEMDC has begun to view educational management in an even broader context than that of management systems generally. There is an increasing awareness (the relevance of policy was a start) that the educational manager operates in a socio-political environment that constrains and conditions his behavior. We are becoming aware in a detailed sense of how the competitive firm differs from public education institutions. We are led to pay particular attention to the effect of certain differences on the readiness of educational managers to adopt or even try innovation. Is, for example, a competitive firm more likely to adopt cost-reducing innovations, and more likely to make changes that cause major modifications in authority roles? It seems plausible that both educational and commercial institutions oppose encroachments on protected markets but tend to respond in different ways. Clearly an understanding of how the competitive and educational environment are similar and different is crucial. Pursuing this understanding is a necessary venture but one we can accept with confidence, having strengthened our convictions about the desirability of relating industrial management practices to education. Our preliminary thinking about how to do this has led to two observations.

1. The task of understanding the educational manager can once more be demonstrated to call for a multi-disciplinary approach (and thereby add support to one of our key assumptions.) This derives from the fact that we must now call on the political scientist and the sociologist to help us understand the context in which the educational manager operates. In addition, we shall need the cross-discipline insights of the industrial management specialist to find and delineate contrasts. Our problems are more interdisciplinary than we at first judged them to be.

2. The scope of the situation we have chosen to address appears to be growing. Instead of confining both investigation, facilitation and instruction to management systems we are finding it necessary to think in terms of social systems in which educational management is imbedded. We have only begun to appreciate what this will mean. The new literature on the social responsibility of industry appears to be helpful and relevant. Some aspects of systems theory that treat "open systems" may also be useful. The next result will be to stretch our minds even further -- still more evidence that the hoped-for new perspectives are emerging.

- The collaborative climate.

By now MEC has grown accustomed to finding new sets of benefits flowing from its collaborative activities. It was not surprising that results of MAP were readily shared and disseminated. Workshops, seminars and instructional programs are easily created and strongly supported. Now with the experience of a year behind us we can recognize further possibilities. Problem oriented activities, focusing on a specific situation and located on their own turf, satisfy participants' needs. Yet, the collaborative network allows the sharing of experiences. We will also be able to test whether the collaborative use of consulting help for this problem-oriented enterprise will be useful. We expect that it will further extend MEC examples of useful collaboration through exchanges.

- Delivery systems.

It is evident that, while we shift our emphasis to a problem orientation and enlarge our perspectives to include social systems, there remain the more routine requirements for providing new and potential managers with an orientation that will facilitate their growth and effectiveness. Having established the existence of useful and available instructional materials in the industrial environment, we need to make some of them available to middle managers and those being oriented from a management point of view. We recognize that only by providing efficient ways to meet these needs will we have adequate resources in time to address the questions to which our strategy brings us. An important technical commitment, therefore, will be to seek out, design and test elements of a delivery system for providing the first and early instruction for new managers. In working toward this, we shall make use of the planned seminar and the results of the past year's work which identified new materials and delivery methods.

Summary

In the First Year Report (Section I) we have emphasized the various research and evaluative aspects of what has been learned. It has not been our intent to outline in this section the listing of the many activities that were underway. In Appendix A these reports of actual activities are presented.

In the Second Year we propose to use a novel mix of proven and accepted process techniques (such as case studies, consultations, formal course work) in working on real field problems in educational management. New intervention strategies are proposed utilizing the development of technology and methodologies for conducting and managing the process of education. The proposal for the second year of this study is not merely to examine and describe change processes but to seek to develop the interventions necessary to influence organizational changes. And, the control for this organizational intervention will reside within the grasp of the school system managers themselves.

MERRIMACK EDUCATIONAL MANAGEMENT DEVELOPMENT CENTER

SECTION II

PROPOSAL FOR YEAR TWO

Merrimack Education Center
101 Mill Road
Chelmsford, Massachusetts 01824

October, 1974

A. PROPOSED CHANGES IN STRATEGY AND TACTICS

The observations previously presented, growing out of our continuing evaluation activities, imply changes in our approach. We note and describe two such changes briefly.

- Problem orientation by means of selected problem-oriented tasks. The emphasis of our effort will shift to specific problems.

  Rather than attending first to additional issues common to the region, we shall begin this activity by focusing on specific situations. We believe that this strategy will enable us to look more sharply at the social system dominating the management issues and at the same time the solution of these problems. This mode of operation will allow us to provide the specialized technical support to those undertaking the solution of these problems and thus respond to our growing awareness that educational management demands insights from many sources. We believe, moreover, that the strategy will permit us to evolve specific techniques for transforming management approaches to new situations. Implicit in this approach is our current view that innovations will come only after we have built a body of experience derived from specific problem-oriented situations.

- Social system emphasis.

  At first, as part of our internal planning and thinking, but later in our service programs, we plan to extend our conceptual framework beyond management systems to encompass social systems. For the present, this represents the beginning rather than the end of a new strategy. During the year, we expect to develop more clearly its implications and begin to interpret them into actions. Certainly they will require that we at some time expand the skills that we as a collaborative assemble and make available for our region.

B. WHAT WILL BE ACCOMPLISHED IN THE NEXT YEAR OF THE PROJECT?

Major Assumptions of the MEMDC Strategies

The MEMDC is directed toward building increased potential and capacity to improve educational management. The MEMDC staff engages local educational agencies in a systematic search for better management structures and processes in an effort to improve practices in local school systems.

The proposal for Year Two of the MEMDC will initiate an examination of delivery strategies and dissemination strategies. As an application project, strategies are utilized to determine how the educational system interacts with the schools' unique market structures. Intervention strategies are designed to gain a better appreciation and understanding of the dynamics of the system and the specific problems which effect its ability to be accountable.

We still need to know more about the incentives and motivations affecting internal school system operations...the incentives for being responsive to problems faced by schools. What kinds of reward structures are necessary to support problem-solving as leadership behavior?

Several major themes seem to be emerging as the MEMDC concentrates on change processes and innovation. The following assumptions are inherent in the approach:

- To perform effectively the MEMDC must improve linking capabilities.
- Change problems that confront school officials are basically at the macro-system level and require systemic approaches.
- Policy issues determine how a school system makes its decisions in coping with the pressures from the external environment.
- The MEMDC should be problem-oriented and multi-purpose rather then methodology-oriented and disciplinary.
- Training of educational managers cannot be independent of policy considerations when on-the-job problems must be resolved.
- Management training must link individual and institutional levels of goals and expectations.
- Improving management in education requires new intervention strategies directed at the organizational level.

From this philosophical base, and the assumptions delineated, we propose the accompanying objectives and management plan.

Project Objectives

Specifically the objectives of this study are as follows:

1. To identify necessary competencies of educational managers and potential managers related to successful management performance in the educational environment.

2. To implement five problem-solving studies in high priority areas.

3. To offer a management training program for thirty practicing administrators

4. To evaluate project activities and submit an end of year report.

Management Plan - (How is the Work to be Done?)

The accomplishment of the goals and objectives of this proposal will be based upon the following management plan:

Objective 1: Identify Necessary Competencies of Educational Managers

The intent of this objective is to identify and validate statements of competence as they relate to training and experiences of educational managers. These competency statements would then be used as criteria for planning inservice educational programs. Most listings of skills available in the literature are too general to constitute behaviorally specific outcomes but they may point us in the direction of planning and design.

Through administration of an assessment instrument to a sample of MEC superintendents and principals, needs assessment data will be obtained to be used with expert judgments in relation to competency statements. A relatively small group of experienced administrators can provide information about job demands that is sufficiently done in a relatively brief time span. Likewise, a reasonable collection of practitioners and scholars, who know the knowledge and practice domains, will review the data producing a tentative list of needs that will be valid for the planning process. This procedure will produce a scope and sequence of competencies that ought to be acquired in an inservice or preservice training program.

Objective 2: Select and Conduct Five Management Studies

In five selected school districts (urban, suburban, and rural), the MEMDC will test systematically the extent to which problem-solving capabilities can be improved in local schools. The purpose of these studies is to examine those elements that contribute to the development and maintenance of problem-solving behavior in schools via guided problem-solving activities. (See Figure 2)

The problem-solving studies will tap available expertise already existing in school systems. These sources and resources will be identified, given support and utilized in the problem-solving efforts. The superintendent commits people to seriously

FIGURE 2

PROBLEM-SOLVING STUDIES

Events	Community A (Urban)	Community B (Rural)	Community C (Suburban)	Community D (Suburban)	Community E (Urban)
Request Proposals					
Select Projects					
Interview Projects					
Contact Consultants					
Select Consultants					
Site Visitations					
Assess Needs					
Determine Priorities					
Develop Action Plan					
Schedule Meetings					
Design Information Collection Form					
Provide Resources					
Select Appropriate Resources					
Develop Implementation Plan					
Facilitate Adoption					
Insure Continuance					
Evaluate Plans					

Administration Evaluation

Teacher Evaluation

Policy Formulation

Program Evaluation

Administrative Organization

consider problem resolution. He will be asked to nominate persons to work with him in a problem-solving team. In addition, consultants will be made available by MEMDC. Through contact with consultants, school system practitioners will develop capacity to be more analytic in their behavior, more sophisticated in their choice of resources, and better able to assess critically the effectiveness of what they are doing.

At the initial phase of the study, each practicing superintendent is interviewed in depth in order to permit him to expand upon his local problem topic. A key element in this process is the active role of the school system manager in identifying and helping to fill his own needs at the local level. The terms of the problem-solving contract will spell out the products expected from the study and this will serve as performance evaluation. From the performance review, "needs assessment" data relative to management practices can be culled out for transition freely from class to practice and vice versa. This is an important aspect of the development of the project and leads directly into Objective three.

Project staff will obtain insights from Objective two to determine the training needs of professional personnel. The mechanism for offering a management model for practicing administrators will be through the monthly seminars held for all twenty superintendents. Although the initial base for attacking real-life problems is the problem-solving study, the seminars will relate the practical issues to a more "formal" or theoretical structure of management. The benefit of this approach is that we will see an emerging framework of practical experience and successful practices coupled with sound administrative theory.

Project staff will evaluate new incentive systems. The problem-solving study is viewed as an incentive to complete a thorough analysis to serve the needs of a local educational system, rather than focusing on the more generic problems of a region. The involvement of top-executive leadership in the process is viewed as a great incentive for other local personnel to get involved which may overcome the lack of fully developed incentive plans.

As action research, the study is designed and conducted in relation to organizational aspects within the context of a dynamic school system. Assisted by the input from consultants, practitioners apply theoretical concepts in the field. The emphasis is on application while seminars are concerned with implications for formal course work in the area of leadership and management development as derived from the field research. A goal for the manager is to take administrative theory, successful practices,

and personal experiences and perform "synthesis" or transformation to his own development. (Refer to Problem-Solving Study Outline in Appendix D).

Objective 3: Offer A Management Training Program For Thirty Practicing Administrators

Findings from objectives one and two above will be used to draw implications for design and development of delivery strategies to improve management training. Since management tools and concepts lie outside the expertise of administrators, the MEMDC will plan to offer a management orientation program. Trainees will have experiences in assessment techniques and self-improvement programs in management development. These analytical experiences are extended over time in the working experience of the administrator to allow for integration into everyday life.

As the project assumptions imply, the proposed intervention strategies will include the following:

- Individualizing and customizing management development to client systems.
- Examination of advanced degree program options for practicing administrators.
- Establishment of a capability to try out new management tools for possible improvements in delivery systems.

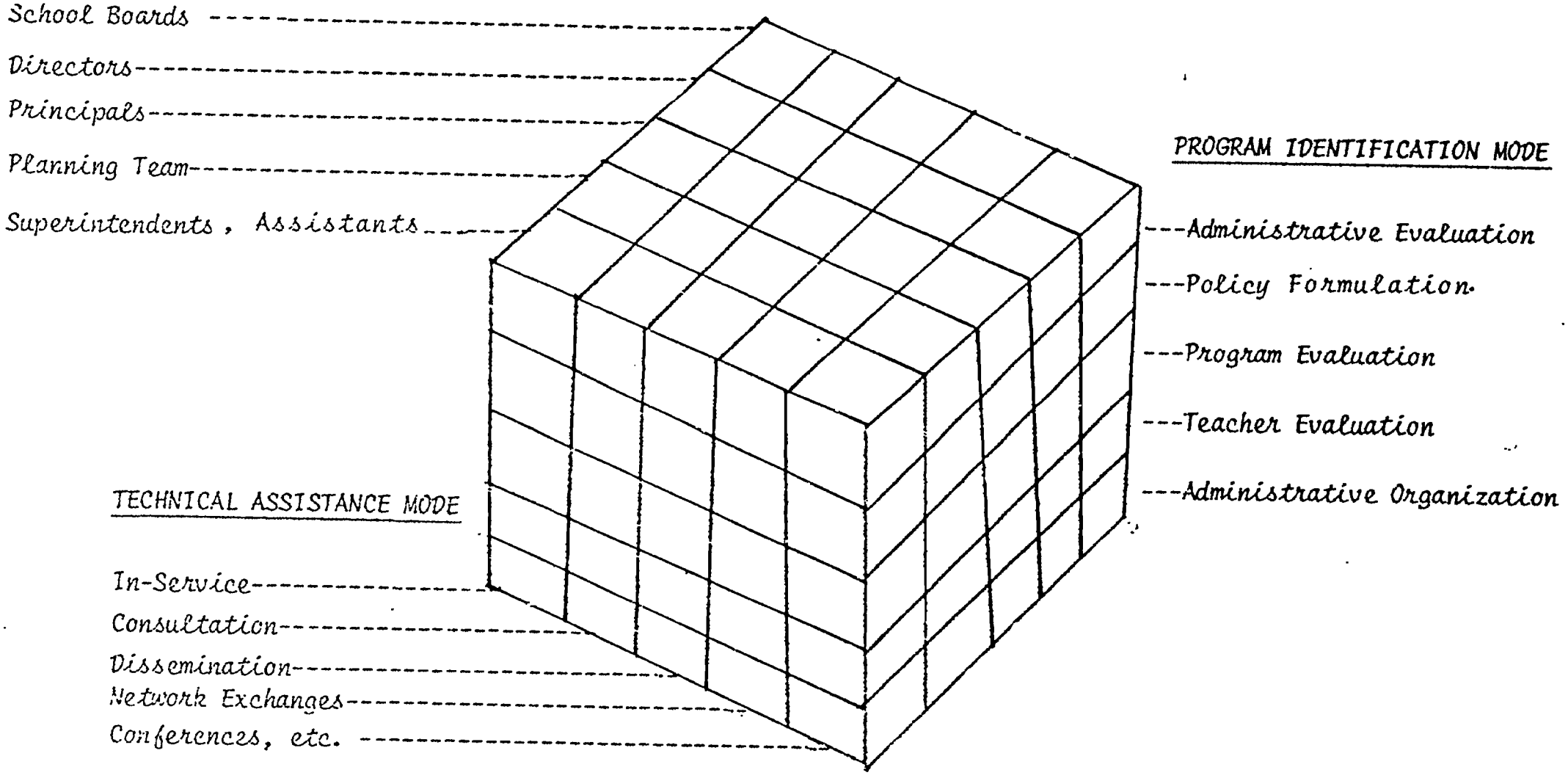
In conjunction with this objective MEC will research and document the availability of products and delivery systems in the specific area of school system management. The MEMDC will build an inventory and prepare a directory of management development efforts that are completed, current, or projected. The criteria for selection of products/practices to be tested in local school systems will be obtained from the needs assessment diagnostic studies.

Project staff will plan and introduce these materials by examining dissemination strategies in pilot communities yielding data that will facilitate adaptation of needs/resources matching. Validated practices are transformed for client needs and incorporated into advanced degree programs. Local "trainers" will offer the training packages in their own or neighboring districts. Technical assistance for implementing innovations (See Figure 3) is provided by consultants who work with both researchers and practicing school administrators. Evaluative data on the needed skills and training experiences is generated.

FIGURE 3

MEMDC

TECHNICAL ASSISTANCE MATRIX



The MEMDC assists the trainers also with the "transformation", modification and adaptation of materials and processes for local expectations to be met. Considerable input and local involvement of trainers is necessary to offer the programs, evaluate the results, and provide adaptation of the selected training packages. The MEMDC reviews the linkages with management levels in school systems and examines for improved delivery systems.

Resources available from universities as well as corporations will be utilized. This type of multi-site, multi-form linkage is expected to enhance the project's effectiveness. The role of consultants will be studied to provide new linkages between school systems and resources.

Products and practices to be incorporated into advanced-degree management training programs would reflect concern with the following sub-systems:

1. Quality and quantity of information on management development practices.

2. Credentials and certification processes.

3. Responsiveness to user needs.

4. Accessibility of large numbers of products/practices in the information network.

5. Invention of new social delivery systems in the area of educational management.

Objective 4: Preparation of End of Year Report

The end of the year evaluation report will describe how the MEMDC adapts management development practices and modifies training delivery systems according to the needs identified in local systems. Questions to be addressed include: Is there a need for this sort of training? What kind of management innovations are available to local schools? Are new methods of training feasible?

Two activity reports will be prepared during the project year that will log activities regarding characteristics of the training plan. Descriptions of the management and monitoring of the project will be provided and activities analyzed by the evaluator. Evaluation activities will be performed primarily by the project's central staff with technical consultation from an outside consultant on the adjustments in Design and Research and Evaluation cited below.

Adjustments in Designs for Research and Evaluation

During the next year, the continuous and interactive form of evaluation will be sustained. An independent evaluator will participate, observe, and review all management activities. A highly conscious aim will be to use this evaluative feedback as quickly as possible to facilitate responsive action. As a consequence, the evaluation report at the end of the second year will contain descriptive commitments such as those developed elsewhere in this report. We will, however, begin early in this next year to introduce structure into the evaluative process. Our aim is to evolve into a considerably more formal and traditional type of evaluation. In particular, our plans include two new items that will be part of the more structured evaluative plan.

- Baseline Data

  It is the nature of MEC that the results of its programs become widely disseminated and without delay. We suspect that some of the impact of last year's work on management practices is in evidence in many places, but we cannot document that fact, because we have no reference point against which to compare current practices. To change this situation, and lay the cornerstone for a broad evaluation plan, we shall design a survey of management practices. The survey will accumulate the analysis data, reveal those practices currently in use, and those of which managers and teachers are aware. Special attention will be given to data which will allow us to draw inferences about the perceptions of managers, their attitudes, their expectations and their constraints. We see these survey data as providing a reference point that will help us reevaluate next year and the following years; this is related to our work. We expect also that the results of this survey will be useful in comparing our region with others as well as for information exchange with other EMDC's.

- Case Studies.

  Since what we are attempting to do does not yet lend itself to measurement (hence our plans to develop reference data), we shall seek first to document and describe it. We shall do so by converting one or more of our problem-oriented tasks into a case study. When such cases are available they can serve several purposes. Their use in instruction is obvious. We plan to use them as well as a set of stimuli to which managers respond in seminars or through questionnaires. Responses to a standardized situation will reveal attitudes, problem-solving approaches, and capabilities for relating knowledge to problems. Thus our case studies will become an evaluative instrument, but one that we feel has the promise of being far less sterile than the usual survey techniques.

MANAGEMENT
1974-75
TIME LINE

PROGRAM ACTIVITIES	J A S O N D J F M A M J	OUTCOMES
A. Identify a Set of Competencies	→	Needs assessment Process
1. Search existing instruments		Diagnostic Reports
2. Select review panel		
3. Revise/modify instrument		
4. Administer Disgnostic Instrument		
5. Analyze data/determine needs		
6. Prepare report		
B. Select and Implement 5 Management Studies	→	5 consultant Planning Studies
		Monthly superintendent seminars
1. Invite proposals from systems		
2. Select 5 problem areas		
3. Schedule studies/seminars		
4. Prepare implementation plans		
5. Conduct studies		
6. Prepare reports		

MANAGEMENT
TIME LINE

PROGRAM ACTIVITIES	J A S O N D J F M A M J	OUTCOMES
C. Offer Management Training Program for Managers and Potential Manager	→	Resource manual
1. Identify resources and tools		Planning seminar
2. Search national and local practices		Training program design
3. Select items for inclusion		
4. Develop resource manual		
5. Conduct monthly seminars		
6. Develop case study format		
D. Evaluation	Nov. 1974 - Oct. 1974	
1. Establish baseline data		
2. Evaluate problem reports		Interim Evaluation Guidelines
3. Develop new insights		
4. Write evaluation report		Evaluation Report
5. Write third year proposal		

MERRIMACK EDUCATION CENTER

CAPABILITIES STATEMENT

The Merrimack Education Center (MEC) began in 1968 as an organization for the purpose of initiating change in twenty school districts of the Merrimack Valley in Northeastern Massachusetts. Originally funded under Title III, ESEA, MEC has since moved into a position of being supported equally by the school districts which it serves and by state and federal monies.

Over its five year history MEC has served in the capacity of investigating the collaborative concept in education as it relates to pooling resources and shared service centers. Utilizing an all too-limited set of resources for education remains a challenge in the process of change.

The MEC approach comes from the grass roots of education and joins school systems in a voluntary sharing relationship. MEC is governed by a board of Superintendents who meet regularly to ascertain regional needs and to seek out resources that might assist communities in offering new programs.

Historically, the MEC communities have demonstrated a continuing commitment to the financial support of successful programs through local contributions. This capability to sustain programs that are proven is a measure of success for the joint collaborative efforts.

MEC plays the role of educational "broker" linking the school districts with external resources at the local, state and national levels. Services and products from the Center stem largely from four major program areas: staff development, Individually Guided Education, information systems, and educational management development.

Client needs are formally assessed on an annual basis; the Center responds to these articulated needs by providing inservice courses to teachers and administrators and by making information packages available in high need areas; 2500 teachers have participated in MEC initiated inservice education programs (accredited by Fitchburg State College and its Graduate Division). MEC offers a source of information through the ERIC subscription service and acts as a consultant to educators trying to put theory into practice through its Project Linker (NIE funded, 1971-1973).

Through the League of IGE Schools (Project LEAGUE, Title III ESEA) the area of individualization is a focal point for innovative reorganization. Individualization emerged as a need early in the life of the Center and this interest resulted in the formation of the League in 1970. Presently, the Center serves 35 schools in Massachusetts who are implementing Individually Guided Education. IGE is a system of education designed to accomodate individual differences among students through alternative instructional and organizational arrangements. The IGE system came into being as a result of research

done at the Wisconsin Research and Development Center for Cognitive Learning and I/D/E/A -- the Institute for the Development of Educational Activities, Inc. established by the Charles F. Kettering Foundation in 1965.

Recently the need for the development of skills in leadership and change management for administrative personnel has been identified. The area of management and school organization is seen as a long-range area of high priority for the school systems in the MEC region and is being responded to by the Center in several ways. Strong ties with local colleges and universities have been effected enabling the Center to sponsor inservice programs for principals and other "middle management" levels. The Center has been designated by the C.F. Kettering/IDEA Foundation as the Northeast Educational Management Development Center and is initiating activities as a means of strengthening educational management among the client communities served.

Staff

The full-time staff of MEC is skeletal by design. The Executive Director, Dr. Richard J. Lavin, is assisted by his Associate Director, Dr. Leslie C. Bernal. Ms. Jean E. Sanders directs the research and information services; Mr. William A. Hassey acts as coordinator of Educational Services.

A wide range of regular consultants devote energies to specific projects and programs. These include Dr. Donald Meals, Arthur D. Little Inc.; Dr. Ronald Havelock, (CRUSK) University of Michigan. A staff of college professors provides the resources for inservice programs along with adjunctive faculty. A field agent assigned by the MEC works with principals and teachers while a second field agent establishes parent advisory committees in IGE schools.

ACKNOWLEDGEMENT

In much of the work alluded to in this paper MEC staff members have been assisted directly and indirectly by a number of persons. The writers of this report; Dr. Richard J. Lavin and Ms. Jean E. Sanders, owe much to their colleagues at the Center for their comments and help in the development of this report.

Special thanks are due to the MEC Executive Board for its project support; and in particular Superintendents Smith, Seifert, and Rivard for their participation in the activities of the project.

Valuable evaluative assistance was provided the project on a regular basis through the efforts of Dr. Donald Meals. We are grateful to Dr. Ronald Jackson who provided editorial assistance in the reading of the report.

Sincere appreciation is expressed to Dr. Charles Willis and staff members of the Charles F. Kettering Foundation together with the Directors of the EMDC's (New Orleans, Dade and Carnegie).

The contributions of all were significant. The responsibility for the work presented in these two reports rests solely with the Directors and Writers of the MEC EMDC project report.

APPENDIX "A"

MERRIMACK EDUCATIONAL MANAGEMENT DEVELOPMENT CENTER

MERRIMACK EDUCATION CENTER

QUARTERLY REPORT

April 30, 1974

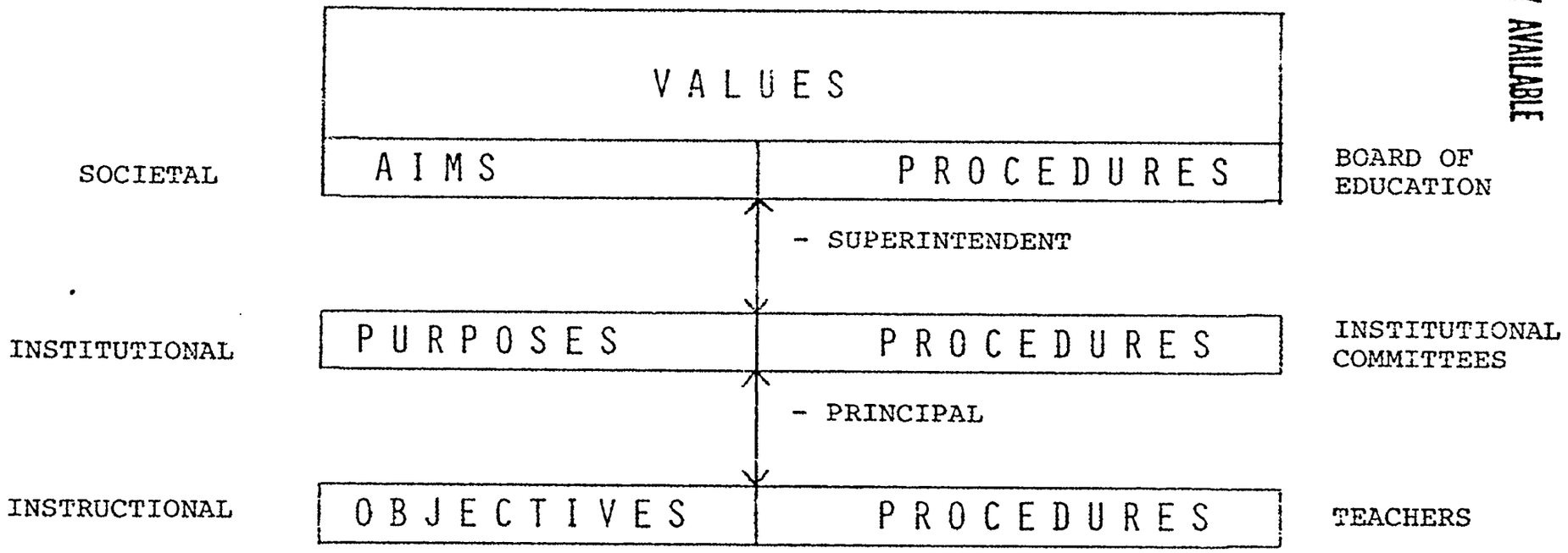
Merrimack Education Center
101 Mill Road
Chelmsford, Mass. 01824
(617) 256-3985

FOREWORD

In October of 1973, MEC received first year funding from the Charles F. Kettering Foundation for a three-year project establishing an Educational Management Development Center.

The Merrimack EMDC is a direct response to the emerging management needs in education. The role of management personnel in the public school systems mediates between the societal and instructional levels of the educational process. The EMDC is a pilot educational service to provic management personnel direction in these functions.

A major purpose of the EMDC is to seek more economical ways of providing new services to meet rising standards for excellence and accountability. Through the EMDC, schools voluntarily establish collaborative relationships as a mechanism for gaining access to a jointly-owned set of new resources. Sharing in a collaborative assumes a deliberate relationship with a set of participants and an active program for the refinement and delivery of services. This second Quarterly Report defines current and projected activities of the Merrimack EMDC.



RELATIONSHIPS

School management is observed to be one layer in a three-tier system comprised of societal, instructional and managerial levels as in the following diagram. (Figure 1)

To have a high impact on educational systems, the EMDC project strategies must be conversant with all three levels. The findings of the pilot communities in the MAP are being presented to the Executive Board comprised of twelve superintendents and then relayed to the twenty school superintendents and their respective school boards. In this way, processes documented by the three superintendents in MAP are shared with the Executive Board. A committee has been selected to plan a School Board Conference to be held in May and a second committee has been appointed by the Executive Board to plan a two-day conference for school superintendents in June.

DIAGNOSIS

The Northeast EMDC project, underway since mid-October of 1973, developed a management assessment team composed of MEC Executive Director, Richard Lavin and superintendents Thomas Rivard (Chelmsford), Ken Seifert (Andover), and Maurice Smith (Lawrence).

This peer assessment lends the credibility and the experiential base of superintendents who have themselves implemented change strategies. The assessment team field-tested the Management Assessment Process (MAP) in the Andover Public Schools. Through a series of on-site visitations, discussions, and question-raising sessions, the visiting peers assisted the Andover superintendent in the self-evaluation process.

A key element in the project is the active participation of school administrators in the process of identifying and helping to fill their own needs at the local level. A major purpose of MAP is to determine the strengths and weaknesses in the management practices of a given

school system and its leadership as perceived by the peer-level administrators. The MAP process is designed to give the local superintendent independent evaluations of his management with recommendations for improvements.

Additionally, benefits accrue for the visiting superintendents as they test out their knowledge and experiences against the unique context of the host community. The host superintendent is able to synthesize old information (his own experience) with the new information (the experiences and perceptions) formulated by the visiting team.

Priorities Established

The superintendent team concentrated on specific assumptions and characteristics of an educational system and posited certain "we agree" statements. Against this common reference point, the areas of monitoring, inventorying, and assessment emerged as high needs. The on-going project activities are focused upon the established priority of inventory control.

ACQUIRING RESOURCES

As a linking agency, the EMDC serves a number of school districts by assisting them in identifying needs, finding resources and improving their capacity and level of competence in problem-solving, resource retrieval and planning. The EMDC acts as a broker, linking the needs with the identified resources.

To acquire additional resources for the project, linkages to business and industrial corporations and associations are externally established to supplement internal resources. Successful practices are identified for possible inclusion in dissemination packages. New programs in management development are provided in needed areas perceived as a

result of the MAP. The EMDC inventories alternative models for school systems (e.g., those found in the Principal's Training Program) and identifies simulation materials for management training (e.g., in the area of inventory control games).

CHOOSING RESOURCES

The commitment to linking internal and external resources has already been operationalized in a number of activities. Activities underway and projected include needs assessment, identification of area, state and national resources, delivery of services, information dissemination, consultation, and assistance in effecting change.

Consultants from Arthur D. Little, Inc., from the Massachusetts School Business Officials Association (MASBO), the Mass. Business Task Force, and New England Telephone have offered assistance with various projects.

Continuing Activities

Projects spawned by the EMDC and discussed in the previous Quarterly Report include:

- Week-long training institute for Fitchburg conducted and evaluated by MEC (evaluation appended to this report).
- Fourteen principals from IGE schools enrolled in a 3-credit course, Management by Objectives, to be completed in June.
- Principal Training Program piloted in the region with thirty-five principals and central office administrators in attendance.

Current and Projected Activities

Principal Training

The Principal Training Program has been expanded to four additional communities with 150 persons trained in instructional alternatives for special education. The alternatives are inventoried in the collection of resources.

AV Cooperative

A project, implemented the third week in April, is the Regional Audio-visual Study within four MEC communities. This study directly relates to the need established to review inventory, purchasing, and maintenance activities of the several towns. This study is undertaken in conjunction with the Mass. Business Task Force.

The school systems of Bedford, Methuen, Wilmington, and Billerica have been invited to participate. The AV project links with Fitchburg State College. The consulting assistance of the Massachusetts Business Task Force serves to facilitate the AV cooperative.

School Board Conference

As indicated in the assessment section above, results from the school committee inventory will be used to plan the School Board Conference to be held on May 29th. High need topics identified for this school board conference are:

(a) *School Board Policies*
(b) *Negotiations and Teacher Contracts*
(c) *Guidelines for Better Board Meetings*

As part of the evaluation and assessment phase, the application of MAP to middle management personnel and to the improved functioning of school committees will be studied. The school committee survey and conference are instrumental in this pursuit.

Educational Management Institute

In June, MEC will sponsor a two-day educational management institute for all superintendents. Based on needs identified at this meeting, plans will be made for projects to be carried out during the EMDC's second year of operation. Activities for the conference will involve all MEC area superintendents. These activities include a review of governance, defining middle management, inservice plans for school boards, testing management development exercises and management tools, as well as training strategies. These activities will be related to the high-priority needs determined in the area of inventory control.

It is expected that EMDC participants will be developing skills in the areas of:

- Long-range planning and resource identification,
- Resource allocation - allocation analysis and improved budget systems,
- Performance evaluation,
- Management of change - change strategies and processes,
- Management by objectives,
- Involving the community in school affairs.

The mechanisms for this growth and development include the delivery formats of institutes, training workshops, and conferences. Planning committees are operational to assist MEC staff with preparations. The School Committee Conference is being planned by superintendents and three school board members.

GAINING
ACCEPTANCE

Conferences are utilized to deliver and gain acceptance for the concepts and ongoing training. The planning committee chooses the resources for the two conferences; (i.e., the school superintendent planning committee and the school committee planning groups). The expected outcome of these two conferences is to develop concurrent, ongoing management development programs for school system managers and for school boards.

The direct and constant accountability of the collaborative to its members appears to encourage sharing that leads to a responsive use of common resources. Systematic observation and formative evaluation are maintained through records of examples of how specific services have been developed and delivered successfully to participants.

The successful evaluation of the Fitchburg management institute enabled the school committee and superintendent to budget $60,000 to conduct ongoing inservice education at the management level. As an adaptive process, the EMDC enables planners to provide feedback from these first implementation steps. Feedback from the middle management training programs enables project staff to make adjustments they could not otherwise have anticipated.

EDUCATIONAL MANAGEMENT DEVELOPMENT CENTER

MERRIMACK EDUCATION CENTER

January 31, 1974
Merrimack Education Center
101 Mill Road
Chelmsford, Massachusetts 01824

FOREWORD

Throughout its five-year history MEC has offered conferences for school board members and superintendents concerning such topics as: Seminar on Boardsmanship, School Finance, and the like. The superintendents' planning committee, comprised of a twelve-member executive board, contributes to the preliminary review and planning of programs undertaken.

The area of management and school organization is presently seen as a long range area of high priority for the school systems of the MEC region and is being responded to by the Center in several ways.

A chief concern is the development of a responsive school organization. This is derived by providing managers of school system with an outlook conducive to the sharing of ideas and participation in innovative programs. As management of education emerges as a high priority on the national scene, the Center is initiating activities as a means of strengthening educational management among client communities served. As a part of its continuing role on the forward edge of management and leadership, MEC is represented by Dr. Richard J. Lavin, Executive Director, on the Massachusetts Governor's Commission on School District Organization and Collaboration. These major areas of renewal are linked with the EMDC concept.

This is the first of a series of quarterly reports on the EMDC project. The reporting format is organized around the major categories of Input, EMDC Role Activities, and Outputs. The headings for the Input column are derived from Havelock's six stage model for change. The heading in the EMDC Role column are the postures identified as those necessary for a "change agent."

OUT	EMDC ROLE	ACTIVITY	OUTPUT SOUGHT
Diagnosis	Catalyst	Through this on-site process, a peer/superintendent team assesses the degree to which the school district administrators' objectives are being met. The data collected highlight the strengths and weaknesses in achieving system objectives. This MAP takes into account planning and goal-setting which reflect specific needs of the local school district administrators. MAP is designed to provide a solid information base for recommending and planning innovations to accomplish goals. The peer assessment process of MAP involves the local superintendent, local school administrators, and a staff of visiting peers who are involved in obtaining the necessary information that will contribute to school districts implementing suggestions for improvement. The local school superintendent, whose system is being assessed, entertains feasible alternatives to existing programs based upon the recommendations of the visiting team. Data collected by the questionnaires, with resultant dialogue, is seen as vital for interpreting conditions or factors that make for a successful school system... the "indicators" or symptoms of areas where problem-solving skills need to be applied. Additional data is collected via the "School Superintendent's Work Activity Schedule".	Needs Defined

INPUT	EMDC ROLE	ACTIVITY	OUTPUT SOUGHT
Building a relationship	Process Linker	Various structures and processes, in the form of related activities, are being examined in order to develop effective skills on the part of management/leadership personnel. These activities and processes are an outgrowth of recognized needs and the recent review of the management literature as it applies to the administration of the educational enterprise. The focus of activities underway is on practical applications. MEC addresses the improvement of school systems, with their respective established services, through the delivery of improved practices. The superintendents of the 20 collaborating communities met in December at the Executive Board meeting. The Kettering grant was announced and the three pilot communities for the testing of the EMDC project were identified. Progress reports will be made available through the regularly scheduled Executive Board meetings. Since the focus of this project is applying educational research, administrators will determine those problems and structures to be studied and researched in their own school systems. Within this ethnographic method, one process now being initiated is a peer process of management assessment.	Local Commitment Inside-outside team
Diagnosis	Catalyst	This Management Assessment Process directly confronts the activities and operational environments by observing managers (on-site) meeting their daily activities and management functions.	Needs Defined

T	EMDC ROLE	ACTIVITY	OUTPUT SOUGHT
Acceptance	Process Helper	Through the assessment process MEC is designing a means whereby local school systems can share expertise to improve planning capabilities of their respective school districts. Mechanisms for assessing schools and for involving middle management in meeting the objectives are incorporated into this system. Management materials concerning goals, objectives and problem-solving are piloted in the MAP process, through consultations, and through in-service courses for administrators at the middle management, or principal, level.	Field Testing
Acquisition	Resource Linker	The concepts and procedures of the management process are being simultaneously approached from different angles. The conceptual approach involving decision-making and problem solving is on-going in Andover while a communications or human relationships approach is demonstrated in Fitchburg. It is believed that these are not mutually exclusive approaches and that, although initiated separately from diverse theoretical and philosophical viewpoints, eventually the two will merge and there will occur mutual benefits.	Management Development
		It is necessary in these two cases to design, to develop, refine and field test instruments and materials. Materials that are identified and located in other management training programs will also be modified to meet the peculiar and particular needs identified. The materials, in themselves, are not sufficient, and they require expertise, skills, and knowledge for application by participating school managers and consultants.	Inventory of practices

INPUT	EMDC ROLE	ACTIVITY	OUTPUT SOUGHT
Selection	Solution giver	From an examination of specimens of program plans offered by superintendents, it is evident that packaging of these concepts in the format of "tools" is necessary in order to provide for internal and external replication. A framework, to be devised, would consist of materials and techniques that are concise and identifiable in the language of school administrators.	Successful practices
Selection	Solution giver	An introductory course in the principles and practices of management by objectives, serves as a process to examine system-wide goals and objectives. The activities of this graduate course are viewed as part of McC's continuing role in management development. Attention is focused on skills needed to develop and utilize management objectives for results. Serving as a source for tested activities, the exemplary program will be refined and documented for use in EMDC training components. A primary aim is to develop some improved tools educational managers can utilize to build effective management skills. Management By Objectives assists principals with determining organizational direction and evaluating results. Participative exercises, developed as prototypes for this program, present examples of situations where MBO is applicable while group projects provide opportunities to gain leadership experience. Another offering, at the middle management level, is the principal's training in the form of an administrative workshop. This program, developed in conjunction with public school administrators around	Innovations Training systems

OUT	EMDC ROLE	ACTIVITY	OUTPUT SOUGHT
		the nation, is brokered into the MEC region through the Education Service Center, Austin, Texas. This is a fully media-oriented workshop in special education alternatives that is practice-oriented and geared towards problem-solving sessions.	
Self-Renewal	Catalyst	MERRIMACK EMDC concept, as a viable organization, provides a dynamic situation in which to launch management practices. One question to be answered is whether the schools and MEC are capable of maintaining reciprocal relationships so that the schools mirror the Center in terms of being responsive to local community needs. Through internal management processes, MEC is able to work through the problem-solving techniques that are offered to schools in a "solution-giving" posture. This role is seen as supplementary to the roles of change agent and of catalyst which are necessary postures in given instances.	Sustaining system
		Summarizing the mission, this three-month report emphasizes the capability of educational leadership and management as an important key to advancing school improvement. The activities underway will create links of human resources...linking skills of experienced managers with management improvement efforts in local school districts. This project addresses the two-fold target problem of (1) underdevelopment of the management system; and (2) lack of effective methods and organizational arrangements for delivering/developing effective systems. The initial design stage will test new ways to improve school management structures and processes. With improved methods for developing skills of management/leadership personnel, application of these "new ways" will be initiated and can be replicated on a wider basis.	Cost-effectiveness

GLOSSARY

ROLES OF THE CHANGE AGENT [1]

1. *A Catalyst*...is needed to overcome inertia, to prod and pressure the system to start working on problem-solving. This role is often taken by students, concerned parents,or school board members. The change agent as a catalyst can energize the problem-solving process to get things started.

2. *A Solution Giver*... has definite ideas about what the change should be. This person has solutions and would like to have others adopt those solutions. The solution giver has to know when and how to offer it and has to know enough about it to help the school system adapt it to local needs.

3. *A Process Helper*...is skilled in the various stages of problem-solving. This person provides valuable assistance in: assisting the client system in recognizing and defining needs; diagnosing problems; setting objectives; acquiring relevant resources; selecting or creating solutions; adapting and installing solutions; and, evaluating solutions to determine if they are satisfying needs.

4. *A Resource Linker*...is the linker or "broker" of needs/resources. Resources consist of people with time, energy and motivation to help as well as materials and information. The "linker" brings people together, and helps clients find and make the best use of resources.

[1] *Excerpted from : R. Havelock , The Change Agent's Guide to Innovation in Education. Englewood Cliffs, New Jersey: Educational Technology Publications, 1973.*

SIX-STAGE MODEL OF TASKS

Stage 1...Relationship with the client system or a solid base within it.

Stage 2...Diagnosis assists the client with defining and stating the needs.

Stage 3...Acquiring Relevant Resources...With a well-defined problem, the client system needs to be able to identify and obtain resources relevant to solutions.

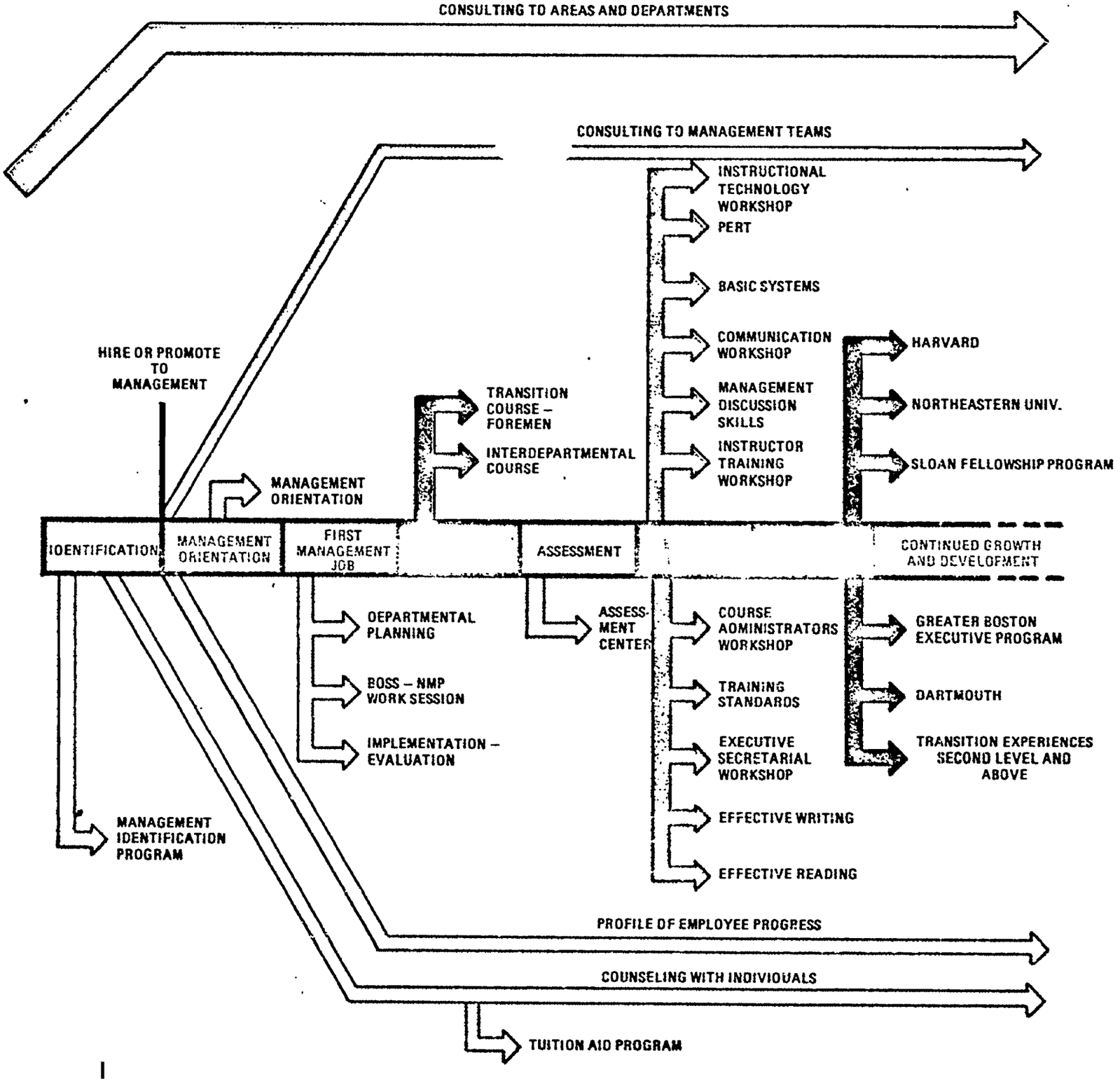
Stage 4...Choosing the Solution... Poring over the information acquired, the client needs to be able to derive implications, generate a range of alternatives, and settle upon a potential solution. This requires adaptation and shaping the solution to fit the special characteristics of the client system.

Stage 5...Gaining Acceptance... moves the solution toward acceptance and adoption by the widest possible number in the client system. The change team helps the client to gain awareness, develop interest, evaluate, try out, and finally adopt the innovation.

Stage 6...Stabilization and Self-Renewal...The client needs to develop an internal capability to maintain the innovation and to continue appropriate use without outside help.

APPENDIX "B"

THE CONTINUUM OF MANAGEMENT DEVELOPMENT



APPENDIX "C"

MANAGEMENT BY OBJECTIVES FOR EDUCATIONAL ADMINISTRATORS

D. W. Meals, Instructor

October 8, 1973

An introductory course in the principles and practices of management by objectives adapted to the needs of educational administrators responsible for IGE programs.

Proposed Participant Objectives

1. Describe how objectives may be advantageously used in performing at least five management functions in an educational setting.
2. Identify the principle features of management by objectives.
3. List and illustrate by examples five criteria that objectives for an educational institution should meet.
4. Demonstrate skill in formulating objectives for a portion of the program of an educational institution.
5. Give evidence of a capability for using objectives in performing two or more management functions in an educational setting.
6. Exhibit a positive as well as constructively critical orientation toward the introduction of management by objectives into an educational setting by initiating at least one application that continues beyond the duration of the course.

Learning Activities

1. Background reading on management by objectives in industry will provide cognitive material and serve as a basis for discussions relating principles to educational situations, including IGE.

2. Participative exercises will present examples of situations where management by objectives is applicable and provide opportunities for practice in developing and using objectives.
3. Individual or small group projects involving others outside the course will provide opportunities to gain leadership experience and continuity in the application of some of the principles of management by objectives.

Administrative Information

Class Sessions: Ten of 180 minutes each.

Assigned Readings: Morrisey, "Management by Objectives and Results," Addison-Wesley, Reading, Mass. 1970.

Carrol and Tosi, "Management by Objectives, Applications and Research," Macmillan Co., N. Y., 1973.

Knezevich: Program Budgeting (PPBS)," McCutchan Publishing Corp., 2526 Grove St., Berkeley, Calif. (Chapters 5 and 6).

Short Assignments: Brief papers of one to two pages describing specific applications in an educational setting.

Project Report: Plan and progress reports, describing the application of management by objectives to a continuing program in an IGE School.

Final Examination: A one hour test to assess the achievement of cognitive and skill objectives by the participants.

Grade

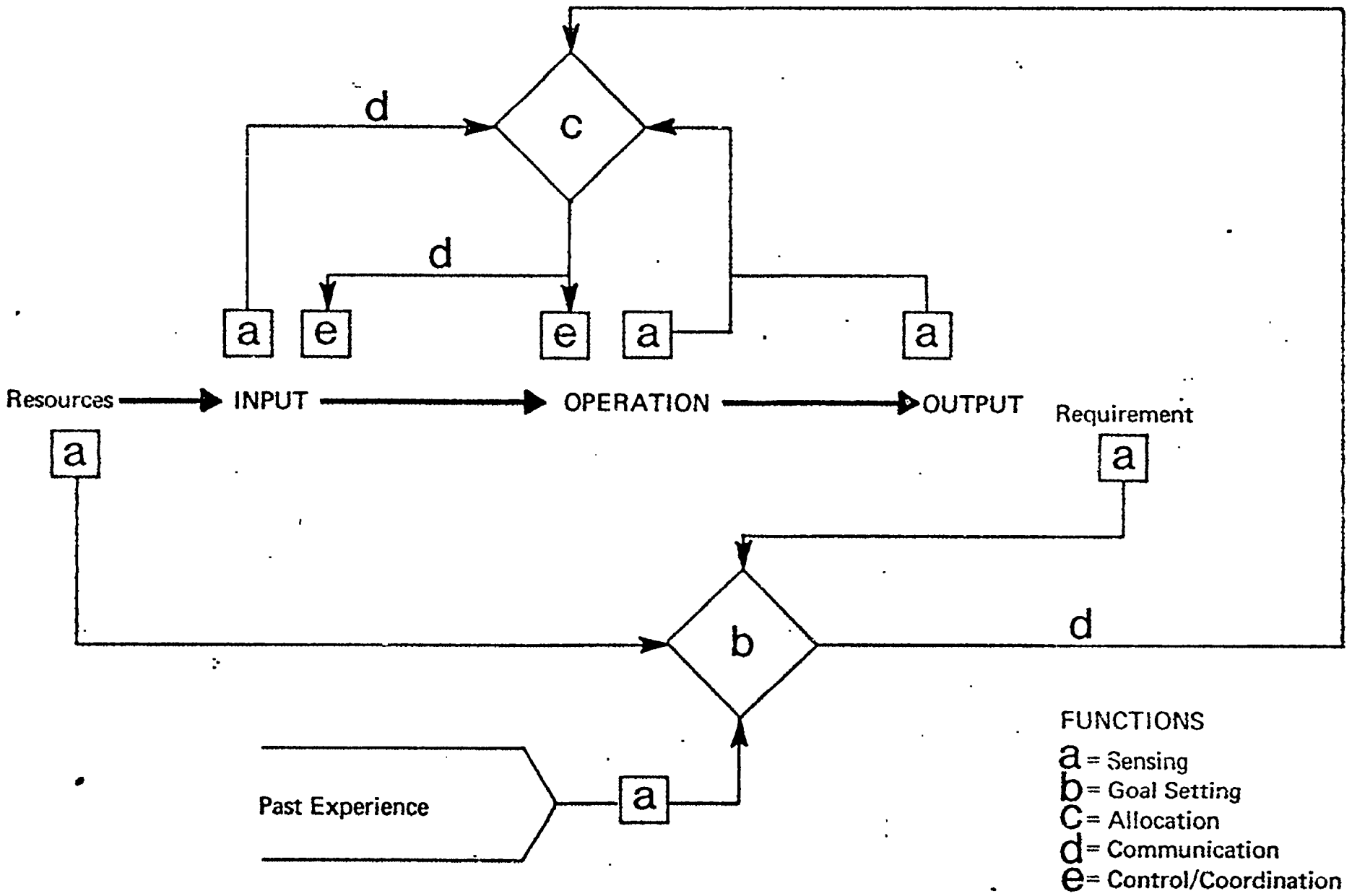
Course Credit Criteria: Credit to be awarded. Individual grades will be based on the following:

a.	Final Examination	30 points
b.	Short Assignments	25 points
c.	Class Participation	15 points
d.	Project	30 points

Exercises in Management by Objectives

1. Deriving Criteria for Objectives
2. Writing Objectives
3. Critique of Objectives
4. Professional Development
5. Performance Assessment
6. Support Objectives Derived from Instructional Objectives
7. Production--Output Structure
8. Negotiated Objectives
9. Creativity and Objectives
10. Level of Aspiration
11. Humanism and Management Objectives
12. Process vs. Objectives Oriented Management
13. Case Study
14. System Functions and Management Functions

System Model



EXAMPLES

Management Functions.....Applied to Operations:

	Money	Material	Men
Sensing			
Goal Setting			
Allocation			
Communication			
Coordination/ Control			

APPENDIX "D"

HAVELOCK MODEL

Havelock[1] has suggested four primary ways in which individuals can act as change agents: as a catalyst, a solution giver, a process helper, or a resource linker.

The MEMDC prefers to regard itself as performing the roles of process helper and resource linker. A process helper provides assistance in showing the client how to recognize and define needs, to diagnose problems, to set objectives, acquire relevant resources, to select or create solutions, to adopt and install solutions and to evaluate and determine if they are satisfying needs. However, effective problem-solving requires the bringing together of needs and resources; the resource linker may be defined as the person who plays this role and helps clients find and make the best use of resources inside and outside their own systems.

These two roles are not mutually exclusive and indeed are complementary. Problem-solving studies are not solely at the "process" level. While the MEMDC assists people in moving toward a solution to a problem, it does not lead people to a place where there is no solution. The intention then is to link process to products and services utilizing change strategies of the "process helper" and "resource linker".

MEMDC staff play these roles in the overall planning and installation of innovations. Activities are comprised of the six problem-solving stages:

1. Building a relationship,
2. Diagnosing the problem,
3. Acquiring relevant resources,
4. Choosing the solution,
5. Gaining acceptance, and
6. Stabilizing the innovation.

Although this process may be undertaken for change projects of any scale, from system-wide reorganization of a school to the introduction of specific materials or procedures in the classroom, the MEMDC's major thrust is at the system level. The six studies to be undertaken in the second year of the project will emphasize the organizational problem-solving aspect.

Change teams (inside-outside teams) at the management or organizational level will be a major intervention strategy. Since problem-solving is an on-going function of management, unless management personnel know change techniques and act as managers, no real change can take place. The collaborative change model to

be stressed in this project is one of an organizational interface between local school systems and the linking agency (MEMDC)

The materials on the following pages of this Appendix are to be disseminated tc the MEMDC member communities to invite six problem-solving studies for the MEMDC project year.

[1]Havelock, R. G. The Change Agent's Guide to Innovation in Education, Engelwood Cliffs, New Jersey: Educational Technology Publications, 1973.

SUGGESTED STRATEGIES AND TACTICS

1. Build and maintain awareness of the resource universe.

2. Acquire resources for seven major puproses:

   a. Diagnosis
   b. Awareness
   c. Evaluation-before-trial
   d. Trial
   e. Evaluation-after-trial
   f. Installation
   g. Maintenance

3. Homing in on a specific problem and/or solution:

   a. Obtain written overview
   b. Overview from knowledgeable person
   c. Observe "live" examples
   d. Obtain evaluation data
   e. Obtain innovation on trail
   f. Acquire a framework for evaluation after trial

4. Build a permanent capacity for resource acquisition:

   a. Supportive atmosphere
   b. Maintain interactions
   c. Use creative practitioners
   d. Use in-house experts
   e. Generate realistic expectations about information
   f. Assess impact of past experience with resource retrieval on present client attitudes
   g. Demonstrate value of resources
   h. Structure acquisition
   i. Teach clients to structure acquisition
   j. Localize resources

November 1, 1974

Our second year of the EMDC (Kettering Management Project) begins in November. This project, although not one of the largest projects in the Center, nevertheless, is one of our most important. It directly relates to how we manage our educational systems and how superintendents can be assisted in their day-to-day operations.

In developing our proposal for year two activities it is our intention to have the project involved in approximately five high-need local problem areas. At the same time we would ask that all superintendents come together through monthly or bi-monthly seminars to exchange information on the new practices or insights that have been picked up in these studies. In effect, our training focus will be on solving local problems.

Therefore, we are requesting your participation and at the same time offering assistance to our MEC superintendents in the form of consulting help. We would appreciate your reply to the enclosed request where you could identify a specific problem that pertains directly to your own school system. Following receipt of this information we will be back to you regarding next steps.

Regards,

Richard J. Lavin
Executive Director

RJL:ms

Enclosure

EDUCATIONAL MANAGEMENT DEVELOPMENT CENTER

PROPOSAL APPLICATION FORMAT

In composing a proposal for submission to the Merrimack Education Center, please complete each item.

I. Local Information

A. LEA _____

B. Name of Superintendent _____

II. Project Information

A. Estimated duration of proposed project: *From* _____ *To* _____

B. Clearly define the problem content for this proposal.

C. Describe the need to which this proposal is addressed. Specify how the need was determined.

1. Formal Need (meetings, assessments, etc.)

2. Informal (School Board interests, etc.) Assessing the Need.

D. List the names of persons who will assist the superintendent in the project:

Name_____ Position _____

_____ _____

_____ _____

_____ _____

E. Describe, in general, the manner by which this study will serve the Needs outlined above. Include a brief description of the role that this proposed study will play in the educational planning of the school system.

F. Describe the anticipated follow-up of the proposed study. (What will you do with results? How will it improve present operation?)

Questions on this project should be addressed to Dick Lavin at the Center.

PROBLEM SOLVING STUDY

GUIDELINES: Submission of Proposals for Educational Management Development Center

Superintendents are invited to submit proposed (Kettering Foundation Management Project) problem areas for consideration during the second year of the EMDC project. The studies selected will receive problem-solving assistance.

MEC Communities should consider the following guidelines in preparing proposals. Proposals submitted to MEC/EMDC will be reviewed with these guidelines.

*1. The problem area is concerned with local needs (e.g., problem needs resolution or an improved approach).

2. The study will address a high-need area at the superintendents level.

3. The issue can be resolved (or an interim solution proposed) within the project year.

4. Proposals should include plans for following through on study recommendations.

5. Superintendents and support team evidence commitment towards resolution of the problem area.

6. The superintendent commits time for participation in the study and attending monthly EMDC seminars.

7. Interview will be conducted by MEC to go over details and clarify the problem.

Benefits to LEA

1. MEC, working with consultants, will facilitate the problem-solving study.

2. Training in problem-solving is addressed to real issues.

3. Superintendents exchange information on new practices through seminars.

4. Alternative solutions ready for presentation to policy groups, school committees, etc., are evolved.

5. Improved practices ready for installation in school systems.

6. MEC funds partially (50%) support for problem-solving studies.

   a. Funding support from the project for consultants, etc. will be provided on a matching basis with local schools.

   b. Total project funds should not exceed $3000 ($1500 - MEC $1500 - local).

---

* Five projects will be initiated with MEC school systems.

APPENDIX "E"

FOOTNOTES

[1]Lutz, F., and Ferrante, R.,
Emergent Practices in the Continuing Education of School Administrators. ERIC/Clearinghouse on Educational Management/ UCEA. Eugene, Oregon, 1972 (ERIC ED 069 015).

[2]ibid

[3]Nagle, J.
"Preparing Leaders for Education: Today and Tomorrow". Trend 6, 1 (Fall, 1969). [Cited in R. Farquhar and P. Piele, Preparing Educational Leaders: A Review of Recent Literature. ERIC CEM/UCEA, 1972 (ERIC ED 069 014)].

[4]Lutz, F., and Ferrante, R., op. cit., page 32.

[5]Farquhar, R., and Piele, P.
Preparing Educational Leaders: A Review of Recent Literature. ERIC CEM/UCEA, 1972 (ERIC ED 069 014).

[6]Wiles, D.
"Politics and Planning: A Rationale for Synthesis in Educational Administration" Educational Administration Quarterly.

[7]Lavin, R.
"Synthesis of Knowledge and Practice in Educational Management and Leadership". Prepared for Charles F. Kettering Foundation, August, 1973.

[8]Hemphill, J., Griffith, D., and Frederickson, N.
Administrative Performance and Personality, New York, 1962.

[9]See; Wiles, D., op. cit.

[10]Lipham, J.
"Personal Variables of Effective Administrators", Administrator's Network, Vol. IX, No. 1, September, 1960.

[11]Gross, N., and Herriott, R.
Staff Leadership in Public Schools, New York: John Wiley, 1965.

[12]Hale, J.
A Review and Synthesis of Research on Management Systems for Vocational and Technical Education, Columbus: Ohio State University for Vocational and Technical Education, 1971.

[13]Farquhar, op. cit.

[14]Dill, W., et. al.
"Strategies for Self-Education." Harvard Business Review. November - December, 1965.

[15]Odiorne, G.
Management by Objectives. New York: Pitman Publishing Corporation, 1965. [See also: ERIC Ed 047 233].

[16]Lutz, F., and Ferrante, R., op cit.

[17]Ohio Commission on Public School Personnel Policies.
"School Leadership." Report No. 7. Stranahan, et. al., Greater Cleveland Associated Foundation, 1973.

[18]ibid.

[19]National Institute of Education
"Building Capacity for Renewal and Reforms", December, 1973. ERIC ED 087 095.

[20]Baldridge, V.
The Impact of Individuals, Organizational Structure, and Environment on Organizational Innovation, Stanford California: Stanford University, May, 1974.

[21]Ohio Commission, op. cit.

[22]Baldridge, V.
"A Political Theory of Organizational Policy." Stanford University, 1970. [See also: ERIC Ed 036 908, ERIC Ed 062 245, and ERIC ED 062 287].

[23]National Institute of Education, op. cit.

[24]Baldridge, V., op. cit., 1974

[25]National Institute of Education, op. cit.

[26]Cook, Paul W., Jr.
Modernizing School Governance for Educational Equality and Diversity: Summary Report. A Study for the Massachusetts Advisory Council on Education. Boston, Massachusetts; September, 1972.

[27] ibid.

[28] Pincus, John
"Incentives for Innovation in the Public Schools." The Rand Corporation. [See also: Robert E. Klitgard. "Models of Educational Innovation and Implications for Research". Rand Corporation. Santa Monica, California, March, 1973. ERIC Ed 078 603].

[29] ibid.

[30] Meals, Donald
"A Process Approach to Educational Systems Design." Journal of Educational Technology Systems, Vol. 1 (3), pp. 185-204, Winter, 1972.

[31] National Institute of Education, op. cit.

[32] ibid.

About /I/D/E/A/

. . . Was established in 1965 as the Institute for Development of Educational Activities, Inc. (/I/D/E/A/).

. . . is the educational affiliate of the Charles F. Kettering Foundation, Dayton, Ohio.

. . . is headquartered in Dayton, Ohio, with a research staff in Los Angeles, California, and an information and services staff in Melbourne, Florida.

. . . investigates, designs and tests new approaches to improving elementary and secondary schools.

. . . arranges to implement school improvement programs through universities, school districts, and other cooperating groups.

. . . is the primary developer of the /I/D/E/A/ Change Program for Individually Guided Education (IGE).

. . . conducts a continuing exploration program to assess and report on emerging educational trends.

. . . reports on its research efforts through films and publications to educators and others interested in improving education.

About MEC

. . . was established in 1968, MEC is a public, multi-purpose collaborative of 20 Massachusetts communities.

. . . implements Individually Guided Education in leagues of participating schools.

. . . acts as an educational "broker" linking the school districts with resources at the local, state, and national levels.

. . . conducts annual needs assessment for member districts.

. . . cooperates with Fitchburg State College in pre-service and in-service education programs.

. . . serves as an educational information center and provides computerized searches of the ERIC Data Base.

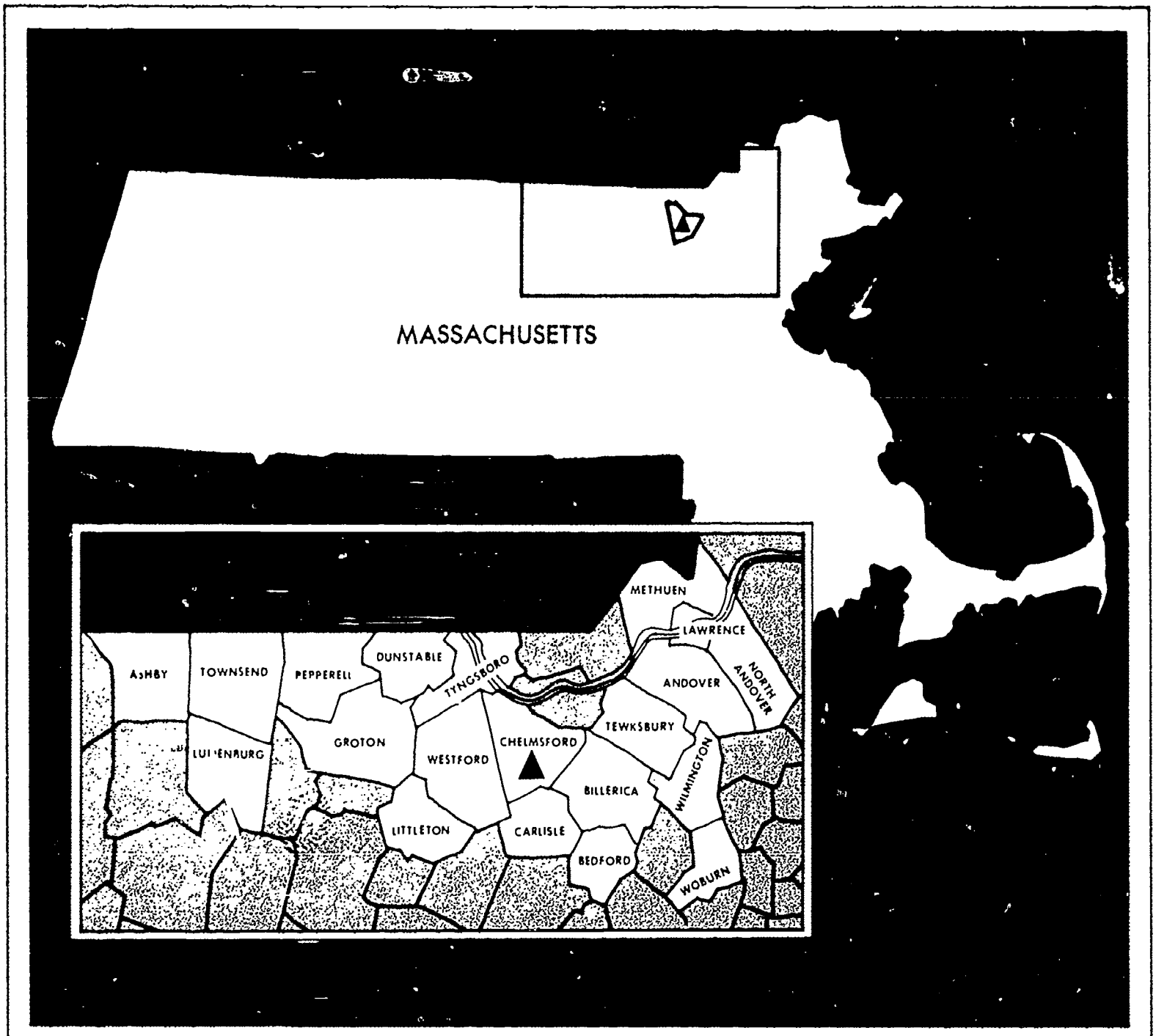
. . . assists local schools in the planning and evaluation of programs.

. . . Serves over 90,000 pupils, over 7,500 teachers and administrators, and over 100 school committeemen in a region where over $50 millions annually are devoted to education.

EDUCATIONAL MANAGEMENT DEVELOPMENT CENTERS
/I/D/E/A/ in Affiliation with the
Charles F. Kettering Foundation

. . . designs and tests new ways to improve school management structures and to improve methods for developing skills of leadership-management personnel. Four organizational sites comprise the EMDC Network:

- Allegheny Intermediate Unit — Carnegie-Mellon University EMDC in Pittsburgh, Pennsylvania
- Merrimack Education Center EMDC in Chelmsford, Massachusetts
- Miami — Dade County EMDC in Miami, Florida
- New Orleans Schools — Tulane University EMDC in New Orleans, Louisiana



MERRIMACK EDUCATION CENTER

101 Mill Rd. • Chelmsford, Mass. 01824

EMDC Communities

- ANDOVER
- BEDFORD
- BILLERICA
- CARLISLE
- CHELMSFORD
- DUNSTABLE-GROTON
- LAWRENCE
- LITTLETON
- LUNENBURG
- METHUEN
- NORTH ANDOVER
- NORTH MIDDLESEX REGION
- TEWKSBURY
- TYNGSBORO
- WESTFORD
- WILMINGTON
- WOBURN
- LAWRENCE REGIONAL
- GREATER LOWELL REGIONAL
- NASHOBA VALLEY TECH.
- SHAWSHEEN VALLEY VOC. TECH.