This study considered the feasibility of alternative methods for managing various school district projects. Several versions of project management were identified and studied, but only two of the more flexible systems were selected for their potential contribution to educational administration. Ten New Jersey administrators were trained by a management consultant firm to determine which problems seemed more relevant to project management techniques. During the study period of almost a year, the presentation was changed according to feedback received from the field. Another project management approach was used in a 2-day training seminar for administrators from several Pennsylvania school districts. The overall findings of this study suggest that project management techniques are applicable to special types of situations and for selected problems. The training will continue to be modified as field staff observe resulting changes in school district management techniques. A related document is EA 002 949. (Author)
I. INTRODUCTION

It is clear that the problems confronting today's school administrator are nowhere near met by the quantity and nature of the training and administrative tools he has at his disposal to deal with them. Although we are now beginning to make some progress in the area of systematic preparation for change in our schools, both in the revision of curriculum and the training of superintendents in new administrative methods, we are still faced with the fact that the administration of a school system in 1970 is a very difficult and complex job, and that in this new decade we can expect it to become even more challenging.

The lesson of the past decade, all too evident to even the most casual observer, seems to be that the only consistent phase of modern American life is the certitude of change. With this in mind, institutions hoping to maintain relevance in their services to Americans -- especially young Americans -- over a prolonged period of time must be capable of responding to, and even anticipating, changes dictated by their social and political environment.

*This paper was prepared for American Educational Research Association Convention, March, 1970, Minneapolis, Minnesota.
It is therefore incumbent upon our educational institutions to adopt some structural alternative to the system under which they now operate, the system which has proven itself too often in the past to be profoundly inadequate. But how does one construct a "system of change," especially in an area as delicate and crucial as the education of future generations? How can a system possess the virtue of flexibility as well as reliability? How can the schools now operating continue their necessary on-going functions, while at the same time undergo basic structural reorganization?

Project Management is defined as a systematic method of achieving defined goals and objectives to produce specific results at a particular time, in an effort often cutting across many pre-existing functional or organizational boundaries. It is a procedure for planning and executing complex, multi-phase projects with explicit specifications. The purpose of this paper is to suggest that the Project Management method of administration, conceived in the military and now very successful in many industrial situations, may be a feasible and effective way to cope with change which is confronting American education. It will be presented as a procedure uniquely suited to the construction of the flexible systems needed by the school administrator of the future. By way of illustration, there is also presented a short history of the experience of Research for Better Schools, Inc., in refining and testing Project Management for application to school district change decision situations, as well as the activities in this area which we are conducting at present and are planning in the near future.
Project Management definitely is not a panacea for all problems besetting the modern public school. The method has impressed us, however, both in its existing capabilities and in its possible potentialities, as being an exciting and promising tool for use in the solution to the inadequacies of present-day educational organizations.

II. WHAT IS PROJECT MANAGEMENT? HOW IS IT APPLICABLE TO SCHOOLS?

Project Management is a method of planning and executing decisions whose complexity and magnitude present problems to the administrator. A common example of the use of Project Management is in the construction of a new building, where a host of multifarious operations must take place in an orderly sequence for the entire project to proceed in the most efficient fashion. The coordination of the various contractors, the obtaining of legal permits, the drafting of the architect's plans, and the other complexities of this project up to the final opening of the new structure must all be completed in recognition of the relative needs of the parties involved, and within specified parameters of cost (imposed by budget allocations), time (imposed by the setting of a deadline indicating the latest possible date for completion of the structure), and the other priority decisions determined by the chief administrator. The man who is responsible for the outlining of a production schedule under the Project Management method, and who bears the authority for the meeting of that schedule, is called the Project Manager. This man is a trained management administrator, distinct from the administrator of the system, and fulfills the exclusive function of overseeing all phases of the project. The manager plans the systematic procedure to
be followed in meeting the objective, delineating the roles to be filled by each of the contractors and other parties involved, and coordinates simultaneous and consequent activities among the various engineers. Flowcharts, PERT, and other management tools are useful to the manager. The manager himself is not vested with the authority to place pressure upon the component workers in the system, but rather makes recommendations to the district administrator when particular facets of the project are performing unsatisfactorily and are detracting from the effort as a whole. All areas of performance are subject to his supervision, and in this way the activities of varied resources (material, people, legal complications, etc.) can be coordinated under one efficient action office with the authority over these components to execute programs based on priorities decided upon by the head administrative function, with the minimum of time and cost.

The nature of the problems facing present-day school districts suggests their susceptibility to solution through Project Management techniques. Change is an inevitable and, indeed, a desirable fact in the public school future in America, and change is being dictated by our changing society. But at the same time they must be achieved under the economic and social limitations prescribed by those same conditions. Time factors and cost limitations must be recognized and established, as well as strict and workable definitions of the objectives toward which we are striving. If ever there were an instance of the need for cooperation among
component interests in a change process, it is in public education, where decisions are made and executed by some combination of boards of education, district superintendents, principals, local politicians with budgeting powers, teachers and students -- often with little awareness on the part of each of these people of the mutual needs involved in the evolution and implementation of the decision.

It is evident that schools are in great need of a flexible but systematic management tool to facilitate the changes dictated by the new decade. Project Management could be that instrument. It is uniquely designed for the management of just such complex and versatile change procedures as that upon which education must now embark. It provides for mid-course revisions in the event of budget changes, unforeseen restrictions, or other crises of which the modern school administrator is already all too familiar. And most importantly, it permits -- indeed, necessitates -- the systematic planning of change decisions for the administrator; facilitates decision-making by requiring the concise expression, both in terms of objectives and costs, of the alternatives for action; and through this process aids in the orderly execution of change decisions on a district-wide scale.

Yet another feature of Project Management which makes it attractive as a potential tool in educational change procedures is its adaptability to isolated, as well as district-wide, innovation for experimental purposes. It is possible through Project Management techniques to manage a curriculum project, while keeping the project isolated and discreet from other on-going operations of the school.
It facilitates experimentation and testing of a new program before implementation on a district-wide level. So we at Research for Better Schools have found Project Management to be a promising tool for use in school change decisions, not only by virtue of its effectiveness in bringing about defined change within specific limitations and coordinating various participants in the change procedure, but also because it makes it possible for essential on-going operations to continue.

III. CONCEPTUAL SCHEMA FOR TESTING THE APPLICABILITY AND EFFICACY OF SOME EXISTING PROJECT MANAGEMENT APPROACHES TO EDUCATIONAL REFORM

In determining the effectiveness and applicability of Project Management techniques in educational settings, it was convenient for us to design a conceptual schema by which we could categorize the different evaluations our staff would make in regard to Project Management and educational change. A leading management consultant firm had for several years conducted Project Management Training Seminars for executives in industry and government, to train men in the Project Management method of meeting objectives. We asked the firm to design a modification of these sessions for use with educational administrators and other school personnel, in the hopes of instilling Project Management methods in the field through selected real-world situations and by this procedure determine the effectiveness both of the training seminars and of the applicability of Project Management to administrator's goals.
The following schema was set up to judge the merits of the efforts of the consultant firm in modifying their seminars for this purpose:

**PROJECT MANAGEMENT**

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The horizontal axis represent the evaluated effectiveness of Project Management to the educational problems raised by participants of the seminars; either (+), demonstrating evidence of support for continued application of Project Management to education; or (-), showing a lack of confidence in the method itself. Vertical axis describe the success, in the minds of the RBS representatives at the seminars, of the management training firm contracted, in presenting Project Management and showing its versatility and relevancy in meeting their problems. A (+) showed confidence in the firm, while a (-) denoted our desire to find a more suitable method of training school administrators in Project Management.

The four possibilities, then, as reflected in the schema, are interpreted in this way:

(+ +) ... Satisfaction both with the material and its presentation. COURSE OF ACTION -- let the firm continue to hold seminars and use resources of RBS to find clients.
(- +) ... Satisfaction with presentation, but doubts concerning the material presented. COURSE OF ACTION -- Help firm to adapt Project Management so as to be more relevant and responsive to the problems confronting school administrators.

(+ -) ... Dissatisfaction with the management firm, but confidence in the promises offered by Project Management. COURSE OF ACTION -- consider alternative ways to bring Project Management to schools.

(- -) ... Both factors unalterably unsatisfactory. COURSE OF ACTION -- scrap effort entirely.

IV. THE INVOLVEMENT OF RESEARCH FOR BETTER SCHOOLS IN REFINING AND TESTING PROJECT MANAGEMENT APPROACHES TO EDUCATIONAL CHANGE

It is useful at this point to describe the extent to which Research for Better Schools, Inc., has been involved in the modification of Project Management techniques for their eventual application and adoption by school districts. Our initial research in the area convinced us that Project Management was potentially a very rewarding tool in educational change, although applications of the technique to educational areas had not yet been systematically attempted. Further experimentation and research gave us a more respectable understanding of the intricacies in the nature of Project Management, as well as renewed interest in its applicability to school decision-making; and we are now planning with reasonably optimistic hopes several projects which will give us even more insight into the nature of Project Management and its use in education.
RBS first learned about Project Management through contacts with the federal government. We explored the method as it was then being used in military projects, especially the space program. This led to extensive discussions with officials at the General Electric Company, whose involvement in certain National Aeronautics and Space Administration projects gave rise to the opportunity for extensive use of Project Management techniques in fulfilling NASA contracts.

RBS felt that Project Management was of interest, and could possibly be modified to meet the requirements of school administrators. We contacted the Urban School Development Council, which is an organization of ten large cities in New Jersey, and the director of SPEEDIER (Studies for the Purpose of Expediting Educational Development Indicated through Educational Research), a four-county Title III organization in central Pennsylvania. Representatives of these organizations attended Project Management Training Seminars conducted by a large private management training firm. The seminars were of the type conducted for private industrial concerns, but were attended by these three men in the hopes of obtaining a better understanding of the nature of Project Management and the difficulties of training men in Project Management methods.

On the recommendations of the men attending the seminars, RBS entered into a contract with USDC to provide PROJECT Management Training Seminars, operating by the same management firm, in each of the ten member districts of the Urban School Development Council. The management firm was asked to revise its presentation to make it specifically
suitable to the educational audience it would be addressing, and the firm responded by designing a supplementary handbook to its original Project Management Training Seminar Handbook, entitled "Project Management in Education Handbook." This book was used in each of the sessions RBS and USDC were to sponsor, and was subject to revision and improvement. In this first series of training seminars, each of the USDC districts was entitled to have twenty administrators and supervisors attend, and each district took part in a three-day seminar.

RBS also made arrangements with SPEEDIER to introduce Project Management into their in-house operations. In this way, Project Management could be tested not only as a tool in district-wide programs, but also as an administrative management method for research institutions in education.

RBS also gave the Department of Instruction of the State of Delaware certain funds in another program testing the versatility of Project Management. The Department of Instruction hired personnel with these additional monies to solve one of their problems using methods derived exclusively from Project Management.

Finally, RBS joined with SPEEDIER in securing the services of Dr. Desmond Cook, Director of the Project Management Center at Ohio Ohio State University, to conduct a two-day Project Management Training Seminar for thirty-five curriculum supervisors from the member districts of the SPEEDIER organization.
VI. PRECAUTIONS ACCOMPANYING PROJECT MANAGEMENT IMPLEMENTATION IN PUBLIC SCHOOLS

Even in its optimal form, Project Management is not a cure-all for all problems confronting an administrator. This statement is an important one and deserving of emphasis. Project Management is applicable only to those certain problems in schools whose characteristics lend themselves to analysis by Project Management methods, as they are roughly suggested by the specifications set forth at the outset of this paper. It would be a grave mistake to assume that Project Management is the panacea which will bring us all to the brink of Utopia; it is only a system which can serve to facilitate the solution of problems which before loomed so complex before an administrator that their efficient execution within the prescribed limitations was next to impossible.

A final point I would like to make in closing is that Project Management is a method of acting upon the execution of predisposed priority decisions, and is not itself a determiner of the direction in which an action is to be headed. The establishment of priority decisions and the setting of proper goals and objectives responsive to perceived needs, precedes the introduction of Project Management.
BIBLIOGRAPHY


