An Educational System for the Seventies (ES '70) is a research and demonstration program representing a broad scope of activity that cuts across every aspect of education. Four main categories of activities comprise the substance of the current effort: staff development, instructional management and career guidance, school management, and evaluation. This report reviews the background, the objectives, and the initial planning for ES '70 which is presented as a cooperative local-state-federal program for the development of a new comprehensive secondary school curriculum and organization providing each student with an individualized education highly relevant to his experience and aspirations and to the adult role which he will play. The experience developed under this program will be available to all school systems. (CH)
AN EDUCATIONAL SYSTEM FOR THE SEVENTIES
ES '70 is a cooperative local-state-federal program for the development of a new comprehensive secondary school curriculum and organization which will provide an individualized education for each student, highly relevant to his experience and his aspirations and to the adult roles which he will play, and economically practical within available public resources.

Participating in the ES '70 program are representative local school districts across the United States, their respective State education departments, a number of universities, foundations, private non-profit and profit making organizations, and the U.S. Office of Education and other federal agencies. The experience developed under this program will be available to all school systems.

The following pages review the background, the objectives and the initial planning for the ES '70 program. This document was prepared from material developed in the course of the ES '70 program since its inception in May, 1967. It represents contributions by members of the ES '70 Governing Board, by curriculum advisors to the Board, and by participants in the various conferences held in connection with the ES '70 program during the past year. This document was prepared in its present form by E. F. Shelley and Company, Inc. under the supervision of the ES '70 Executive Committee.
TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>An Educational System for the Seventies</td>
<td>1</td>
</tr>
<tr>
<td>How the Network is Organized</td>
<td>10</td>
</tr>
<tr>
<td>The Elements of the ES '70 Program</td>
<td>22</td>
</tr>
</tbody>
</table>
AN EDUCATIONAL SYSTEM FOR THE SEVENTIES

At a time when many of the established institutions of the nation have been challenged to change or give way, it has not been surprising to find many school districts engaging in critical assessment of their operations. They have been looking for or instituting those changes they believe will make their schools more successful and effective.

During the last several years, the great ferment in American education has yielded a rich array of innovative practices, each designed to deal with one or another aspect of the numerous crises besetting our schools. In almost every case the ultimate objective has been to improve the learning situation for the individual youngster so that his school experience will be effective, relevant to his needs and aspirations, and will make him a useful functioning adult able to cope with, contribute to and benefit from a fast changing society.

To this end, research and demonstration projects in education have been carried out at every level of the educational enterprise, public and private, in varying degrees of complexity and size.

What has now emerged that is unique, is the inception of a concerted local-state-federal effort to accomplish a major and specific goal: the systematic development of an improved comprehensive secondary school curriculum and organization that is relevant, individualized and economically feasible.
The program is called ES'70 -- An Educational System for the Seventies.

The challenge is to overcome the growing disparity between traditional curricular offerings and education processes, on the one hand, and the current educational needs of large segments of the American population, on the other.

The task before the groups and agencies involved in the ES'70 project, therefore, is to develop for the schools a relevant curriculum for the modern American youth that is keyed to his needs, his aspirations and to the adult roles which he may play. The desired educational program should afford each student a variety of options for his future—a job, further vocational training, college entry, or a combined work-study program. It should prepare him to cope more effectively with man-made environments. While grappling with the outer world, he must derive an inner feeling of satisfaction and control over his own destiny.

The task is also to redesign or modify and test the organization of the educational process and the educational system so that it is possible to implement this curriculum most effectively for the individual student, and most economically for the society.

Modifying the educational process has long been stymied by the difficulties of dealing systematically with the numerous interacting factors involved in the educational process. The availability of new practical technological aids and the
sophisticated development of the new tools of systems analysis and systems management, have now made it possible to transform the educational process in a systematic and logical fashion so that every educator's dream of doing a good job for every child becomes practical and within reach.

It is within the context of a systems approach that the complex ES'70 program is being undertaken.

ES'70 is a research and demonstration program. Participants at each level are engaged in specific activities that are directly related to the total design of the program.

The heart of the program is the creation of a new curriculum. What should it be? How can it be formulated? What must we do about organizing and managing schools to make is possible for teachers to teach and students to learn in ways that are better than heretofore? What should this new individualized curriculum make possible?

The curriculum is being developed from educational objectives stated in specific performance terms. Individual instructional programs are to be based on realistic measures of student capability and progress. Instructional strategies will emphasize individualized learning and counseling. Appropriate staff organization and technological aids will be employed to enhance the effectiveness of teaching personnel.

In order to formulate the curriculum models which will achieve this overall objective, the research effort is patterned
to establish performance objectives for selected activities, design the courses of studies, select media and materials and develop instructional teaching strategies. This effort will result in the development of new "learning modules" - specific instructional units prepared in printed, audio-visual, programmed, computer-based, or other form. Each "module" will be tested and validated within a school setting and then made available to other schools for local adaptation. The flexibility afforded by a variety of learning modules means that teachers will be able to adapt not only subject matter but the learning method itself to each student's requirements. Sight, sound and the printed word--the student will be able to use whatever approach is best suited to his individual style.

Participating in the ES'70 program are representative local school districts across the United States, their respective state education departments, and universities, foundations, private non-profit institutions, business and labor organizations, the U.S. Office of Education and other federal agencies.

The cooperating school systems represent old, new small and large communities; national geographic distribution; cultural mixes, and varying levels of financial support from the poorest to the very wealthy. The combined student population of the 17 participating districts approximates 1.3 million students. 37% of the youngsters in these schools are from families with annual incomes below $5000.

While the individual districts are designing and validating
the learning modules in real school settings, they have behind them the resource and advice of their state education departments. A rich variety of supporting research and development activities relevant to the goals of ES'70 are being conducted by universities, by professional organizations, by other cooperating state and federal agencies.

The crucial question of how to change the curriculum and the school organization while at the same time fulfilling current daily obligations to students under present organizational structures is being studied as part of the research and demonstration program. Models for the process of orderly transition can be expected to emerge from these studies. Presently underway are projects on instructional management and career guidance; school organization and management; accreditation; and the development of instruments for measurement and evaluation.

Staff development within the local districts and on a national scale is an essential component of the ES'70 program design. The local districts, many of them in cooperation with nearby universities, are already engaged in sponsoring seminars and in-service training programs. In addition there are special institutes to which ES'70 faculty from all parts of the nation come to exchange experiences and ideas. Universities have instituted appropriate courses to familiarize student teachers with the goals and strategies of the educational philosophy embraced by the ES'70 program.

Within the participating states and local school districts,
the responsible officials have been developing among board members, administrators, staff, parents, students and members of the community, an understanding of the objectives of the ES'70 program and the nature of the district's involvement with it. Engaging each group appropriately in planning and implementing the ES'70 program is one of their major tasks.

As program and research results are communicated back and forth through the operation of a carefully designed information and feedback system, it will be possible to revise, refine and modify what has been done. Thus, each participant will benefit from the experience of the others.

What will emerge?

--A school for the seventies.

--A learning environment of unprecedented richness and variety will be provided by various audio-visual aids, self-study systems, programmed instruction, educational television, computer-assisted instruction, single concept films, and communication linked study centers. New technological advances will be employed to free teachers from chores that are not an essential part of the inter-personal teaching process; both the teacher and the career guidance specialist will have increased time to devote to individual student needs. Information banks will contain up-to-the-minute materials in each field and curricular material in many forms for individual use by students. The student will be reinforced in his progress by minimizing failure, by building on his individual learning style, by
involving him in the design of his study program and insuring steady gains in his achievement by selecting that course and those materials most suited to his needs each step of the way.

--An education center where each student progresses at his own pace, with a teacher free to devote his attention to each individual as he needs it, and a curriculum relevant to the student's life.

If someone were to ask how the ES'70 system differs from what has existed in the past, the answer would be that it is different in kind but not in philosophy--it represents an effort to fuse the best of modern technology with the best educational principles evolved in this nation over the past two centuries. If there is any shift in attitude, it stems from a hardheaded awareness of the implications of the rapidity of change in our time. There must be less emphasis on what the student learns--and much more on the process of learning. The process of arriving at answers is more important than the storing of answers. Tomorrow will not listen to today's answers.

In addition, increased attention will be given to providing a relevant and enriched education to young people who are not candidates for college. This can be the case for as high as 80% of the total school population in some communities. ES'70 has set itself the task of providing these boys and girls with an education that prepares them for an open-ended future. They will be taught skills which will enable them to get responsible jobs after graduation--but they will be taught in such a way
that this represents the beginning, not the end, of their alternatives. Some students who discover that they are potential college candidates will already be on the right path because their individual abilities were determining their courses of study. Others will have gained the basic knowledge that is needed to start at one level in an occupational field and, with further study, will move up the ladder to more demanding positions. This kind of education, based on the idea of a broad constellation of related occupations, is vitally important to ES'70 because it meets the challenge of change. It permits a student trained for one responsibility to adapt himself to new responsibilities during the course of his life.

The swiftness of change, not only in science and technology but in the trades, businesses and professions as well, is recognized by educators. They are no longer willing to let ten years or five years or even two years elapse between the time that a more advantageous approach to teaching is found and the time that it is utilized in the public school system. They know that if we wait too long, any corrections we make may come too late to affect the ultimate outcome, a fact that jet pilots know very well. For if two supersonic jets discover that they are on a collision course while still a mile apart, it is already too late. Nothing they can do will avert a crash; they are moving too quickly and the planes respond too slowly.

American educators, who want to avoid future social collisions, are looking for changes that can be made today while
there is still time. They are gripped by an understandable sense of urgency. There is nothing abstract about the future, as far as teachers are concerned. Every time they walk into a classroom and face the boys and girls before them, they are looking at tomorrow. Just as these young people are growing, and growing means changing, so the country is growing and changing. The important thing is to help tomorrow change for the better.

In the United States the future is forged in the public school classroom. ES'70 is a plan for forging a better future. By assuring every young person of an education that is uniquely his own, and one that will equip him to deal with the world on his own terms, ES'70 sets a new standard for educational excellence.
HOW THE NETWORK IS ORGANIZED

A Local-State-Federal Partnership

BACKGROUND

American education is today at the point where the clarification of the role of the three levels of government--local, state and federal--can no longer be delayed. This section will relate details of a workable partnership as a means of advancing the development of an improved educational system for the 1970s. While this system--ES'70--is not a microcosm of education in the United States, its implications for the future of the nation as a whole lend the matter both urgency and importance. The ES'70 program can function as a laboratory in which an effective partnership of the three levels of government can be synthesized. Developing the means of effective three-way interaction is therefore assigned high priority. The achievement of an intergovernmental partnership is no doubt one of the crucial challenges now facing ES'70 participants.

A few brief comments may help put the problem in perspective. For both historical and pragmatic reasons, it is essential that within the partnership the balance of power remains with local authorities. Local school government retains not only its sensitivity but also its ability to respond effectively to community needs and the community conscience. Within ES'70, therefore, the local structure has control of and responsibility for, educational innovation at the program level.
It is expected that local community plans be communicated to the State department of education as part of an open dialogue in an effort to integrate local district goals with a unified--and unifying--structure of educational goals. Plans, programs and problems move from local curriculum coordinators and research project directors to the superintendent of schools; he, in turn, is responsible for evolving broad policies in cooperation with his local Board of Education and officials of the State's office of education.

Cooperating with local and state educational agencies will be the federal government. It is the responsibility of the United States Office of Education to recognize and encourage the contributions made by state and local agencies, to lead the way in securing necessary funds to continue the effort, and to weave a multiplicity of strands into a coordinated system.

The ES'70 Local-State-Federal organization plan which follows was drafted in January, 1968, by three Superintendents of Schools on the ES'70 Executive Committee representing the seventeen local district Superintendents in the primary network; two Chief State School Officers; and three representatives of the United States Office of Education. The Governing Board of ES'70 has approved these policy and procedural statements at a general meeting of the network conducted on February 16 and 17, 1968.
ORGANIZATION

Section I - General Function of the Primary Network

A. Membership

In order for a school district to become a member of, and sustain its membership in, the ES'70 network, the following minimum standards are to be adhered to:

1. The district shall agree with the general plans and objectives for ES '70.
2. Approval for participation in the network shall be formally acted upon by the Board of Education of the local district.
3. The local participating school district shall have written approval from the chief state school officer for its participation in ES '70, and shall have established an effective working relationship with the State Department of Education within its own state.
4. The chief administrative officer of the school district (hereafter referred to as the Superintendent) shall evidence his support of and interest in ES '70 through his attendance at network meetings.
5. The participating local school district shall provide necessary baseline data in order to implement effective research.
6. Each district shall draw up its P.E.R.T. chart showing the relationship of its anticipated program to the
Master P.E.R.T. chart for the ES'70 network, and shall provide subsequent information as requested by the Program Director.

7. Progress reports shall be submitted to the Executive Committee by the seventeen member districts of the network on at least a semi-annual basis. The Executive Committee shall review these reports.

8. Results of such review and a report on the status of membership will be made to the entire network at the spring meeting.

9. When necessary, the Executive Committee will make recommendations for action regarding continuing membership in accordance with the foregoing criteria. Prior to making recommendations to the network, the Executive Committee will consult with the affected local school district, the appropriate local State Department of Education officials and the USOE.

10. Any member district of the ES'70 network may voluntarily withdraw from the primary network by informing the Executive Committee of its intention to do so and submitting the formal resolution of the local Board of Education indicating its withdrawal.

B. Structure

1. There shall be seventeen (17) member public school systems in the Primary Network, approved by the State Education Agency of their respective States.
2. Modification of the Primary Network membership shall be effective on approval of the Governing Board.

3. In addition to the active participation of the superintendent, each participating school system shall designate a Coordinator, whose full-time responsibility shall be the maintenance of ongoing relationships with the Primary and Secondary networks and the general coordination of all ES'70 activities at the local level. All Coordinators shall attend the network meetings.

4. There shall be exemplary membership in the Primary Network from the private school sector.

C. Function

In order to accomplish the general and specific goals of ES'70, the Primary Network will perform the following series of interrelated functions:

1. Formulation, testing and validation of the performance objectives.

2. Development, testing and validation of appropriate curricular materials consistent with the various learning modes.

3. Development and implementation of individualized learning strategies related to the instructional outcomes.

4. Design and implementation of appropriate teacher training programs of both an in-service and a pre-service nature.

5. Development and implementation of the system design, including the information system, as well as delineation
of the interrelationships among network schools and between the Primary and Secondary Networks.

6. Dissemination of data to the other Primary Network schools.

7. Maintenance of relationships with a Secondary Network.

8. Maintenance of relationships with the State Departments of Education as described in the following section.

Section II - General Function of the Governing Board

A. Membership

1. The Governing Board shall consist of the seventeen Superintendents of the ES '70 Primary Network as voting members, with the two designated representatives of USOE as non-voting ex-officio members.

2. The two Chief State School Officers elected by the Chief State School Officers of the participating States shall be full voting members.

B. Functions

1. There shall be a minimum of two annual meetings, one in the Spring and one in the Fall. These and all other meetings shall be called at the discretion of the Executive Committee.

2. The Spring agenda shall include the presentation of the annual budget, a review of recommended policies from the Executive Committee, and the consideration of applications for membership in the Secondary
Network after preliminary consideration and recommendation by the appropriate Chief State School Officer and the Executive Committee.

Section III - State Departments of Education in Relation to the ES '70 Network

The authority of the State within whose jurisdiction each member district is located is recognized as inherent. The written permission of the State Department of Education involved is a prerequisite for membership in either the Primary or Secondary Network. The Chief State School Officers of the States represented in the Primary Network shall elect two of their number who shall be full voting members of the Executive Committee and the Governing Board (see Sections II-A and V-A.) Further, all activities resulting from actions taken by network members must meet the professional standards, regulations and legal statutes applicable within their states.

1. Using resources supplied by varying sources the State shall provide liaison services for the participating local districts and educational institutions and servicing agencies within the State.

2. Each participating district will request its State Department of Education to provide such consultative service as may be necessary and available.

3. The active participation by the respective State Departments of Education will be necessary in order
to deal effectively with such areas of concern as teacher accreditation, high school graduation requirements, local district and university articulation and the provision of such financial assistance as may be available and appropriate to support the participating local school district. Such measures will effect the realization of anticipated innovations and experimentation.

4. The two Chief State School Officers who serve on the Executive Committee (Section V-A.) shall report back to the annual meeting of the Council of Chief State School Officers, giving their assessment of ES '70 projects and procedures. This parent body may, in turn, evaluate the implications of ES '70 in broad and long-range terms, and express itself to the ES '70 system through its two representatives.

5. The Council of Chief State School Officers is enjoined to assist in the general dissemination of data through the various agencies represented by its total membership.

6. The Executive Committee Structure outlined here, and in greater detail in Section V, provides the means for State-level involvement in all ES '70 deliberations at the Federal level.

7. Under the aegis and at the discretion of the Chief State School Officers a secondary network may be established within the context of guidelines to be
Section IV - The Federal Government in Relationship to the ES '70 Program

Recognized as an integral part of the educational scene of the United States, the United States Office of Education shall be considered as an ex-officio member of the network and its Executive Committee. The U. S. Commissioner of Education shall assign two non-voting members to the Executive Committee. These United States Office of Education change officers shall be responsible for:

A. Supporting implementation of ES '70 projects.
B. The promotion of necessary legislation to acquire the funds required.
C. Consultation on the long-range implications of proposed projects, especially as they relate to prospects for relevant future legislation.
D. Informing the bureaus within the USOE and other relevant federal agencies (such as the OEO) of their opportunities for positive interaction with ES '70.
E. Coordinating the functions of the various regional educational laboratories with the goals of ES '70.
F. Providing basic financial support for the research, development, dissemination and assimilation of information regarding ES '70 activities.
G. Providing leadership and assistance in locating...
additional resources from other agencies, both public and private, necessary to achieve the goals of the ES'70 program.

H. Establishing and maintaining adequate communications between State and Federal bureaus involved with ES'70 regarding all pertinent activities and plans of the program.

I. Consideration of the recommendations of the Executive Committee and the Governing Board in determining the nature and levels of financial support for the ES'70 program.

Section V - General Function of the Executive Committee

A. Membership

The eight-member Executive Committee shall be composed as follows:

1. Six (6) ES'70 Primary Network Superintendents as elected by the Governing Board at its annual Spring meeting. Of these, two will be elected for a one-year term, two will be elected for two-year terms and two will be elected for three-year terms.

2. Two (2) representatives of the Council of Chief State School Officers, to be appointed no later than May 1 of each year. Both of these must be from states which are directly involved in the Primary Network.

3. Two representatives of the USOE appointed by the U.S.
Commissioner of Education shall be ex-officio, non-voting members of the Executive Committee.

B. Functions

1. The Executive Committee shall annually elect a Chairman who shall preside at all of its meetings as well as those of the Governing Board.

2. The Executive Committee shall hold not less than three nor more than twelve meetings per year.

3. At least two annual meetings shall be held for the purpose of preparing reports, respectively, for the Spring Business Meeting and the Fall Program Meeting of the Governing Board. Specifically, a proposed budget shall be prepared for the Spring meeting and a schedule of policy recommendations for the Fall Meeting. (See Section II-B.)

4. The Executive Committee may call such additional meetings of the Governing Board as they deem necessary.

5. A primary function of the Committee will be the annual review and evaluation of the progress of the network as a whole and of its individual member systems.

6. The ex-officio representatives of the USOE, though non-voting, will participate in the deliberations of the Executive Committee as well as those of the Governing Board.

7. In order to assist in the performance of these functions, the Executive Committee may consider the
establishment of the position of Project Director to prepare agendas, appropriate budgets and reports, assist in the coordination of the Primary and Secondary Networks and review legislative needs and procedures of the ES '70 network. The direct and incidental costs for the maintenance of this position may be met by a grant from the United States Office of Education or other appropriate sources.

8. The Executive Committee will make recommendations on the responsibilities and general functions of the Secondary Network for approval by the Governing Board.
THE ELEMENTS OF THE ES'70 PROGRAM

ES'70 is a research and demonstration program, representing a broad scope of activity that cuts across every aspect of education.

It involves the development of an improved secondary school curriculum designed to present individual school districts with a wide variety of alternatives in providing their own secondary school students with an individualized and relevant secondary education at a feasible cost.

Four main categories of activity comprise the substance of the current effort:

A. Staff Development
   1. Professional Pre-service
   2. Professional In-service
   3. Non-educational Professional Utilization
   4. Sub-professionals

B. Instructional Management and Career Guidance
   1. Educational Objectives
   2. Cluster Arrangements of Vocational Careers
   3. Curriculum Development
   4. Instructional Material
   5. Instructional and Learning Media
   6. Modular Scheduling
   7. Individualized Instruction
   8. Guidance Progress and Procedures
   9. Reduction of Failures

C. School Management
   1. Staff Utilization
   2. Information Handling
   3. Increased Efficiency in Communication
   4. Simulated Decision-making in On-line Situations
   5. Scheduling Progress, and Accounting for Pupils
   6. Budgeting Fiscal Accounting, Personnel Records
   7. Modification of Existing Plant
   8. New Structures
D. Evaluation
   1. Student Assessment
   2. School Accreditation
   3. Use of Data Processing in Evaluation
   4. Student Certification
   5. General Evaluation of Educational Progress

   After examining the results of these current research and demonstration activities and analyzing the experiences of the local school districts involved, the ES'70 network will diffuse the findings for use by other educational systems across the nation.
ES '70 Participating Districts

Atlanta, Georgia
Baltimore, Maryland
Bloomfield Hills, Michigan
Breathitt County, Kentucky
Boulder, Colorado
Duluth, Minnesota
Ft. Lauderdale (Nova), Florida
Houston, Texas
Mamaroneck, New York
Mineola, New York
Monroe, Michigan
Philadelphia, Pennsylvania
Portland, Oregon
Quincy, Massachusetts
San Antonio, Texas
San Mateo, California
Willingboro, New Jersey

November 21, 1968
WHAT IS ES '70?

In May 1967 the ES '70 network was formed to devise and execute a program for the development of a new comprehensive secondary school curriculum and organization

---providing an individualized education for each student
---highly relevant to the adult roles which he will play
---economically practical within available public resources
---based on behavioral and related sciences
---employing suitable systems of school organization
---utilizing appropriate educationally oriented technology
---locally planned and directed
---state supervised, nationally coordinated
---financed by federal, state and local funds
---designed for ultimate availability to all school systems.